

OXREF BUNDLE

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

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v1.1

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Introduction

This document provides the documented sources for the oxref bibliography 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, oxyyear-doc.pdf, oxyyear-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 2016–2019 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.

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}{\textendash}\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[boolean]{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[boolean]{usenametitles}[true]{%
67   \settoggle{blx@ox@nametitle}{#1}}
68 \DeclareTypeOption[boolean]{usenametitles}[true]{%
69   \settoggle{blx@ox@nametitle}{#1}}
70 \DeclareEntryOption[boolean]{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        \revsnamepunct}%
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        \revsnamepunct}%
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         \iffielddannotation{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     \iffielddundef{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+altdeditor}{%
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{author type}
460   {}
461   {\usebibmacro{authorstrg}%
462    \setunit{\addspace}}}%
463   {\global\undef\bbx@lasthash}}
464   \DeclareFieldFormat{author type}{\mkbibparens{#1}}

```

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

```

465   \newcommand{\titlebyauthor delim}{\addspace}

```

Following `author title` and `author year`, 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+altditor`, 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+altditor}%
479       \setunit{\printdelim{editortypedelim}}%
480       \usebibmacro{bbx:savehash}}%
481      \usebibmacro{#1}%
482      \clearname{editor}}
483     {\global\undef\bbx@lasthash}}
484   \DeclareFieldFormat{editor type}{\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]}{}{}%

```

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).

```

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

```

515 \newbibmacro*{bookeditor}{%
516   \global\undef\bbx@lasthash
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 preceded by punctuation.

```

541 \renewbibmacro*{title}{%
542 \ifbool{expr}{
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   }{}%
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   }{}%
605 \patchcmd{\mkdaterangetrunc}{%
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   }{}%
612 \patchcmd{\mkdaterangetruncextra}{%
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   }{}

```

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{biburlllcpenalty}}{0}
772 {\def\do##1{\appto\UrlSpecials{\do##1{\mathchar`##1 \penalty\value{biburlllcpenalty}}}}%
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}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{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[boolean]{varissuedate}[true]{%
910   \settoggle{blx@ox@varissuedate}{#1}}
911 \DeclareTypeOption[boolean]{varissuedate}[true]{%
912   \settoggle{blx@ox@varissuedate}{#1}}
913 \DeclareEntryOption[boolean]{varissuedate}[true]{%
914   \settoggle{blx@ox@varissuedate}{#1}}
915 \DeclareBibliographyOption[boolean]{issuedate-plain}[true]{%
916   \settoggle{blx@ox@varissuedate}{#1}}
917 \DeclareTypeOption[boolean]{issuedate-plain}[true]{%
918   \settoggle{blx@ox@varissuedate}{#1}}
919 \DeclareEntryOption[boolean]{issuedate-plain}[true]{%
920   \settoggle{blx@ox@varissuedate}{#1}}
921 \renewbibmacro*{issue+date}{%
922   \ifboolexpr{
923     test {\iffielddundef{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         }{\%
955           \newunit
956           \printfield{eid}\%
957         }{\%

```

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 supperiodical 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[supperiodical]{title}{%
1026   \def\currentfield{title}%
1027   \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
1028   \undef\currentfield}

```

```

1029 \DeclareFieldFormat[supperiodical]{volume}{#1}% volume of a journal
1030 \DeclareFieldFormat[supperiodical]{number}{#1}% number of a journal
1031 \DeclareFieldFormat[supperiodical]{series}{% series of a journal
1032   \ifinteger{#1}
1033     {\mkbibordseries{#1}~\bibstring{jourser}}
1034     {\ifbibstring{#1}{\bibstring{#1}}{#1}}
1035 \DeclareBibliographyDriver{supperiodical}{%
1036   \usebibmacro{bibindex}%
1037   \usebibmacro{begentry}%
1038   \usebibmacro{author/translator+others}%
1039   \setunit{\printdelim{nametitledelim}}\newblock
1040   \usebibmacro{title}%
1041   \setunit{\titlebyauthor}\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   \ifbool{expr}{
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 inference, so we need to change the title style accordingly.

```

1089 \DeclareFieldFormat[inference]{title}{\mkbibquote{#1\isdot}}

```

Volume numbers in monograph-style entries are formatted as roman numerals.

```

1090 \DeclareFieldFormat[book,mvbook,bookinbook,inbook,suppbk,%
1091 collection,mvcollection,incollection,suppcollection,%
1092 proceedings,mvproceedings,inproceedings,%
1093 reference,mvreference,inreference]{volume}{%
1094 \IfSubStr{#1}{-}{%
1095   \StrCount{#1}{-}[\blx@dashnum]%
1096   \StrBefore{#1}{-}[\blx@volnum]%
1097   \Rn{\blx@volnum}\bibrangedash
1098   \StrBehind{\blx@dashnum}{#1}{-}[\blx@volnum]%
1099   \Rn{\blx@volnum}%
1100 }{%
1101   \Rn{#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   \ifbool{expr}{
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{nametitle}}\newblock
1283   \usebibmacro{title}%
1284   \setunit{\titlebyauthor}\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{nametitle}}\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{\bibpagerefunct}\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{nametitle}}\newblock
1374   \usebibmacro{title}%
1375   \setunit{\titlebyauthor}\newblock
1376   \usebibmacro{byauthor}%
1377   \newunit\newblock
1378   \usebibmacro{in:}%
1379   \usebibmacro{bybookauthor}%
1380   \newunit\newblock
1381   \usebibmacro{maintitle+booktitle}%
1382   \newunit
1383   \iffielddundef{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 suppbok driver is just like inbook except that the note is moved nearer the title so it can be used as a descriptor.

```

1413 \DeclareFieldFormat[suppbok]{title}{%
1414   \def\currentfield{title}%
1415   \iffielddannotation{descriptor}{#1}{\mkbibemph{#1}}%
1416   \undef\currentfield}
1417 \DeclareBibliographyDriver{suppbok}{%
1418   \usebibmacro{bibindex}%
1419   \usebibmacro{begentry}%
1420   \usebibmacro{author/translator+others}%
1421   \setunit{\printdelim{nametitle}}\newblock
1422   \usebibmacro{title}%
1423   \setunit{\titlebyauthor}\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{nametitleledelim}}\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 \iffielddundef{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{\bibpagerefunct}\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{\bibpagerefunct}\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{\titlebyauthor\delim}\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{nametitleledelim}}\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[boolean]{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{\titlebyauthor}\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{\titlebyauthor}\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, datasets, 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{\titlebyauthor\delim}\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[boolean]{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{\bibpagerefunct}\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 website 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

Datasets are currently treated like manuals

```

2646   \DeclareBibliographyAlias{dataset}{manual}

```

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

```

2647   \newtoggle{bbx:scotstyle}
2648   \DeclareEntryOption{scottish-style}[true]{%
2649     \settoggle{bbx:scotstyle}{#1}}
2650   \newboolean{bbx@year-essential}\setboolean{bbx@year-essential}{false}
2651   \DeclareEntryOption{year-essential}[true]{%
2652     \setboolean{bbx@year-essential}{#1}}
2653   \newboolean{bbx@paryear-essential}\setboolean{bbx@paryear-essential}{false}
2654   \DeclareEntryOption{paryear-essential}[true]{%
2655     \setboolean{bbx@paryear-essential}{#1}}
2656   \newtoggle{blx@ox@nopostnotedelim}
2657   \newtoggle{bbx:altcourt}
2658   \DeclareBibliographyOption{court-plain}[true]{%
2659     \settoggle{bbx:altcourt}{#1}}
2660   \DeclareEntryOption{court-plain}[true]{%
2661     \settoggle{bbx:altcourt}{#1}}
2662   \newtoggle{bbx@ecliuse}
2663   \newtoggle{bbx@eclionly}
2664   \DeclareBibliographyOption{ecli}[yes]{%
2665     \ifstrequal{#1}{no}{%
2666       \global\togglefalse{bbx@ecliuse}%
2667       \global\togglefalse{bbx@eclionly}%
2668     }{%
2669       \global\toggletrue{bbx@ecliuse}%
2670       \ifstrequal{#1}{only}{%
2671         \global\toggletrue{bbx@eclionly}%
2672       }{}}

```

Field formats

```

2673 \DeclareFieldFormat{casenotetitle}{\mkbibquote{\mkbibemph{#1}}}
2674 \DeclareFieldFormat[jurisdiction,legislation,legal]{journaltitle}{#1}
2675 \DeclareFieldFormat[jurisdiction]{volume}{#1}
2676 \DeclareFieldFormat[jurisdiction]{titleaddon}{\mkbibparens{#1}}
2677 \DeclareFieldFormat{romanvol}{\RN{#1}}
2678 \DeclareListFormat[jurisdiction]{listb}{}
2679 \DeclareFieldFormat{usseries}{\ifinteger{#1}{\mkusbibordinal{#1}}{#1}}
2680 \DeclareFieldFormat{verba}{#1}
2681
2682 \DeclareListFormat{echrinst}{%
2683 \ifboolexpr{%
2684 test {\ifnumequal{\value{listtotal}}{1}}
2685 or
2686 test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
2687 }{%
2688 \ifboolexpr{
2689 test {\ifdefstring{\Commission}{#1}}
2690 or
2691 test {\ifdefstring{\commission}{#1}}%
2692 }{%
2693 \bibstring{commissiondecision}%
2694 }{#1}%
2695 }{%
2696 \setcounter{blx@tmpcnt}{\value{listcount}}%
2697 \addtocounter{blx@tmpcnt}{1}%
2698 \ifnumequal{\value{blx@tmpcnt}}{\value{listtotal}}{%
2699 #1\space\bibstring{and}\addspace
2700 }{%
2701 #1\addcomma\space}}}%
2702
2703 \newcommand*{\commission}{commission}
2704 \newcommand*{\Commission}{Commission}
2705 \DeclareListFormat{ecthr}{%
2706 \ifboolexpr{
2707 test {\ifdefstring{\Commission}{#1}}
2708 or
2709 test {\ifdefstring{\commission}{#1}}
2710 }{\bibstring[\mkbibparens]{commissiondecision}\toggletrue{blx@ox@nopostnotedelim}}{}}
2711
2712 \newcommand*{\pcijrep}{PCIJ Rep}
2713 \DeclareFieldFormat{international}{%
2714 \iffieldequals{journaltitle}{\pcijrep}}{%
2715 \bibcplstring{jourser}\space #1%
2716 }{#1}}
2717
2718 \DeclareListFormat{checkcontains}{%
2719 \bbx@check{#1}}
2720 \newtoggle{bbx@institutiontoggle}
2721 \newcommand\iflistcontains[2]{%
2722 \global\togglefalse{bbx@institutiontoggle}%
2723 \def\bbx@check##1{%
2724 \ifdefstring{#2}{##1}{\global\toggletrue{bbx@institutiontoggle}}{}}%
2725 \printlist[checkcontains]{#1}%
2726 \iftoggle{bbx@institutiontoggle}}
2727
2728 \DeclareFieldFormat{draftleg}{%
2729 \StrBefore{#1}{ Bill}}
2730
2731 \DeclareListFormat{billprinting}{%
2732 \ifstrequal{#1}{HC}{%

```

```

2733     \mkbibbrackets{\strfield{number}}%
2734     \toggletrue{blx@ox@nopostnotedelim}%
2735   }{%
2736     \strfield{number}%
2737     \togglefalse{blx@ox@nopostnotedelim}}
2738
2739 \newcommand*\treatypartysep{\allowbreak ---\allowbreak}
2740 \DeclareListFormat{treaty}{%
2741   \ifmoreitems{}{%
2742     \ifnumequal{\value{listcount}}{1}{%
2743       \bibopenparen
2744     }{%
2745       \ifnumgreater{\value{liststop}}{\value{listcount}}{%
2746         #1\treatypartysep
2747       }{%
2748         #1\bibcloseparen}}}}
2749
2750 \def\siganddate#1{%
2751   \def\bbx@tempa{#1}%
2752   \expandafter\bbx@signeddatei#1/relax}
2753 \def\bbx@signeddatei#1=#2/relax{%
2754   \def\bbx@tempa{#2-}%
2755   \bibstring{#1}\space\expandafter\makebbx@datei\bbx@tempa}
2756 \def\makebbx@datei#1-#2-#3-{%
2757   \makebbx@dateii{#1}{#2}{#3}}
2758 \def\makebbx@dateii#1#2#3{%
2759   \blx@imc@stripzeros{#3}~\mkbibmonth{#2}%
2760   \space
2761   #1}
2762 \DeclareListFormat{treatydates}{%
2763   \ifnumequal{\value{listcount}}{1}{%
2764     \siganddate{#1}%
2765   }{%
2766     \addcomma\space\siganddate{#1}}}

```

Pagination formats

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

```

2767 \newrobustcmd*\mkrawpageprefix[1][none]{%
2768   \begingroup
2769   \def\blx@tempa{\blx@mkpageprefix@i}%
2770   \ifstrequal{#1}{none}{}{%
2771     \ifbibstring{#1}{%
2772       \def\blx@tempa{\blx@mkpageprefix{#1}}%
2773     }{%
2774       \blx@warning@entry{Unknown pagination type '#1'}}%
2775   \@ifnextchar[%]
2776     {\blx@tempa}
2777     {\blx@tempa[\@firstofone]}
2778
2779 \newcommand*\paragraphmarkings{[]}
2780 \DeclareFieldFormat[jurisdiction,legislation,legal]{postnote}{%
2781   \iffieldundef{pagination}{%
2782     \ifboolexpr{
2783       test {\ifkeyword{eu}}
2784       or
2785       test {\ifkeyword{echr}}
2786     }{%
2787       \mkcomprange[\mkrawpageprefix[paragraph]]{#1}%

```

```

2788     }{%
2789     \mkcomprange{#1}}%
2790 }{%
2791 \iffieldequals{pagination}{\paragraphmarkings}{%
2792 \mkcomprange[\mkbibbrackets]{#1}%
2793 }{%
2794 \mkcomprange[\mkpageprefix{pagination}]{#1}}}}

```

Shorthands

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

```

2795 \renewbibmacro*{shorthandintro}{%
2796 \iffieldundef{shorthandintro}
2797 {\iffieldundef{shorthand}
2798 }
2799 {\setunit{\addspace}%
2800 \printtext[parens]{%
2801 \ifboolexpr{
2802 test {\ifentrytype{jurisdiction}}
2803 or
2804 test {\ifentrytype{legal}}
2805 or
2806 test {\ifentrytype{legislation}}
2807 }{ }{%
2808 \bibstring{citedas}\space}%
2809 \printfield{shorthand}}}}
2810 {\setunit{\addspace}%
2811 \printtext[parens]{\printfield{shorthandintro}}}}

```

Common macros

```

2812 \newbibmacro*{issue/volume}{%
2813 \iffieldundef{volume}%
2814 {\iffieldundef{issue}%
2815 }{%
2816 {\printfield{issue}}}%
2817 {\printfield[default]{volume}}}}
2818 \newcommand*\subtypenewsp{newspaper}
2819 \newbibmacro*{year+vol+report}[1][default]{%
2820 \iffieldequals{entrysubtype}{\subtypenewsp}{%
2821 \setunit{\addcomma\space}%
2822 }{%
2823 \usebibmacro{journaldate}%
2824 \setunit{\addspace}%
2825 \printfield[parens]{origyear}%
2826 \setunit{\addspace}%
2827 \printfield{volume}%
2828 \setunit{\addspace}}}%
2829 \printfield{journaltitle}%
2830 \setunit*{\addspace}%
2831 \iffieldundef{series}{ }{%
2832 \setunit{\addspace}%
2833 \printfield[#1]{series}%
2834 \setunit{\addspace}}}%
2835 \iffieldequals{entrysubtype}{\subtypenewsp}{%
2836 \setunit{\addcomma\space}%
2837 \printdate%
2838 }{ }}

```



```

2839 \newbibmacro*{journaldate}[1][]{%
2840 \ifboolexpr{
2841   test {\iffieldundef{#1volume}}
2842   or
2843   bool {bbx@#1year-essential}
2844 }{%
2845 \ifboolexpr{
2846   test {\ifkeyword{sc}}
2847   or
2848   test {\iftoggle{bbx:scotstyle}}
2849 }{%
2850 \setunit{\addcomma\space}%
2851 \printfield{#1year}%
2852 }{%
2853 \printfield[brackets]{#1year}}%
2854 }{%
2855 \printfield[parens]{#1year}}}}
2856 \newcommand*\casenote{casenote}
2857 \newcommand\casenotetext{\bibstring{casenote}}
2858 \newbibmacro{journaltitle}{%
2859 \iffieldequals{entrysubtype}{\casenote}{%
2860 \iffieldundef{crossref}{%
2861 \usebibmacro{title}%
2862 }{%
2863 \iffieldundef{note}{%
2864 \restorefield{note}{\casenotetext}%
2865 }{%
2866 \ifboolexpr{
2867   test {\iffootnote}
2868   and test {\iftoggle{bbx@samefootnote}}
2869   and test {\iffieldequals{crossref}{\blx@lastkey@foot}}%
2870 }{\printfield[casenotetitle]{title}}}%
2871 }{%
2872 \usebibmacro{title}}}}
2873 \newbibmacro*{unreported}[1][default]{%
2874 \iffieldundef{verba}{%
2875 \ifboolexpr{
2876   test {\iflistundef{institution}}
2877   and
2878   test {\iffieldundef{date}}
2879   and
2880   test {\iffieldundef{year}}
2881 }{}{%
2882 \ifboolexpr{
2883   test {\iffieldundef{date}}
2884   and
2885   test {\iffieldundef{year}}
2886 }{%
2887 \mkbibparens{\printlist[jurisdiction]{institution}}%
2888 }{%
2889 \toggletrue{blx@ox@nopostnotedelim}%
2890 \iflistundef{institution}{%
2891 \mkbibparens{\usebibmacro{date}}%
2892 }{%
2893 \printtext[parens]{%
2894 \printlist[#1]{institution}%
2895 \setunit{\addcomma\space}
2896 \usebibmacro{date}}}}}%
2897 }{%
2898 \iftoggle{bbx@ecliuse}{}{%
2899 \printfield{verba}}}}
2900 \newbibmacro{court-note}{%

```

```

2901     \iffielddundef{note}%
2902     {}%
2903     {\printfield{note}%
2904     \toggletrue{blx@ox@nopostnotedelim}}}
2905 \newbibmacro*{jurisdictionpages}{%
2906     \iffieldequals{entrysubtype}{\subtypenewsp}}{%
2907     \setunit{\addspace}%
2908     \printfield{pages}}
2909 \newbibmacro{pcitenote}{%
2910     \iffielddundef{parreporter}}{%
2911     \setunit{\addcomma\space}%
2912     \iffielddundef{postnote}}{%
2913     \printfield{postnote}%
2914     \clearfield{postnote}%
2915     \setunit{\addsemicolon\space}}}
2916 \newbibmacro*{courtid}{%
2917     \iffielddundef{number}}{%
2918     \ifboolexpr{
2919         test {\iflistundef{institution}}
2920         and
2921         test {\iffielddundef{location}}%
2922     }{%
2923         \togglefalse{blx@ox@nopostnotedelim}%
2924     }{%
2925         \ifboolexpr{%
2926             test {\iffielddundef{journaltitle}}
2927             or
2928             not togl {bbx:altcourt}
2929         }{%
2930             \printtext[parens]{%
2931                 \printfield{location}%
2932                 \setunit{\addspace}%
2933                 \printlist{institution}%
2934                 \usebibmacro{unrep:date}}%
2935             \toggletrue{blx@ox@nopostnotedelim}
2936         }{%
2937             \setunit{\addcomma\space}%
2938             \printfield{location}%
2939             \setunit*{\addspace}%
2940             \printlist{institution}}}%
2941     }{%
2942         \togglefalse{blx@ox@nopostnotedelim}}}
2943 \newbibmacro*{unrep:date}{%
2944     \ifboolexpr{
2945         test {\iffielddundef{journaltitle}}%
2946         and
2947         test {\iffielddundef{number}}%
2948     }{%
2949         \setunit{\addcomma\space}%
2950         \usebibmacro{date}%
2951     }{}}

```

Legal cases

There are different formats depending on the jurisdiction.

```

2952 \DeclareBibliographyDriver{jurisdiction}{%
2953     \usebibmacro{bibindex}%
2954     \usebibmacro{begentry}%
2955     \usebibmacro{juriscitation}%

```

```

2956 \usebibmacro{doi+eprint+url}%
2957 \setunit{\addspace}%\newblock
2958 \usebibmacro{addendum+pubstate}%
2959 \setunit{\bibpagerefpunct}\newblock
2960 \usebibmacro{pageref}%
2961 \setunit{\addspace}%\newblock
2962 \iftoggle{bbx:related}
2963   {\usebibmacro{related:init}%
2964   \usebibmacro{related}}
2965   {}%
2966 \usebibmacro{finentry}}
2967 \newtoggle{bbx@juriscitedone}
2968 \newbibmacro{juriscitation}{%
2969 \togglefalse{bbx@juriscitedone}%
2970 \renewcommand{\do}[1]{%
2971   \ifkeyword{##1}{%
2972     \toggletrue{bbx@juriscitedone}\usebibmacro{##1juriscitation}%
2973     \listbreak
2974   }}}%
2975 \docsvlist{eu,chr,int,ca,us}%
2976 \iftoggle{bbx@juriscitedone}{\usebibmacro{enjuriscitation}}%
2977 }

```

Here is the format for EU cases.

```

2978 \newtoggle{bbx@commissiondecision}
2979 \newbibmacro*{eujuriscitation}{%
2980 \ifboolexpr{
2981   test {\iflistcontains{institution}{\commission}}
2982   or
2983   test {\iflistcontains{institution}{\Commission}}}
2984   {%
2985     \toggletrue{bbx@commissiondecision}%
2986   }{%
2987     \togglefalse{bbx@commissiondecision}}%
2988 \iftoggle{bbx@commissiondecision}{%
2989   \usebibmacro{eucasenumber}}%
2990 \usebibmacro{title}%
2991 \setunit{\addspace}%
2992 \iftoggle{bbx@commissiondecision}{%
2993   \usebibmacro{eucommissiondecision}}%
2994 \setunit{\addspace}%
2995 \usebibmacro{eu:reportinfo}%
2996 \iftoggle{bbx@commissiondecision}{%
2997   \setunit{\addcomma\space}%
2998 }{%
2999   \setunit{\addspace}}%
3000 \usebibmacro{altreportdetails}%
3001 \usebibmacro{court-note}%
3002 }
3003 \newcommand*{\oxrefand{ and }}
3004 \newbibmacro{eucasetype}{%
3005 \iffieldundef{type}{%
3006   \ifboolexpr{
3007     test {\IfSubStr{\thefield{number}}{,}}
3008     or
3009     test {\IfSubStr{\thefield{number}}{--}}
3010     or
3011     test {\IfSubStr{\thefield{number}}{\oxrefand}}}
3012   }{%
3013     \bibstring{eujoinedcases}%
3014   }%

```

```

3015     \bibstring{eucase}}%
3016   }{%
3017     \printfield{type}}%
3018 }
3019 \newbibmacro{eucasenumber}{%
3020   \usebibmacro{eucasetype}%
3021   \setunit{\addnbspace}%
3022   \printfield{number}%
3023   \setunit{\addspace}}
3024 \newbibmacro{eucommissiondecision}{%
3025   \iffieldundef{userb}{%
3026     \iffieldundef{number}}{%
3027     \printtext[parens]{%
3028       \usebibmacro{eucasetype}%
3029       \setunit{\addnbspace}%
3030       \printfield{number}}}%
3031   }{%
3032     \printtext[parens]{%
3033       \usebibmacro{eucasetype}%
3034       \setunit{\addnbspace}%
3035       \printfield{userb}}%
3036     \setunit{\addspace}%
3037     \iffieldundef{number}}{%
3038     \iffieldundef{type}{%
3039       \setunit{\addspace\bibstring{commissiondecision}\addspace}%
3040     }{%
3041       \setunit{\addspace\printfield{type}\addspace}}%
3042     \printfield{number}}%
3043   }%
3044 }
3045 \newbibmacro*{eu:reportinfo}{%
3046   \iftoggle{bbx@ecliconly}{%
3047     \iffieldundef{verba}{%
3048       \usebibmacro{eu:osreport}
3049     }{%
3050       \printfield{verba}}%
3051   }{%
3052     \usebibmacro{eu:osreport}}
3053 \newbibmacro*{eu:osreport}{%
3054   \iftoggle{bbx@eccliuse}{%
3055     \iffieldundef{verba}}{%
3056     \printfield{verba}%
3057     \setunit{\addcomma\space}}%
3058   }{}%
3059   \iffieldundef{journaltitle}{%
3060     \usebibmacro{unreported}%
3061   }{%
3062     \usebibmacro{eu:year+vol+report}}
3063 \newcommand*{officialjournaltitle}{OJ}
3064 \newcommand*{ecrreporttitle}{ECR}
3065 \newbibmacro*{eu:year+vol+report}{%
3066   \iffieldequals{journaltitle}{\ecrreporttitle}{%
3067     \printfield[brackets]{year}%
3068     \setunit{\addspace}%
3069     \printfield{journaltitle}%
3070     \setunit{\addspace}%
3071     \printfield{volume}%
3072     \setunit*{\printtext{--\allowbreak}}}%
3073   \printfield{pages}%
3074 }{%
3075   \iffieldequals{journaltitle}{\officialjournaltitle}{%
3076     \printfield[brackets]{year}%

```

```

3077     \setunit{\addspace}%
3078     \printfield{journaltitle}%
3079     \setunit{\addspace}%
3080     \printfield[default]{series}%
3081     \usebibmacro{issue/volume}%
3082     \setunit{\printtext{\slash}}%
3083     \printfield{pages}%
3084   }{%
3085     \usebibmacro{year+vol+report}}}}

```

Here is the format for European Human Rights cases.

```

3086 \newbibmacro*{echrjuriscitation}{%
3087   \usebibmacro{title}%
3088   \setunit{\addspace}\newblock
3089   \iffieldundef{number}{}{%
3090     \printtext[parens]{%
3091       \def\adddot{}%
3092       \bibstring{application}\space
3093       \bibstring{number}\space
3094       \printfield{number}}}%
3095   \setunit{\addspace}\newblock}%
3096 \iffieldundef{journaltitle}{}{%
3097   \usebibmacro{unreported}[echrinst]%
3098 }{%
3099   \usebibmacro{echr:year+vol+report}
3100   \setunit{\addspace}\newblock
3101   \usebibmacro{echr:courtid}}}%
3102 \setunit{\addspace}%
3103 \usebibmacro{court-note}%
3104 \newblock
3105 \setunit{\addspace}}
3106 \newcommand*{\seriesa}{Series A}
3107 \newcommand*{\echrreports}{ECHR}
3108 \newbibmacro*{echr:year+vol+report}{%
3109   \iffieldequals{journaltitle}{\seriesa}{%
3110     \usebibmacro{seriesareport}%
3111   }{%
3112     \iffieldequals{journaltitle}{\echrreports}{%
3113       \usebibmacro{echrreports}%
3114     }{%
3115       \usebibmacro{year+vol+report}
3116       \setunit{\addspace}%
3117       \printfield{pages}}}}
3118 \newbibmacro*{seriesareport}{%
3119   \printfield[parens]{year}%
3120   \setunit{\addspace}%
3121   \printfield{journaltitle}%
3122   \setunit{\addspace}%
3123   \printtext{\def\adddot{}\bibstring{number}\addspace}%
3124   \printfield{pages}}
3125 \newbibmacro*{echrreports}{%
3126   \printfield{journaltitle}%
3127   \setunit{\addspace}%
3128   \printfield{year}%
3129   \iffieldundef{volume}{}{%
3130     \printtext{--}\printfield[romanvol]{volume}}
3131   \setunit{\addspace}%
3132   \printfield{pages}}
3133 \newcommand*{\decisionsandreports}{DR}
3134 \newcommand*{\collectionofdecisions}{CD}

```

```

3135 \newbibmacro*{echr:courtid}{%
3136 \ifboolexpr{
3137 test {\iffieldequals{journaltitle}{\decisionsandreports}}
3138 or
3139 test {\iffieldequals{journaltitle}{\collectionofdecisions}}}%
3140 }{}{%
3141 \printlist[ecthr]{institution}}}
```

Here is the format for international cases.

```

3142 \newbibmacro*{intjuriscitation}{%
3143 \iflistundef{institution}{%
3144 \setunit{}\printtext{}%
3145 }{%
3146 \printlist{institution}%
3147 \setunit{\addcomma\space}}%
3148 \usebibmacro{int:title}%
3149 \setunit{\addspace}\newblock
3150 \iffieldundef{journaltitle}{%
3151 \printfield{number}%
3152 \setunit{\addspace}\newblock
3153 \printtext[parens]{\printdate}%
3154 }{%
3155 \usebibmacro{year+vol+report}[international]%
3156 }%
3157 \setunit{\addspace}%
3158 \usebibmacro{int:jurisdictionpages}%
3159 \setunit{\addspace}\newblock
3160 \usebibmacro{court-note}%
3161 }
3162 \newbibmacro*{int:title}{%
3163 \ifboolexpr{
3164 test {\iffieldundef{title}}
3165 and
3166 test {\iffieldundef{subtitle}}
3167 }{}{%
3168 \printtext[title]{%
3169 \printfield[titlecase]{title}%
3170 \setunit{\addspace}%
3171 \printfield[parens]{subtitle}}}%
3172 \setunit{\addspace}%
3173 \printfield{titleaddon}%
3174 }
3175 \newbibmacro*{int:jurisdictionpages}{%
3176 \iffieldequals{journaltitle}{\pcijrep}{%
3177 \printtext{\bibcpstring{number}\addspace}%
3178 \iffieldundef{pages}{%
3179 \printfield{number}%
3180 }{%
3181 \printfield{pages}}}%
3182 }{}%
3183 \printfield{pages}}}
```

Here is the format for Canadian cases.

```

3184 \newbibmacro{canjuriscitation}{%
3185 \usebibmacro{title}%
3186 \setunit{\addspace}\newblock
3187 \printfield{number}%
3188 \setunit{\addcomma\space}%
3189 \iffieldundef{journaltitle}{}{}%
```

```

3190     \usebibmacro{can:year+vol+report}}}%
3191     \usebibmacro{jurisdictionpages}%
3192     \usebibmacro{pcitenote}%
3193     \usebibmacro{altreportdetails}%
3194     \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3195     \newunit\newblock
3196     \usebibmacro{courtid}%
3197     \newunit%
3198     \usebibmacro{court-note}%
3199     \newblock%
3200     \newunit}
3201 \newbibmacro*{can:year+vol+report}{%
3202   \iffieldundef{number}{%
3203     \setunit{\addspace}%
3204   }{%
3205     \ifboolexpr{
3206       test {\iffieldundef{volume}}
3207       or
3208       bool {bbx@year-essential}}%
3209   }{%
3210     \clearfield{year}}}%
3211 \iffieldequals{entrysubtype}{\subtypenewsp}{%
3212   \iffieldundef{year}{%
3213     \usebibmacro{journaldate}%
3214     \setunit{\addspace}}}%
3215 \printfield{volume}%
3216 \setunit{\addspace}%
3217 \printfield{journaltitle}%
3218 \setunit*{\addspace}%
3219 \iffieldundef{series}{%
3220   \setunit{\addspace}%
3221   \printtext[parens]{\printfield[usseries]{series}}%
3222   \setunit{\addspace}}}%
3223 \iffieldequals{entrysubtype}{\subtypenewsp}{%
3224   \setunit{\addcomma\space}%
3225   \usebibmacro{newspaperdate}%
3226 }{}}

```

Here is the format for American cases.

```

3227 \newbibmacro{usjuriscitation}{%
3228   \usebibmacro{title}%
3229   \setunit{\addcomma\space}\newblock%
3230   \iffieldundef{journaltitle}{%
3231     \printfield{number}%
3232     \setunit{\addcomma\space}%
3233     \printfield[default]{eprint}%
3234     \clearfield{eprint}%
3235   }{
3236     \usebibmacro{us:vol+report}}}%
3237 \setunit{\addspace}%
3238 \usebibmacro{jurisdictionpages}%
3239 \usebibmacro{us:postnote}%
3240 \usebibmacro{altreportdetails}%
3241 \setunit{\addspace}\newblock
3242 \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}%
3243 \setunit{\addspace}%
3244 \usebibmacro{us:courtid+date}%
3245 \setunit{\addspace}%
3246 \usebibmacro{court-note}%
3247 \newblock
3248 \setunit{\addspace}}

```

```

3249 \newbibmacro{us:vol+report}{%
3250 \printfield{volume}%
3251 \setunit{\addspace}%
3252 \printfield{journaltitle}%
3253 \iffieldundef{series}{}{%
3254 \setunit{\addspace}%
3255 \printfield[usseries]{series}}}
3256 \newbibmacro{us:postnote}{%
3257 \iffieldundef{postnote}{}{%
3258 \setunit{\addcomma\space}%
3259 \printfield{postnote}%
3260 \clearfield{postnote}%
3261 }}
3262 \newbibmacro{us:courtid+date}{%
3263 \ifboolexpr{
3264 test {\iflistundef{institution}}
3265 and
3266 test {\iflistundef{location}}
3267 and
3268 test {\iffieldundef{year}}
3269 }{}{%
3270 \printtext[parens]{%
3271 \printlist{location}%
3272 \setunit*\addspace}%
3273 \printlist{institution}%
3274 \setunit{\addspace}%
3275 \printfield{year}%
3276 \nopunct}}}

```

Here is the format for English cases.

```

3277 \newbibmacro{enjuriscitation}{%
3278 \usebibmacro{title}%
3279 \setunit{\addspace}\newblock
3280 \printfield{number}%
3281 \setunit*\addcomma\space}%
3282 \iffieldundef{journaltitle}{}{%
3283 \usebibmacro{year+vol+report}}%
3284 \usebibmacro{jurisdictionpages}%
3285 \usebibmacro{pcitenote}%
3286 \usebibmacro{altreportdetails}%
3287 \unspace\printlist[jurisdiction][1-\value{listtotal}]{listb}% additional reports
3288 \setunit{\addspace}\newblock
3289 \usebibmacro{courtid}%
3290 \setunit{\addspace}%
3291 \usebibmacro{court-note}}
3292 \newbibmacro{altreportdetails}{%
3293 \restorefield{prenote}{\postnotesecond}%
3294 \iffieldundef{parreporter}{}{%
3295 \usebibmacro{journaldate}[par]%
3296 \setunit{\addspace}\newblock
3297 \usebibmacro{altreportvolume}%
3298 \setunit{\addspace}\newblock
3299 \usebibmacro{altjournaltitle}%
3300 \setunit{\addspace}\newblock
3301 \usebibmacro{altseries}%
3302 \setunit{\addspace}\newblock
3303 \usebibmacro{altjurisdictionpages}%
3304 \iffieldundef{prenote}{}{%
3305 \setunit{\addcomma\space}%
3306 \printfield[postnote]{prenote}}}}

```



```

3307 \newbibmacro*{altreportvolume}{%
3308 \iffieldundef{parvolume}{}{%
3309 \printfield{parvolume}}
3310 \newbibmacro*{altjournaltitle}{%
3311 \iffieldundef{parreporter}{}{
3312 \printfield{parreporter}}
3313 \newbibmacro*{altseries}{%
3314 \iffieldundef{parseries}{}{%
3315 \printfield{parseries}}
3316 \newbibmacro*{altjurisdictionpages}{%
3317 \iffieldundef{parpages}{}{%
3318 \printfield{parpages}}%

```

Legislation

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

```

3319 \newcommand*{\subtypecourtrules}{procedure-rule}
3320 \DeclareBibliographyDriver{legislation}{%
3321 \usebibmacro{bibindex}%
3322 \usebibmacro{begentry}%
3323 \iffieldequals{entrysubtype}{\subtypecourtrules}{%
3324 \usebibmacro{courtrules}%
3325 }{%
3326 \ifkeyword{draft}{%
3327 \usebibmacro{legislation:bill}%
3328 }{%
3329 \ifkeyword{eu}{%
3330 \usebibmacro{eulegislation}%
3331 }{%
3332 \printfield[default]{title}%
3333 \setunit{\addspace}%
3334 \printfield[default]{year}%
3335 \setunit*{\addspace}%
3336 \usebibmacro{legnumber}%
3337 \setunit{\addspace}\newblock
3338 \usebibmacro{legsupp}}}}%
3339 \setunit{\addcomma\space}%
3340 \printfield{note}%
3341 \setunit{\addspace}%
3342 \usebibmacro{finentry}}
3343 \newbibmacro*{courtrules}{%
3344 \restorefield{prenote}{\postnotesecond}%
3345 \iffieldequalstr{shorttitle}{PD}{%
3346 \printfield{postnote}%
3347 \clearfield{postnote}%
3348 \setunit{\addspace}%
3349 }{}%
3350 \iffieldundef{shorttitle}{%
3351 \printfield[default]{title}%
3352 }{%
3353 \printfield[default]{shorttitle}}%
3354 \setunit{\addspace}\newblock
3355 \iffieldundef{postnote}{%
3356 \toggletrue{blx@ox@nopostnotedelim}%
3357 }{%
3358 \iffieldequalstr{shorttitle}{CPR}{%
3359 \printfield{postnote}%
3360 \setunit{\addspace}%

```

```

3361     }{%
3362     \printtext{%
3363     \bibstring{order}\space
3364     \printfield{postnote}%
3365     \setunit{\addcomma\space}}}%
3366     \restorefield{postnote}{\postnotesecond}%
3367     \usebibmacro{postnote}%
3368     \clearfield{postnote}%
3369     \setunit{\addspace}\newblock}
3370 \newcommand*{\subtypeprimarylegislation}{primary}
3371 \newbibmacro*{legislation:bill}{%
3372 \printfield[draftleg]{title}%
3373 \setunit{\addspace}%
3374 \printlist{institution}%
3375 \setunit*{\addspace}%
3376 \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3377 \bibcpstring{bill}%
3378 \setunit{\addspace}%
3379 \printtext[parens]{\usebibmacro{sessionyear}}%
3380 \setunit{\addspace}%
3381 \iffieldundef{number}{}%
3382 \printlist[billprinting]{institution}}%
3383 }{%
3384 \printtext[parens]{%
3385 \bibstring{draft}\space
3386 \printdate}}
3387 \setunit{\addspace}}
3388 \newbibmacro*{sessionyear}{%
3389 \iffieldundef{year}{}%
3390 \printfield{year}%
3391 \iffieldundef{endyear}{}%
3392 \bibdaterangesep
3393 \blx@ox@compyear{\thefield{year}}{\thefield{endyear}}}}
3394 \newbibmacro{euLegislation}{%
3395 \printfield[default]{title}%
3396 \setunit{\addspace}\newblock%
3397 \usebibmacro{eulegref}}
3398 \newcommand*{\ojspecedtitle}{OJ Spec Ed}
3399 \newbibmacro*{eulegref}{%
3400 \iffieldequals{journaltitle}{\officialjournaltitle}{%
3401 \printfield[brackets]{year}%
3402 \setunit{\addspace}%
3403 \printfield{journaltitle}%
3404 \setunit{\addspace}%
3405 \iffieldundef{series}{%
3406 \printtext{L}%
3407 }{%
3408 \printfield[default]{series}}%
3409 \usebibmacro{issue/volume}%
3410 \setunit*{\addslash}%
3411 \printfield{pages}%
3412 \togglefalse{blx@ox@nopostnotedelim}%
3413 }{%
3414 \usebibmacro{year+vol+report}%
3415 \setunit*{\addspace}%
3416 \printfield{pages}}}
3417 \newbibmacro*{legnumber}{%
3418 \iffieldequals{entrysubtype}{\subtypeprimarylegislation}{%
3419 \ifboolexpr{(
3420 test {\iffieldundef{number}}
3421 or
3422 not test {\iffieldundef{title}} )

```

```

3423     and not (
3424         test {\ifkeyword{cy}}
3425     or
3426         test {\ifkeyword{sc}}
3427     or
3428         test {\ifkeyword{ni}} )
3429     }{%
3430         \printtext[parens]{\printfield{number}}%
3431         \toggletrue{blx@ox@nopostnotedelim}}%
3432     }{%
3433         \iffieldundef{number}{}%
3434         \setunit{\addcomma\addspace}%
3435         \printfield{number}%
3436         \togglefalse{blx@ox@nopostnotedelim}}}}

```

This adds additional material for Welsh statutory instruments.

```

3437     \newbibmacro*{legsupp}{%
3438         \ifkeyword{cy}
3439         {\iffieldundef{userb}
3440             {}
3441             {\printtext{\mkbibparens{\printfield{userb}}}\toggletrue{blx@ox@nopostnotedelim}}}
3442         {}

```

Treaties, explanatory notes and Hansard

```

3443     \newcommand*{\explanatorynote}{explanatory note}
3444     \newcommand*{\parliamentarytype}{parliamentary}
3445     \newcommand*{\treatysubtype}{piltreaty}
3446     \DeclareBibliographyDriver{legal}{%
3447         \usebibmacro{bibindex}%
3448         \usebibmacro{begentry}%
3449         \iffieldequals{entrysubtype}{\explanatorynote}{%
3450             \printfield[default]{title}%
3451             \setunit{\addspace}\newblock
3452         }{%
3453             \iffieldequals{entrysubtype}{\parliamentarytype}{%
3454                 \usebibmacro{legal:parliamentary}%
3455             }{%
3456                 \usebibmacro{treatycitation}}}%
3457         \setunit{\addcomma\space}\newblock
3458         \printfield[default]{note}
3459         \setunit{\addspace}\newblock
3460         \setunit{\bibpagerefpunct}%
3461         \usebibmacro{pageref}%
3462         \usebibmacro{finentry}}
3463     \newbibmacro{legal:parliamentary}{%
3464         \printfield[default]{title}%
3465         \newunit\newblock
3466         \printfield{type}%
3467         \setunit{\addspace}%
3468         \iffieldundef{series}{}%
3469         \printtext[parens]{%
3470             \bibstring{jourser}\space
3471             \printfield{series}}}%
3472         \setunit{\addspace}%
3473         \printfield{volume}%
3474         \setunit{\addcomma\space}%
3475         \usebibmacro{hansard-ref}%
3476         \setunit{\addspace}%

```

```

3477     \iffielddundef{year}{}{%
3478         \printtext[parens]{\usebibmacro{date}}}%
3479     \togglefalse{blx@ox@nopostnotedelim}}
3480 \newbibmacro*{hansard-ref}{%
3481     \iffielddundef{postnote}{}{%
3482         \iffielddundef{pages}{}{%
3483             \printfield{pages}}%
3484         }}}%
3485 \newbibmacro{treatycitation}{%
3486     \printfield[default]{title}%
3487     \setunit{\addspace}\newblock%
3488     \printlist[treaty]{institution}
3489     \setunit{\addspace}\newblock
3490     \usebibmacro{treatyinfo}%
3491     \setunit{\addspace}\newblock
3492     \usebibmacro{treaty:year+vol+report}}
3493 \newbibmacro{treatyinfo}{%
3494     \iflistundef{lista}{% execution
3495         \iffielddundef{year}{}{%
3496             \iffielddundef{volume}{}{%
3497                 \printtext[parens]{\printdate}}}%
3498         }}{%
3499             \printtext[parens]{\printlist[treatydates]{lista}}}}
3500 \newbibmacro{treaty:year+vol+report}{%
3501     \iffieldequals{journaltitle}{\officialjournaltitle}{%
3502         \usebibmacro{eulegref}}%
3503     }{%
3504         \usebibmacro{treaty:date}%
3505         \setunit{\addspace}%
3506         \printfield[default]{volume}%
3507         \setunit{\addspace}%
3508         \printfield{journaltitle}%
3509         \setunit*{\addspace}%
3510         \iffielddundef{series}{}{%
3511             \setunit{\addspace}%
3512             \printfield{series}%
3513             \setunit{\addspace}}%
3514         \printfield{pages}}}%
3515 \newbibmacro*{treaty:date}{%
3516     \ifboolexpr{
3517         test {\iffielddundef{volume}}
3518         or
3519         bool {bbx@year-essential}
3520     }{%
3521         \ifboolexpr{
3522             test {\ifkeyword{sc}}
3523             or
3524             test {\iftoggle{bbx:scotstyle}}
3525         }{%
3526             \printfield{year}%
3527         }{%
3528             \printfield[brackets]{year}%
3529         }}}}

```

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

```

3530 \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.

```
3531 \newcommand{\locationlibrarypunct}{\addcomma\addspace}
3532 \newcommand{\collectionshelfmarkpunct}{\addspace}
3533 \newcommand{\datingpagespunct}{\addcomma\addspace}
3534 \newcommand{\librarycollectionpunct}{\addcomma\addspace}
3535 \newcommand{\pagetotalpagespunct}{\addcomma\addspace}
3536 \newcommand{\columnslayerpunct}{\addsemicolon\addspace}%
```

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

```
3537 \def\recto{r}
3538 \def\verso{v}
3539 \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.

```
3540 \DeclareFieldFormat[manuscript,unpublished]{title}{%
3541   \def\currentfield{title}%
3542   \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3543   \undef\currentfield}
3544 \DeclareFieldFormat{columns+layer}{\mkbibparens{#1}}
3545 \DeclareFieldFormat{columns}{\mkbibparens{#1}}
3546 \DeclareFieldFormat{layer}{\mkbibparens{#1}}
3547 \DeclareFieldFormat{dating}{#1\isdot}%
3548 \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.

```
3549 \newbibmacro{manuscript:date}{%
3550   \ifboolexpr{
3551     test {\ifnameundef{author}}
3552     and
3553     test {\iffieldundef{title}}
3554     and
3555     test {\iffieldundef{label}}
3556   }{\usebibmacro{date}}
3557 \newbibmacro{dating}{%
3558   \ifboolexpr{(
3559     test {\ifnameundef{author}}
3560     and
3561     test {\iffieldundef{title}}
3562     and
3563     test {\iffieldundef{label}}
3564   ) or
3565     test {\iffieldundef{year}}
3566 }{%
3567   \printfield{dating}%
3568 }}}
```

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.

```

3569 \newbibmacro{location+library+collection+shelfmark}{%
3570 \printfield{library}%
3571 \setunit{\locationlibrarypunct}%
3572 \printlist{location}%
3573 \setunit{\librarycollectionpunct}%
3574 \usebibmacro{collection+shelfmark}}
3575 \newbibmacro{collection+shelfmark}{%
3576 \ifboolexpr{
3577 test {\iffieldundef{collection}}
3578 and
3579 test {\iffieldundef{shelfmark}}
3580 }{}{%
3581 \printtext[collection+shelfmark]{%
3582 \printfield{collection}%
3583 \setunit*{\collectionshelfmarkpunct}%
3584 \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.

```

3585 \newbibmacro{manuscript:pages}{%
3586 \printfield{pagetotal}%
3587 \setunit{\addspace}%
3588 \iffieldundef{pages}{%
3589 \usebibmacro{manuscript:columns+layer}%
3590 }{%
3591 \usebibmacro{manuscript:columns}%
3592 \setunit{\pagetotalpagespunct}%
3593 \printfield{pages}%
3594 \setunit{\addspace}%
3595 \usebibmacro{manuscript:layer}}}
3596 \newbibmacro{manuscript:columns}{%
3597 \iffieldundef{columns}{}{%
3598 \printtext[columns]{\bibstring{\strfield{columns}column}}}%
3599 }%
3600 \newbibmacro{manuscript:layer}{%
3601 \iffieldundef{layer}{}{%
3602 \printtext[layer]{\bibstring{\strfield{layer}layer}}}%
3603 }%
3604 \newbibmacro{manuscript:columns+layer}{%
3605 \ifboolexpr{
3606 test {\iffieldundef{columns}}
3607 or
3608 test{\iffieldundef{layer}}
3609 }{}%
3610 \usebibmacro{manuscript:columns}%
3611 \usebibmacro{manuscript:layer}%
3612 }{%
3613 \printtext[columns+layer]{%
3614 \bibstring{\strfield{columns}column}%
3615 \setunit*{\columnslayerpunct}%
3616 \bibstring{\strfield{layer}layer}}}}%

```

Putting it all together, here is the manuscript driver.

```

3617 \DeclareBibliographyDriver{manuscript}{%
3618   \usebibmacro{bibindex}%
3619   \usebibmacro{begentry}%
3620   \usebibmacro{author}%
3621   \setunit{\printdelim{nametitle}}\newblock
3622   \usebibmacro{title}%
3623   \setunit{\titlebyauthor}\newblock
3624   \usebibmacro{byauthor}%
3625   \newunit\newblock
3626   \printfield{howpublished}%
3627   \newunit\newblock
3628   \printfield{note}%
3629   \newunit\newblock
3630   \usebibmacro{manuscript:date}%
3631   \newunit\newblock
3632   \usebibmacro{location+library+collection+shelfmark}%
3633   \newunit
3634   \printfield{support}%
3635   \newunit
3636   \usebibmacro{dating}%
3637   \setunit{\datingpagespunct}
3638   \usebibmacro{manuscript:pages}
3639   \newunit\newblock%
3640   \iftoggle{bbx:url}{%
3641     \usebibmacro{url+urldate}%
3642   }{}%
3643   \setunit{\relatedtypepunct}\newblock
3644   \iftoggle{bbx:related}{%
3645     \usebibmacro{related:init}%
3646     \usebibmacro{related}%
3647   }{}%
3648   \usebibmacro{finentry}}

```

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

```

3649 \newbibmacro*{library+location+series+number}{%
3650   \printfield{library}%
3651   \setunit{\locationlibrarypunct}%
3652   \printlist{location}%
3653   \setunit{\librarycollectionpunct}%
3654   \ifboolexpr{
3655     test {\iffieldundef{series}}
3656     and
3657     test {\iffieldundef{number}}
3658   }{}%
3659   \printtext[collection+shelfmark]{%
3660     \printfield{series}%
3661     \setunit*{\collectionshelfmarkpunct}%
3662     \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’.

```

3663 \newtoggle{blx@ox@ms}
3664 \DeclareBibliographyDriver{unpublished}{%
3665   \usebibmacro{bibindex}%
3666   \usebibmacro{begentry}%
3667   \iffieldundef{library}{\togglefalse{blx@ox@ms}}{\toggletrue{blx@ox@ms}}%
3668   \usebibmacro{author}%
3669   \setunit{\printdelim{nametitle}}\newblock
3670   \usebibmacro{title}%

```

```

3671 \setunit{\titlebyauthor\delim}\newblock
3672 \usebibmacro{byauthor}%
3673 \newunit\newblock
3674 \printfield{note}%
3675 \newunit\newblock
3676 \printfield{howpublished}%
3677 \newunit\newblock
3678 \iftoggle{blx@ox@ms}{%
3679 \usebibmacro{manuscript:date}%
3680 \newunit\newblock
3681 \usebibmacro{library+location+series+number}%
3682 \newunit
3683 \printfield{support}%
3684 \newunit
3685 \usebibmacro{dating}%
3686 \setunit{\datingpagespunct}
3687 \usebibmacro{manuscript:pages}
3688 }{%
3689 \usebibmacro{location+date}%
3690 }%
3691 \newunit\newblock
3692 \iftoggle{bbx:url}
3693 {\usebibmacro{url+urldate}}
3694 {}%
3695 \newunit\newblock
3696 \usebibmacro{addendum+pubstate}%
3697 \setunit{\bibpagerefpunct}\newblock
3698 \usebibmacro{pageref}%
3699 \setunit{\relatedtypepunct}\newblock
3700 \iftoggle{bbx:related}
3701 {\usebibmacro{related:init}}%
3702 \usebibmacro{related}}
3703 {}%
3704 \usebibmacro{finentry}}

```

2.1.17 LETTERS

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

```

3705 \DeclareBibliographyAlias{letter}{unpublished}
3706 \DeclareFieldFormat[letter]{title}{%
3707 \def\currentfield{title}%
3708 \iffieldannotation{descriptor}{#1}{\mkbibquote{#1\isdot}}%
3709 \undef\currentfield}
3710 \DeclareFieldFormat[letter]{date}{%
3711 \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.

```

3712 \xpatchbibdriver{booklet}{%
3713 \newunit\newblock
3714 \iftoggle{bbx:related}
3715 }{%
3716 \setunit{\relatedtypepunct}\newblock
3717 \iftoggle{bbx:related}
3718 }{\wlog{WARNING: biblatex-oxref failed to patch booklet}}

```



```

3719 \xpatchbibdriver{misc}{%
3720   \newunit\newblock
3721   \iftoggle{bbx:related}
3722 }{%
3723   \setunit{\relatedtypepunct}\newblock
3724   \iftoggle{bbx:related}
3725 }{\wlog{WARNING: biblatex-oxref failed to patch misc}}

```

We provide an option for setting the relatedtype punctuation.

```

3726 \DeclareBibliographyOption{relationpunct}[semicolon]{%
3727   \ifcsdef{add#1}{%
3728     \ifstrequal{#1}{space}{%
3729       \renewcommand*{\relatedtypepunct}{\addspace}%
3730     }{%
3731       \renewcommand*{\relatedtypepunct}{\csuse{add#1}\space}}%
3732   }{%
3733     \PackageError{biblatex-oxref}{%
3734       Invalid option 'relationpunct=#1'%
3735     }{%
3736       Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
3737       'period', 'exclam', 'question', and 'space'.}}%
3738 \DeclareTypeOption{relationpunct}[semicolon]{%
3739   \ifcsdef{add#1}{%
3740     \ifstrequal{#1}{space}{%
3741       \renewcommand*{\relatedtypepunct}{\addspace}%
3742     }{%
3743       \renewcommand*{\relatedtypepunct}{\csuse{add#1}\space}}%
3744   }{%
3745     \PackageError{biblatex-oxref}{%
3746       Invalid option 'relationpunct=#1'%
3747     }{%
3748       Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
3749       'period', 'exclam', 'question', and 'space'.}}%
3750 \newtoggle{blx@ox@relpunctset}
3751 \DeclareEntryOption{relationpunct}[semicolon]{%
3752   \ifcsdef{add#1}{%
3753     \ifstrequal{#1}{space}{%
3754       \renewcommand*{\relatedtypepunct}{\addspace}%
3755     }{%
3756       \renewcommand*{\relatedtypepunct}{\csuse{add#1}\space}}%
3757   \toggletrue{blx@ox@relpunctset}
3758 }{%
3759   \PackageError{biblatex-oxref}{%
3760     Invalid option 'relationpunct=#1'%
3761   }{%
3762     Valid values are 'dot', 'comma', 'semicolon', 'colon',\MessageBreak
3763     'period', 'exclam', 'question', and 'space'.}}%
3764 \newcounter{blx@ox@relitem}
3765 \xapptobibmacro{begrelated}{%
3766   \setcounter{blx@ox@relitem}{0}%
3767   \iftoggle{blx@ox@relpunctset}{%
3768     \iffieldequalstr{relatedtype}{in}{%
3769       \setunit{\addcomma\space}}{%
3770     \iffieldequalstr{relatedtype}{reprintfrom}{%
3771       \setunit{\addperiod\space}}{%
3772     \iffieldequalstr{relatedtype}{translationof}{%
3773       \setunit{\addspace}}{%
3774     \iffieldequalstr{relatedtype}{multivolume}{%
3775       \setunit{\addcomma\space}}{%
3776   }}}{\wlog{WARNING: biblatex-oxref failed to append to begrelated}}

```

```
3777 \renewcommand*\begrelateddelimmultivolume}{\newunitpunct}
```

Translations

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

```
3778 \newbibmacro*{rellanguage}{%
3779   \def\do##1{%
3780     \entrydata{##1}{%
3781       \printlist{language}}}%
3782   \docsvfield{related}%
3783 }
3784 \DeclareFieldFormat{relatedstring:translationof}{%
3785   \usebibmacro{rellanguage}\space
3786   \bibstring{original}\addcomma\space}
3787
3788 \DeclareFieldFormat{related:translationof}{%
3789   \mkbibbrackets{##1}}
```

Co-publications

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

```
3790 \newbibmacro*{related:copub}[1]{%
3791   \entrydata*{##1}{%
3792     \usebibmacro{publisher+location+date}%
3793     \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.

```
3794 \renewbibmacro*{related:reprintfrom}[1]{%
3795   \entrydata*{##1}{%
3796     \nopunct
3797     \usedriver{%
3798       \ifnameundef{savedauthor}{%
3799         \ifnameundef{savededitor}}{%
3800           \ifnameequal{editor}{savededitor}{%
3801             \clearname{editor}%
3802           }{}%
3803       }{}%
3804       \ifnameequal{author}{savedauthor}{%
3805         \clearname{author}%
3806       }{}%
3807       \iffieldundef{savedtitle}{}{%
3808         \iffieldsequal{savedtitle}{title}{%
3809           \clearfield{title}%
3810         }{}%
3811       \renewbibmacro*{related:init}{}%
3812       \DeclareNameAlias{sortname}{default}%
3813       \ifbibmacroundef{date+extradate}{}{%
3814         \renewbibmacro*{date+extradate}{}%
3815         \renewbibmacro*{date}{\printdate}%
3816       \renewbibmacro*{pageref}{}%
3817     }{}%
3818     \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.

```

3819 \newbibmacro*{related:serialarticle}[1]{%
3820 \entrydata*{#1}{%
3821 \iffieldundef{savedjournaltitle}{}{%
3822 \iffieldsequal{journaltitle}{savedjournaltitle}{%
3823 \clearfield{journaltitle}%
3824 }{}%
3825 \iffieldundef{savedjournalsubtitle}{}{%
3826 \iffieldsequal{journalsubtitle}{savedjournalsubtitle}{%
3827 \clearfield{journalsubtitle}%
3828 }{}%
3829 \iffieldundef{savedseries}{}{%
3830 \iffieldsequal{series}{savedseries}{%
3831 \clearfield{series}%
3832 }{}%
3833 \iffieldundef{savedyear}{\clearfield{year}}{
3834 \iffieldsequal{year}{savedyear}{%
3835 \clearfield{year}%
3836 }{}%
3837 \usebibmacro{journal+issuetitle}%
3838 \newunit
3839 \usebibmacro{note+pages}%
3840 \newunit\newblock
3841 \usebibmacro{doi+eprint+url}%
3842 \newunit\newblock
3843 \usebibmacro{addendum+pubstate}}}
```

Reviews

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

```

3844 \DeclareFieldFormat[review]{title}{\mkbibquote{#1\isdot}}
3845 \DeclareFieldFormat[review]{volume}{#1}% volume of a journal
3846 \DeclareFieldFormat[review]{number}{#1}% number of a journal
3847 \DeclareFieldFormat[review]{series}{% series of a journal
3848 \ifinteger{#1}
3849 {\mkbibordseries{#1}~\bibstring{jourser}}
3850 {\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.

```

3851 \newbibmacro*{related:reviewof}[1]{%
3852 \entrydata*{#1}{%
3853 \usedriver{%
3854 \renewbibmacro*{related:init}{}%
3855 \DeclareNameAlias{author}{given-family}%
3856 \renewbibmacro*{pageref}{}%
3857 }{\thefield{entrytype}}%
3858 }%
3859 }
```

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’.

```

3860 \DeclareBibliographyDriver{review}{%
3861 \usebibmacro{bibindex}%
3862 \usebibmacro{begentry}%
3863 \usebibmacro{author/translator+others}%
3864 \setunit{\printdelim{nametitledelim}}\newblock
3865 \usebibmacro{title}%
3866 \setunit{\titlebyauthordelim}\newblock
3867 \usebibmacro{byauthor}%
3868 \newunit\newblock
3869 \usebibmacro{bytranslator+others}%
3870 \newunit\newblock
3871 \printfield{version}%
3872 \newunit\newblock
3873 \iftoggle{bbx:related}{%
3874 \usebibmacro{related:init}%
3875 \usebibmacro{related}%
3876 }{}%
3877 \newunit\newblock
3878 \usebibmacro{in:}%
3879 \setunit{\addspace}%
3880 \usebibmacro{journal+issuetitle}%
3881 \newunit
3882 \usebibmacro{byeditor+others}%
3883 \iffieldundef{note}%
3884 {\newunit}%
3885 {\setunit{\addsemicolon\addspace}}%
3886 \usebibmacro{note+pages}%
3887 \newunit\newblock
3888 \iftoggle{bbx:isbn}
3889 {\printfield{issn}}
3890 {}%
3891 \newunit\newblock
3892 \usebibmacro{doi+eprint+url}%
3893 \newunit\newblock
3894 \usebibmacro{addendum+pubstate}%
3895 \setunit{\bibpagerefunct}\newblock
3896 \usebibmacro{pageref}%
3897 \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.

```

3898 \DeclareFieldFormat{related:multivolume}{#1}
3899 \renewbibmacro*{related:multivolume}[1]{%
3900 \entrydata*{#1}{%
3901 \printtext{%
3902 \printfield{volume}%
3903 \printfield{part}}%
3904 \setunit*{\addspace}%
3905 \usebibmacro{series+number+edition+publisher+location+date}}}

```

Related editions

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

```

3906 \newbibmacro*{related:editadas}[1]{%
3907   \entrydata{#1}{%
3908     \renewbibmacro*{name:hook}[1]{%
3909       \ifnumequal{\value{listcount}}{1}{%
3910         \begingroup
3911         \mkrelatedstring%
3912         \ltx@initnamehook{#1}%
3913         \endgroup
3914       }{}%
3915       \printfield{edition}%
3916       \setunit{\addspace}%
3917       \usebibmacro{byeditor+others}%
3918       \setunit*{\addcomma\space\bibstring[\mkrelatedstring]{astitle}\space}%
3919       \usebibmacro{maintitle+title}%
3920       \setunit{\addspace}%
3921       \printfield{note}%
3922       \newunit\newblock
3923       \printfield{volumes}%
3924       \newunit
3925       \usebibmacro{series+number+publisher+location+date}}
3926 \renewbibmacro*{related:bytranslator}[1]{%
3927   \entrydata{#1}{%
3928     \renewbibmacro*{name:hook}[1]{%
3929       \ifnumequal{\value{listcount}}{1}
3930       {\begingroup
3931         \mkrelatedstring%
3932         \ltx@initnamehook{#1}%
3933         \endgroup}
3934       {}%
3935       \printnames[bytranslator]{translator}%
3936       \setunit*{\addspace\bibstring[\mkrelatedstring]{astitle}\space}%
3937       \usebibmacro{maintitle+title}%
3938       \setunit{\addspace}%
3939       \printfield{note}%
3940       \newunit\newblock
3941       \printfield{volumes}%
3942       \newunit
3943       \usebibmacro{series+number+publisher+location+date}}

```

Joint releases

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

```

3944 \newbibmacro*{related:includes}[1]{%
3945   \stepcounter{blx@ox@relitem}%
3946   \ifnumequal{\value{blx@ox@relitem}}{\value{bbx:relatedtotal}}%
3947     {\bibstring{and}\addspace}{}%
3948   \entrydata{#1}{%
3949     \ifbibmacroundef{date+extradate}{}{%
3950       \renewbibmacro*{date+extradate}{}%
3951       \usebibmacro{author}%
3952       \setunit{\printdelim{nametitledelim}}\newblock
3953       \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.

```

3954 \DeclareFieldFormat[misc]{title}{%
3955 \def\currentfield{title}%
3956 \iffieldannotation{descriptor}{#1}{%
3957 \iffieldequalstr{relatedtype}{in}{%
3958 \mkbibquote{#1\isdot}%
3959 }{%
3960 \mkbibemph{#1}%
3961 }}%
3962 \undef\currentfield}
3963 \newbibmacro*{related:in}[1]{%
3964 \entrydata*{#1}{%
3965 \usedriver
3966 {\ifnameundef{savedauthor}
3967 {\ifnameundef{savededitor}
3968 {}
3969 {\ifnameequal{editor}{savededitor}
3970 {\clearname{editor}}
3971 {}}}
3972 {\ifnameequal{author}{savedauthor}
3973 {\clearname{author}}
3974 {}}}%
3975 \renewbibmacro*{related:init}{}%
3976 \DeclareNameAlias{sortname}{default}%
3977 \ifbibmacroundef{date+extradate}
3978 {}
3979 {\renewbibmacro*{date+extradate}{}%
3980 \renewbibmacro*{date}{\printdate}}%
3981 \renewbibmacro*{pageref}{}
3982 {\thefield{entrytype}}%
3983 \ifboolexpr{
3984 test {\iffieldundef{pages}}
3985 or
3986 test {\iffieldundef{savedpages}}
3987 }{%
3988 \newunit\newblock
3989 }{%
3990 \setunit{\addspace}%
3991 \bibstring{thiscite}%
3992 \printunit{\addspace}%
3993 }%
3994 }%
3995 \usebibmacro{chapter+pages}%
3996 }

```

2.1.19 SOURCE MAPS

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

```

3997 \DeclareStyleSourcemap{%
3998 \maps[datatype=bibtex]{%

```

Sort order

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

```

3999     \map{
4000       \pertype{proceedings}
4001       \pertype{mvproceedings}
4002       \step[notfield=author,
4003             fieldsource=organization,
4004             fieldtarget=author]
4005     }

```

Descriptors

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

```

4006     \map[overwrite=false]{
4007       \step[fieldsource=descriptor, final]
4008       \step[notfield=title,
4009             fieldset=title+an,
4010             fieldvalue={=descriptor}]
4011       \step[notfield=title,
4012             fieldsource=descriptor,
4013             fieldtarget=title]
4014       \step[fieldsource=descriptor,
4015             fieldtarget=note]
4016     }

```

Pseudonyms and inferred authorship

These help ensure compatibility with biblatex-realauthor.

```

4017     \map[overwrite=false]{
4018       \step[fieldsource=realauthor, final]
4019       \step[notfield=author,
4020             fieldset=author+an,
4021             fieldvalue={=inferred}]
4022       \step[notfield=author,
4023             fieldsource=realauthor,
4024             fieldtarget=author]
4025       \step[fieldsource=realauthor,
4026             fieldtarget=authoraddon]
4027     }
4028     \map[overwrite=false]{
4029       \step[fieldsource=realeditor, final]
4030       \step[notfield=editor,
4031             fieldset=editor+an,
4032             fieldvalue={=inferred}]
4033       \step[notfield=editor,
4034             fieldsource=realeditor,
4035             fieldtarget=editor]
4036       \step[fieldsource=realeditor,
4037             fieldtarget=editoraddon]
4038     }

```

Editors as joint authors

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

```

4039     \map[overwrite=false]{
4040       \step[fieldsource=editor+an,
4041         match=\regexp{=jointauthor},
4042         final]
4043       \step[fieldsource=editor,
4044         fieldtarget=jointauthor]
4045       \step[fieldsource=editortype,
4046         fieldtarget=jointauthortype]
4047     }
4048     \map[overwrite=false]{
4049       \step[fieldsource=translator+an,
4050         match=\regexp{=jointauthor},
4051         final]
4052       \step[fieldsource=translator,
4053         fieldtarget=jointauthor]
4054       \step[fieldset=jointauthortype,
4055         fieldvalue={=translator}]
4056     }

```

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.

```

4057     \map[overwrite=false]{
4058       \pertype{standard}
4059       \step[notfield=author,
4060         fieldsource=number,
4061         final]
4062       \step[fieldset=sortkey,
4063         origfieldval]
4064     }

```

Audiovisual materials

For audiovisual materials, origdatetype defaults to 'recorded'.

```

4065     \map[overwrite=false]{
4066       \pertype{audio}
4067       \pertype{music}
4068       \pertype{movie}
4069       \pertype{video}
4070       \pertype{inaudio}
4071       \pertype{inmusic}
4072       \pertype{inmovie}
4073       \pertype{invideo}
4074       \step[fieldset=origdatetype, fieldvalue={recorded}]
4075     }

```

Legal references

These help ensure compatibility with oscola.


```

4076 \map[overwrite=false]{
4077   \pertype{jurisdiction}
4078   \step[fieldsource=reporter,
4079         fieldtarget=journaltitle]
4080   \step[fieldsource=court,
4081         fieldtarget=institution]
4082   \step[fieldsource=additionalreports,
4083         fieldtarget=listb]
4084   \step[fieldsource=ecli,
4085         fieldtarget=verba]
4086 }%
4087 \map[overwrite=false]{
4088   \pertype{legal}
4089   \step[fieldsource=reporter,
4090         fieldtarget=journaltitle]
4091 }
4092 \map[overwrite=true]{
4093   \pertype{legal}
4094   \step[fieldsource=parties,
4095         fieldtarget=institution]
4096   \step[fieldsource=execution,
4097         fieldtarget=lista]
4098 }

```

This is how oscola removes dots from entries.

```

4099 \map[overwrite=true]{
4100   \pertype{jurisdiction}
4101   \pertype{legislation}
4102   \pertype{legal}
4103   \step[fieldsource=title,
4104         match=\regexp{(\d)\.(\d)},
4105         replace=\regexp{$1.$2}]
4106   \step[fieldsource=title,
4107         match=\regexp{(\D)\.(\d)},
4108         replace=\regexp{$1 $2}]
4109   \step[fieldsource=title,
4110         match=\regexp{\.(\D)},
4111         replace=\regexp{$1}]
4112   \step [fieldsource=title,
4113         match=\regexp{(\D)\.},
4114         replace=\regexp{$1}]
4115   \step[fieldsource=shorttitle,
4116         match=\regexp{(\d)\.(\d)},
4117         replace=\regexp{$1.$2}]
4118   \step[fieldsource=shorttitle,
4119         match=\regexp{(\D)\.(\d)},
4120         replace=\regexp{$1 $2}]
4121   \step[fieldsource=shorttitle,
4122         match=\regexp{\.(\D)},
4123         replace=\regexp{$1}]
4124   \step [fieldsource=shorttitle,
4125         match=\regexp{(\D)\.},
4126         replace=\regexp{$1}]
4127   \step[fieldsource=parreporter,
4128         match=\regexp{(\d)\.(\d)},
4129         replace=\regexp{$1.$2}]
4130   \step[fieldsource=parreporter,
4131         match=\regexp{(\D)\.(\d)},
4132         replace=\regexp{$1 $2}]
4133   \step[fieldsource=parreporter,

```

```

4134         match=\regexp{\.(\D)},
4135         replace=\regexp{$1}]
4136 \step [fieldsource=parreporter,
4137       match=\regexp{(\D)\.},
4138       replace=\regexp{$1}]
4139 \step[fieldsource=journaltitle,
4140       match=\regexp{(\d)\.(\d)},
4141       replace=\regexp{$1.$2}]
4142 \step[fieldsource=journaltitle,
4143       match=\regexp{(\D)\.(\d)},
4144       replace=\regexp{$1 $2}]
4145 \step[fieldsource=journaltitle,
4146       match=\regexp{\.(\D)},
4147       replace=\regexp{$1}]
4148 \step [fieldsource=journaltitle,
4149       match=\regexp{(\D)\.},
4150       replace=\regexp{$1}]
4151 \step[fieldsource=institution,
4152       match=\regexp{(\d)\.(\d)},
4153       replace=\regexp{$1.$2}]
4154 \step[fieldsource=institution,
4155       match=\regexp{(\D)\.(\d)},
4156       replace=\regexp{$1 $2}]
4157 \step[fieldsource=institution,
4158       match=\regexp{\.(\D)},
4159       replace=\regexp{$1}]
4160 \step[fieldsource=institution,
4161       match=\regexp{(\D)\.},
4162       replace=\regexp{$1}]
4163 \step[fieldsource=publisher,
4164       match=\regexp{(\d)\.(\d)},
4165       replace=\regexp{$1.$2}]
4166 \step[fieldsource=publisher,
4167       match=\regexp{(\D)\.(\d)},
4168       replace=\regexp{$1 $2}]
4169 \step[fieldsource=publisher,
4170       match=\regexp{\.(\D)},
4171       replace=\regexp{$1}]
4172 \step [fieldsource=publisher,
4173       match=\regexp{(\D)\.},
4174       replace=\regexp{$1}]
4175 \step[fieldsource=location,
4176       match=\regexp{(\d)\.(\d)},
4177       replace=\regexp{$1.$2}]
4178 \step[fieldsource=location,
4179       match=\regexp{(\D)\.(\d)},
4180       replace=\regexp{$1 $2}]
4181 \step[fieldsource=location,
4182       match=\regexp{\.(\D)},
4183       replace=\regexp{$1}]
4184 \step [fieldsource=location,
4185       match=\regexp{(\D)\.},
4186       replace=\regexp{$1}]
4187 \step[fieldsource=series,
4188       match=\regexp{(\d)\.(\d)},
4189       replace=\regexp{$1.$2}]
4190 \step[fieldsource=series,
4191       match=\regexp{(\D)\.(\d)},
4192       replace=\regexp{$1 $2}]
4193 \step[fieldsource=series,
4194       match=\regexp{\.(\D)},
4195       replace=\regexp{$1}]

```

```

4196     \step [fieldsource=series,
4197           match=\regexp{(\D)\.},
4198           replace=\regexp{$1}]
4199     \step[fieldsource=indextitle,
4200           match=\regexp{(\d)\.(\d)},
4201           replace=\regexp{$1.$2}]
4202     \step[fieldsource=indextitle,
4203           match=\regexp{(\D)\.(\d)},
4204           replace=\regexp{$1 $2}]
4205     \step[fieldsource=indextitle,
4206           match=\regexp{\.(\D)},
4207           replace=\regexp{$1}]
4208     \step [fieldsource=indextitle,
4209           match=\regexp{(\D)\.},
4210           replace=\regexp{$1}]
4211   }

```

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

```

4212     \map[overwrite=false]{
4213       \step[fieldsource=casenumber, final]
4214       \step[notfield=number, fieldsource=casenumber, fieldtarget=number]
4215       \step[fieldsource=casenumber, fieldtarget=userb]
4216     }
4217   }%
4218 }

```

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).

```

4219   \DeclareSortingTemplate{nty}{
4220     \sort{
4221       \field{presort}
4222     }
4223     \sort[final]{
4224       \field{sortkey}
4225     }
4226     \sort{
4227       \field{sortname}
4228       \field{author}
4229       \field{editor}
4230       \field{translator}
4231       \field{sorttitle}
4232       \field{title}
4233       \field{library}
4234     }
4235     \sort{
4236       \field{sorttitle}
4237       \field{title}
4238     }
4239     \sort{
4240       \field{sortyear}
4241       \field{year}
4242     }
4243     \sort{
4244       \field{volume}
4245       \literal{0}
4246     }

```

```
4247     \sort{
4248       \field{location}
4249     }
4250     \sort{
4251       \field{collection}
4252       \field{series}
4253     }
4254   }
4255
4256   \DeclareSortingTemplate{nyt}{
4257     \sort{
4258       \field{presort}
4259     }
4260     \sort[final]{
4261       \field{sortkey}
4262     }
4263     \sort{
4264       \field{sortname}
4265       \field{author}
4266       \field{editor}
4267       \field{translator}
4268       \field{sorttitle}
4269       \field{title}
4270       \field{library}
4271     }
4272     \sort{
4273       \field{sortyear}
4274       \field{year}
4275     }
4276     \sort{
4277       \field{sorttitle}
4278       \field{title}
4279     }
4280     \sort{
4281       \field{volume}
4282       \literal{0}
4283     }
4284     \sort{
4285       \field{location}
4286     }
4287     \sort{
4288       \field{collection}
4289       \field{series}
4290     }
4291   }
4292
4293   \DeclareSortingTemplate{anyt}{
4294     \sort{
4295       \field{presort}
4296     }
4297     \sort{
4298       \field{labelalpha}
4299     }
4300     \sort[final]{
4301       \field{sortkey}
4302     }
4303     \sort{
4304       \field{sortname}
4305       \field{author}
4306       \field{editor}
4307       \field{translator}
4308       \field{sorttitle}
```

```

4309     \field{title}
4310     \field{library}
4311   }
4312   \sort{
4313     \field{sortyear}
4314     \field{year}
4315   }
4316   \sort{
4317     \field{sorttitle}
4318     \field{title}
4319   }
4320   \sort{
4321     \field{volume}
4322     \literal{0}
4323   }
4324   \sort{
4325     \field{location}
4326   }
4327   \sort{
4328     \field{collection}
4329     \field{series}
4330   }
4331 }

```

The following entry types never put editors first.

```

4332 \ExecuteBibliographyOptions
4333   [proceedings,report,artwork,audio,image,music,movie,performance,video,%
4334   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}

```

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}}

```

2.2.2 SOURCE MAPS

```
34 \DeclareStyleSourceMap{%
35   \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.

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

2.3 Numeric style: oxnum.bbx

2.3.1 PRELIMINARIES

First we load the common oxref features.

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

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}}
```

2.3.2 LABEL NUMBERS

This next code is extracted from the standard numeric style.

```

34 \ExecuteBibliographyOptions{labelnumber}
35
36 \providebool{bbx:subentry}
37
38 \DeclareBibliographyOption[boolean]{subentry}[true]{%
39   \setbool{bbx:subentry}{#1}}
40
41 \DeclareFieldFormat{bibentrysetcount}{\mkbibparens{\mknumalph{#1}}}
42 \DeclareFieldFormat{labelnumberwidth}{\mkbibbrackets{#1}}
43 \DeclareFieldFormat{shorthandwidth}{\mkbibbrackets{#1}}
44
45 \defbibenvironment{bibliography}
46   {\list
47     {\printtext[labelnumberwidth]{%
48       \printfield[labelprefix]{%
49         \printfield[labelnumber]}}
50       {\setlength{\labelwidth}{\labelnumberwidth}%
51         \setlength{\leftmargin}{\labelwidth}%
52         \setlength{\labelsep}{\biblabelsep}%
53         \addtolength{\leftmargin}{\labelsep}%
54         \setlength{\itemsep}{\bibitemsep}%
55         \setlength{\parsep}{\bibparsep}}}%
56     \renewcommand*{\makelabel}[1]{\hss##1}}
57   {\endlist}
58   {\item}
59
60 \defbibenvironment{shorthand}
61   {\list
62     {\printfield[shorthandwidth]{shorthand}}
63     {\setlength{\labelwidth}{\shorthandwidth}%
64       \setlength{\leftmargin}{\labelwidth}%
65       \setlength{\labelsep}{\biblabelsep}%
66       \addtolength{\leftmargin}{\labelsep}%
67       \setlength{\itemsep}{\bibitemsep}%
68       \setlength{\parsep}{\bibparsep}}}%
69     \renewcommand*{\makelabel}[1]{\hss##1}}
70   {\endlist}
71   {\item}
72
73 \DeclareBibliographyDriver{set}{%
74   \entryset
75     {\ifbool{bbx:subentry}
76       {\printfield[bibentrysetcount]{entrysetcount}}%
77     \printunit*{\adddnbspace}}
78     {}
79     {}%
80   \newunit\newblock
81   \usebibmacro{setpageref}%
82   \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 \DeclareBibliographyOption{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'.}}
29 \DeclareTypeOption{mergedate}[true]{%
30   \ifcsdef{bbx@opt@mergedate@#1}
31     {\csuse{bbx@opt@mergedate@#1}}
32     {\PackageError{biblatex-oxref}
33       {Invalid option 'mergedate=#1'}
34       {Valid values are 'maximum', 'compact', 'basic', 'minimum',\MessageBreak
35         '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.

```
36 \providebibmacro*{date+extradate}{}
37 \DeclareFieldFormat{dateLabel}{\mkbibparens{#1}}
38 \DeclareFieldFormat{labeldate}{%
39   \iflabeldateisdate{%
40     \def\currentfield{date}%
41   }{%
42     \iflabeldateisanydate{%
43       \def\currentfield{\thefield{labeldatesource}date}%
44     }{%
45       \def\currentfield{\thefield{labeldatesource}}}%
46   \iffieldannotation{inferred}{\mkbibbrackets{#1}}{#1}%
47   \undef\currentfield}
```

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

```
48 \DeclareLabeldate{%
49   \field{origdate}
50   \field{date}
51   \field{year}
52   \field{eventdate}
53   \field{pubstate}
54   \literal{nodate}
55 }
```

The `extradate` string should be printed bare.


```

56 \DeclareFieldFormat{extradate}{%
57   \iffieldundef{\thefield{labeldatesource}}{%
58     \iffieldnums{\thefield{labeldatesource}year}{~}%
59   }{%
60     \iffieldnums{\thefield{labeldatesource}}{~}%
61   }%
62   \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.

```

63 \def\iflabeldateisanydate{%
64   \ifboolexpr{%
65     togl {blx@labeldateparts}
66     and not test {\iffieldundef{labeldatesource}}
67     and (
68       test {\iffieldequalstr{labeldatesource}{year}}
69       or not test {\iffieldundef{\thefield{labeldatesource}year}}
70     )}}
71 \def\iflabeldateispubstate{%
72   \ifboolexpr{%
73     not test {\iffieldundef{labeldatesource}}
74     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.

```

75 \newtoggle{blx@ox@nonodate}
76 \DeclareBibliographyOption[boolean]{nonodate}[true]{%
77   \settoggle{blx@ox@nonodate}{#1}}
78 \DeclareTypeOption[boolean]{nonodate}[true]{%
79   \settoggle{blx@ox@nonodate}{#1}}
80 \DeclareEntryOption[boolean]{nonodate}[true]{%
81   \settoggle{blx@ox@nonodate}{#1}}
82 \newbibmacro*{labeldate}{%
83   \ifboolexpr{
84     test {\iffieldequalstr{labeldatesource}{nodate}}
85     and
86     togl {blx@ox@nonodate}
87   }{\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).

```

88 \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.

```

89 \def\bbx@opt@mergedate@maximum{%
90 \renewbibmacro*{date+extradate}{%
91 \iffieldundef{labelyear}}{%
92 \iflabeldateisdate{%
93 \printtext[datelabel]{%
94 \printfield{issue}\clearfield{issue}%
95 \setunit*{\addspace}%
96 \printdateextra}%
97 \clearfield{year}\clearfield{season}\clearfield{month}\clearfield{day}%
98 }{%
99 \iflabeldateisanydate{%
100 \printtext[datelabel]{%
101 \csuse{print\thefield{labeldatesource}dateextra}}%
102 \clearfield{\thefield{labeldatesource}year}%
103 \clearfield{\thefield{labeldatesource}season}%
104 \clearfield{\thefield{labeldatesource}month}%
105 \clearfield{\thefield{labeldatesource}day}%
106 }{%
107 \usebibmacro{labeldate}%
108 \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.

```

109 \def\bbx@opt@mergedate@compact{%
110 \renewbibmacro*{date+extradate}{%
111 \iffieldundef{labelyear}}{%
112 \iflabeldateisdate{%
113 \printtext[datelabel]{\printdateextra}%
114 \clearfield{year}\clearfield{season}\clearfield{month}\clearfield{day}%
115 }{%
116 \iflabeldateisanydate{%
117 \printtext[datelabel]{%
118 \csuse{print\thefield{labeldatesource}dateextra}}%
119 \clearfield{\thefield{labeldatesource}year}%
120 \clearfield{\thefield{labeldatesource}season}%
121 \clearfield{\thefield{labeldatesource}month}%
122 \clearfield{\thefield{labeldatesource}day}%
123 }{%
124 \usebibmacro{labeldate}%
125 \iflabeldateispubstate}{\clearfield{\thefield{labeldatesource}}}}}}}}

```

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

```

126 \def\bbx@opt@mergedate@year{%
127 \renewbibmacro*{date+extradate}{%
128 \iffieldundef{labelyear}}{%
129 \usebibmacro{labeldate}%
130 \iflabeldateisdate{%
131 \clearfield{year}%
132 }{%
133 \iflabeldateisanydate{%
134 \clearfield{\thefield{labeldatesource}year}%
135 }{%
136 \iflabeldateispubstate}{\clearfield{\thefield{labeldatesource}}}}}}
137

```

- 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.

```

138 \def\bbx@opt@mergedate@basic{%
139 \renewbibmacro*{date+extradate}{%
140 \iffieldundef{Labelyear}}{%
141 \usebibmacro{labeldate}%
142 \iflabeldateisdate{%
143 \ifboolexpr{
144 test {\ifdateshavedifferentprecision{label}}
145 or
146 not test {\iffieldundef{issue}}
147 }{%
148 \clearfield{year}}%
149 }{%
150 \iflabeldateisanydate{%
151 \ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}}{%
152 \clearfield{\thefield{labeldatesource}year}}%
153 }{%
154 \iflabeldateispubstate}{\clearfield{\thefield{labeldatesource}}}%
155 }}}}

```

- 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.

```

156 \def\bbx@opt@mergedate@minimum{%
157 \renewbibmacro*{date+extradate}{%
158 \iffieldundef{Labelyear}}{%
159 \usebibmacro{labeldate}%
160 \iflabeldateisdate{%
161 \ifboolexpr{
162 test {\ifdateshavedifferentprecision{label}}
163 or
164 not test {\iffieldundef{extradate}}
165 or
166 not test {\iffieldundef{issue}}
167 }{%
168 \clearfield{year}}%
169 }{%
170 \iflabeldateisanydate{%
171 \ifboolexpr{
172 test {\ifdateshavedifferentprecision{label}{\thefield{labeldatesource}}}
173 or
174 not test {\iffieldundef{extradate}}
175 }{%
176 \clearfield{\thefield{labeldatesource}year}}%
177 }{%
178 \iflabeldateispubstate}{\clearfield{\thefield{labeldatesource}}}%
179 }}}}

```

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

```

180 \def\bbx@opt@mergedate@false{%
181 \renewbibmacro*{date+extradate}{%
182 \iffieldundef{Labelyear}}{%
183 \usebibmacro{labeldate}%

```

```

184 \iflabeldateisanydate{}{%
185 \iflabeldateispubstate{}{\clearfield{\thefield{labeldatesource}}}%
186 }}}

```

We set the default to be true/year.

```

187 \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 extravagantly named `\mknoyeardaterangefull` and `\mknoyeardaterangetrunc`.

```

188 \newrobustcmd*{\mknoyeardaterangefull}[2]{%
189 \iffieldundef{#2month}{}{%
190 \datecircaprint
191 \printtext[#2date]{%
192 \iffieldundef{#2season}{%
193 \csuse{mkbibdate#1}{}{#2month}{#2day}%
194 \blx@printtime{#2}{}%
195 }{%
196 \csuse{mkbibseasondate#1}{}{#2season}}%
197 \dateuncertainprint
198 \iffieldundef{#2endmonth}{}{%
199 \iffieldequalstr{#2endmonth}{}{%
200 \mbox{\bibdaterangesep}%
201 }{%
202 \bibdaterangesep
203 \enddatecircaprint
204 \iffieldundef{#2season}{%
205 \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
206 \blx@printtime{#2}{end}%
207 }{%
208 \csuse{mkbibseasondate#1}{}{#2endseason}}%
209 \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.

```

210 \newrobustcmd*{\mknoyeardaterangetrunc}[2]{%
211 \iffieldundef{#2month}{}{%
212 \datecircaprint
213 \printtext[#2date]{%
214 \iffieldundef{#2season}{%
215 \ifboolexpr{
216 test {\iffieldsequal{labelyear}{labelendyear}}
217 and
218 test {\iffieldsequal{#2month}{#2endmonth}}
219 }{%
220 \csuse{mkbibdate#1}{}{#2day}%
221 }{%
222 \csuse{mkbibdate#1}{}{#2month}{#2day}}%
223 }{%
224 \csuse{mkbibseasondate#1}{}{#2season}}%
225 \dateuncertainprint
226 \iffieldundef{#2endmonth}{}{%
227 \iffieldequalstr{#2endmonth}{}{%

```

```

228     \mbox{\bibdaterangesep}%
229   }{%
230     \bibdaterangesep
231     \enddatecircaprint
232     \iffieldundef{#2season}{%
233       \csuse{mkbibdate#1}{#2endmonth}{#2endday}%
234     }{%
235       \csuse{mkbibseasondate#1}{#2endseason}%
236     \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.

```

237 \xpatchcmd{\mkdaterangefull}{%
238   \iffieldundef{#2year} {\blx@nounit}%
239 }{%
240   \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
241 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch mkdaterangefull}}
242 \xpatchcmd{\mkdaterangetrunc}{%
243   \iffieldundef{#2year} {\blx@nounit}%
244 }{%
245   \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
246 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch mkdaterangetrunc}}
247 \xpatchcmd{\mkdaterangefullextra}{%
248   \iffieldundef{#2year} {\blx@nounit}%
249 }{%
250   \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
251 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch mkdaterangefullextra}}
252 \xpatchcmd{\mkdaterangetruncextra}{%
253   \iffieldundef{#2year} {\blx@nounit}%
254 }{%
255   \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
256 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch mkdaterangetruncextra}}

```

2.4.3 BIBLIOGRAPHY FORMATTING

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

```

257 \DeclareFieldFormat{shorthandwidth}{#1}

```

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

```

258 \xpretonameformat{family-given}{%
259   \iffieldannotation{inferred}{\ifnumequal{\value{listcount}}{1}{\bibopenbracket}{}}{%
260     \ifitemannotation{inferred}{\bibopenbracket}{}}{%
261   }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to prepend to family-given}}
262 \xpatchnameformat{family-given}{%
263   \usebibmacro{name:andothers}%
264 }{%
265   \ifitemannotation{pseudo}{%
266     \addspace\printtext[parens]{\bibsstring{pseudo}}%
267   }{%
268     \ifitemannotation{inferred}{\bibclosebracket}{}}{%
269   \usebibmacro{name:andothers}%
270   \iffieldannotation{inferred}{%
271     \ifboolexpr{
272       test {\ifnumequal{\value{listcount}}{\value{maxnames}}}
273       or

```

```

274     test {\ifnumequal{\value{listcount}}{\value{listtotal}}}
275     or (
276       test {\ifnumequal{\value{listcount}}{\value{minnames}}}
277       and
278       test {\ifnumgreater{\value{listtotal}}{\value{maxnames}}} )
279     }\bibclosebracket}{}%
280   }{%
281   }{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch family-given}}
282   \DeclareNameAlias{shortauthor}{family-given}
283   \DeclareNameAlias{shorteditor}{family-given}

```

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

```

284   \DeclareNameAlias{sortname}{family-given}
285   \DeclareNameAlias{author}{family-given}
286   \DeclareNameAlias{editor}{family-given}
287   \DeclareNameAlias{translator}{family-given}

```

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

```

288   \defbibenvironment{bibliography}
289     {\list
290      {}
291      {\setlength{\leftmargin}{\bibhang}%
292       \setlength{\itemindent}{-\leftmargin}%
293       \setlength{\itemsep}{\bibitemsep}%
294       \setlength{\parsep}{\bibparsep}}
295     {\endlist}
296     {\item}

```

The shorthand formatting is just like authoryear.

```

297   \defbibenvironment{shorthand}
298     {\list
299      {\printfield[shorthandwidth]{shorthand}}
300      {\setlength{\labelwidth}{\shorthandwidth}%
301       \setlength{\leftmargin}{\labelwidth}%
302       \setlength{\labelsep}{\biblabelsep}%
303       \addtolength{\leftmargin}{\labelsep}%
304       \setlength{\itemsep}{\bibitemsep}%
305       \setlength{\parsep}{\bibparsep}%
306       \renewcommand*{\makelabel}[1]{##1\hss}}
307     {\endlist}
308     {\item}

```

2.4.4 NAME AND DATE FORMATTING

We set up hashing just as in authoryear.

```

309   \InitializeBibliographyStyle{\global\undef\bbx@lasthash}

```

We ensure related entries do not interfere with the hashing.

```

310   \xapptobibmacro{begrelated}{%
311     \booltrue{bbx@inset}}%
312   {}{\wlog{WARNING: biblatex-oxref (oxyear) failed to append to begrelated}}
313   \xapptobibmacro{endrelated}{%

```

```

314 \usebibmacro*{bbx:savehash}}%
315 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to append to endrelated}}

```

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

```

316 \xpatchbibmacro{author}{%
317 \iffieldundef{authortype}%
318 }{%
319 \usebibmacro{date+extradate}%
320 \setunit*{\addspace}%
321 \iffieldundef{authortype}%
322 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch author (authortype)}}%
323 \xpatchbibmacro{author}{%
324 \global\undef\bbx@lasthash
325 }{%
326 \global\undef\bbx@lasthash
327 \usebibmacro{labeltitle}%
328 \setunit*{\addspace}%
329 \usebibmacro{date+extradate}%
330 }{\wlog{WARNING: biblatex-oxref (oxyyear) 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.

```

331 \xpatchbibmacro{namepairs}{%
332 \printnames[by#1]%
333 }{%
334 \printnames[#1]%
335 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch namepairs}}%
336 \xpatchbibmacro{author+altauthor}{%
337 \printnames{author}%
338 }{%
339 \ifboolexpr{%
340 ( not test {\ifnameundef{shortauthor}} )
341 and
342 test {\ifnumequal{\value{shortauthor}}{\value{author}}}
343 }{%
344 \usebibmacro{namepairs}{author}{shortauthor}%
345 }{%
346 \printnames{author}%
347 }%
348 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch author+altauthor}}%

```

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

```

349 \xpatchbibmacro{bbx:editor}{%
350 \usebibmacro{#1}%
351 }{%
352 \usebibmacro{date+extradate}%
353 \setunit*{\addspace}%
354 \usebibmacro{#1}%
355 }{\wlog{WARNING: biblatex-oxref (oxyyear) failed to patch bbx:editor}}%
356 \xpatchbibmacro{bbx:editor}{%
357 \global\undef\bbx@lasthash
358 }{%
359 \global\undef\bbx@lasthash
360 \usebibmacro{labeltitle}%
361 \setunit*{\addspace}%
362 \usebibmacro{date+extradate}%

```

```

363 }{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:editor (lasthash)}}%
364 \xpatchbibmacro{editor+altditor}{%
365   \printnames[byeditor]%
366 }{%
367   \printnames[editor]%
368 }{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch editor+altditor}}
369 \xpatchbibmacro{editor+altditor}{%
370   \printnames{editor}%
371 }{%
372   \ifboolexpr{%
373     ( not test {\ifnameundef{shorteditor}} )
374     and
375     test {\ifnumequal{\value{shorteditor}}{\value{editor}}}
376   }{%
377     \usebibmacro{namepairs}{editor}{shorteditor}%
378   }{%
379     \printnames{editor}%
380   }%
381 }{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch editor+altditor (shorteditor)}}%

```

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

```

382 \xpatchbibmacro{bbx:translator}{%
383   \global\undef\bbx@lasthash
384 }{%
385   \global\undef\bbx@lasthash
386   \usebibmacro{labeltitle}%
387   \setunit*\addspace}%
388 \usebibmacro{date+extradate}%
389 }{\wlog{WARNING: biblatex-oxref (oxyear) failed to patch bbx:translator (lasthash)}}%
390 \xpatchbibmacro{bbx:translator}{%
391   \usebibmacro{#1}%
392 }{%
393   \usebibmacro{date+extradate}%
394   \setunit*\addspace}%
395 \usebibmacro{#1}%
396 }{\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.

```

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

```



```

416     \setunit{\addspace}%
417   }%
418 }{%
419   \printtext[title]{\printfield[titlecase]{shorttitle}}%
420 }%
421 }{%
422   \printfield[label]%
423 }%
424 }

```

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

```

425 \xpretobibmacro{maintitle+title}{%
426   \iftoggle{blx@ox@clearedtitle}{%
427     \usebibmacro{maintitle+volume}%
428     \clearfield{maintitle}%
429     \clearfield{volume}%
430   }{}%
431 }{}{\wlog{WARNING: biblatex-oxref (oxyear) failed to prepend to maintitle+title}}
432 \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.

```

433 \xpatchbibdriver{online}{%
434   \iffieldundef{year}%
435 }{%
436   \ifboolexpr{
437     test {\iffieldundef{season}}
438     and
439     test {\iffieldundef{month}}
440   }%
441 }{}{\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.

```

442 \DeclareFieldFormat[bookinbook]{citetitle}{%
443   \ifboolexpr{
444     test {\iffieldequalstr{entrysubtype}{poem}}
445     or
446     test {\iffieldequalstr{entrysubtype}{play}}
447   }{%
448     \mkbibemph{#1}%
449   }{%
450     \mkbibquote{#1\isdot}}
451 \DeclareFieldFormat[suppperiodical,inaudio,inmusic,inmovie,invideo,online,%
452   image,manuscript,unpublished]{citetitle}{%
453   \def\currentfield{title}%
454   \ifboolexpr{
455     test {\iffieldannotation{descriptor}}
456     or (
457       test {\iffieldundef{shorttitle}}
458       and
459       test {\iffieldundef{title}}
460     )
461   }{#1}{\mkbibquote{#1\isdot}}%
462   \undef\currentfield}
463 \DeclareFieldFormat[suppperiodical,inaudio,inmusic,inmovie,invideo,online,%

```

```

464     image,manuscript,unpublished]{citetitle}{%
465 \def\currentfield{title}%
466 \ifboolexpr{
467   test {\iffieldannotation{descriptor}}
468   or (
469     test {\iffieldundef{shorttitle}}
470     and
471     test {\iffieldundef{title}}
472   )
473 }{#1}{\mkbibquote{#1\isdot}}%
474 \undef\currentfield}
475 \DeclareFieldFormat[audio,music]{citetitle}{%
476 \def\currentfield{title}%
477 \ifboolexpr{
478   test {\iffieldannotation{descriptor}}
479   or (
480     test {\iffieldundef{shorttitle}}
481     and
482     test {\iffieldundef{title}}
483   )
484 }{#1}{%
485   \iffieldequalstr{entrysubtype}{podcast}{%
486     \mkbibquote{#1\isdot}}%
487   }{%
488     \mkbibemph{#1}}}%
489 \undef\currentfield}
490 \DeclareFieldFormat[movie,video]{citetitle}{%
491 \def\currentfield{title}%
492 \ifboolexpr{
493   test {\iffieldannotation{descriptor}}
494   or (
495     test {\iffieldundef{shorttitle}}
496     and
497     test {\iffieldundef{title}}
498   )
499 }{#1}{%
500   \ifboolexpr{
501     test {\iffieldequalstr{entrysubtype}{episode}}
502     or
503     test {\iffieldequalstr{entrysubtype}{clip}}
504     or
505     test {\iffieldequalstr{entrysubtype}{webcast}}
506   }{%
507     \mkbibquote{#1\isdot}}%
508   }{%
509     \mkbibemph{#1}}}%
510 \undef\currentfield}
511 \DeclareFieldFormat[legislation,legal]{citetitle}{#1}
512 \DeclareFieldFormat[misc]%
513   {citetitle}{%
514 \def\currentfield{title}%
515 \ifboolexpr{
516   test {\iffieldannotation{descriptor}}
517   or (
518     test {\iffieldundef{shorttitle}}
519     and
520     test {\iffieldundef{title}}
521   )
522 }{#1}{%
523   \iffieldequalstr{relatedtype}{in}{%
524     \mkbibquote{#1\isdot}}%
525   }{%

```

```

526     \mkbibemph{#1}%
527     }}%
528     \undef\currentfield}

```

2.4.5 JOURNAL DIVISION FORMATTING

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

```

529     \renewcommand*{\bibpagespunct}{%
530     \ifboolexpr{
531       test {\ifentrytype{article}}
532       or
533       test {\ifentrytype{supperperiodical}}
534       or
535       test {\ifentrytype{review}}
536     }{%
537       \addcolon\space
538     }{%
539       \addcomma\space
540     }%
541   }

```

2.4.6 MANUSCRIPTS

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

```

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

```

2.4.7 SOURCE MAPS

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

```

548     \DeclareStyleSourcemap{%
549     \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.

```

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

```

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.

```

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

```

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

The page reference postnote is given after a colon.

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

3.3 Author–year style: oxyyear.cbx

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

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

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

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

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

```
22 \newbibmacro*{cite:labeldate+extradate}{%
23   \ifboolexpr{
24     test {\iffielddundef{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*{\complicatedelim}{\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*{\compctitedelim}{\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, oxyyear.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 datatype and origdatatype fields are used for prefixing the date with a description.

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

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.

```
22 \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.

```
23 \DeclareDatamodelFields[type=list,datatype=name]{jointauthor}
24 \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’.

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

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

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

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

```
29 \DeclareDatamodelEntrytypes{manuscript}
30 \DeclareDatamodelFields[type=field,datatype=literal]{catalog,dating,%
31   shortlibrary,columns, collection,shortcollection,usualtitle,shelfmark,%
32   sortshelfmark,support,columns,layer}
33 \DeclareDatamodelFields[type=list,datatype=name]{scribe,owner}
```

```
34 \DeclareDatamodelFields[type=list,datatype=literal]{origin}
35 \DeclareDatamodelEntryfields[manuscript]{catalog,dating,shortlibrary,%
36 shortcollection,columns,languages,collection,usualtitle,shelfmark,%
37 sortshelfmark,support,columns,origin,scribe,owner}
```

This data model helps with legal citations.

```
38 \DeclareDatamodelFields[type=field,datatype=date]{pardate}
39 \DeclareDatamodelFields[type=field,datatype=literal]{parreporter,parseries}
40 \DeclareDatamodelFields[type=field,datatype=integer]{parvolume}
41 \DeclareDatamodelFields[type=field,datatype=range]{parpages}
42 \DeclareDatamodelEntryfields[jurisdiction]{pardate,parreporter,parseries,%
43 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\adddot\space ed\adddot}},
44   serieseditors = {{series editors}{ser\adddot\space eds\adddot}},
45   holder       = {{holder}{holder}},
46   holders      = {{holders}{holders}},
47   editorcm     = {{editor and compiler}{ed\adddot\space and comp\adddot}},
48   editorcms    = {{editors and compilers}{eds\adddot\space and comp\adddot}},

```

- Roles expressed as actions

```

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

```

- Publication details

```

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

```

- Publication state

```

63 impressin = {{to be published in}}{to be published in}},

```

- Pagination

```

64 book = {{book}}{bk\addot}},
65 books = {{books}}{bks\addot}},
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\addot}},
75 folios = {{folios}}{fos\addot}},
76 article = {{article}}{art\addot}},
77 articles = {{articles}}{arts\addot}},
78 clause = {{clause}}{cl\addot}},
79 clauses = {{clauses}}{cls\addot}},
80 regulation = {{regulation}}{reg\addot}},
81 regulations = {{regulations}}{regs\addot}},
82 rule = {{rule}}{r\addot}},
83 rules = {{rules}}{rr\addot}},
84 booktotal = {{book}}{bk\addot}},
85 booktotals = {{books}}{bks\addot}},
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\addot}},
95 foliototals = {{folios}}{fos\addot}},
96 articletotal = {{article}}{art\addot}},
97 articletotals = {{articles}}{arts\addot}},

```

```

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

```

- 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\addot p\addot}},
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\addot}},
117  pseudo         = {{Pseudo-}}{Ps\addot-}},
118  urldown        = {{downloaded}}{downloaded}},

```

- Country names, patents, and patent requests,

```

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

```

- These are borrowed from other styles.

```

122  1column         = {{one column}}{1\addnbspace col\addot}},
123  2column         = {{two columns}}{2\addnbspace col\addot}},
124  inflayer        = {{inferior layer}}{inf\adddot space lay\addot}},
125  suplayer        = {{superior layer}}{sup\adddot space lay\addot}},
126  paper           = {{paper}}{pap\addot}},
127  papyrus         = {{papyrus}}{papy\addot}},
128  pergament       = {{pergament}}{perg\addot}},
129  eucase          = {{Case}}{Case}},
130  eujoinedcases   = {{Joined Cases}}{Joined Cases}},
131  commissiondecision = {{Commission Decision}}{Commission Decision}},
132  application      = {{Application}}{App\addot}},
133  order           = {{Order}}{Ord\addot}},
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\addot}},
141 bycompiler = {{compiled by}}{comp\addot}},
142 byfounder = {{founded by}}{found\addot}},
143 bycontinuator = {{continued by}}{cont\addot}},
144 byredactor = {{redacted by}}{red\addot}},
145 byreviser = {{revised by}}{rev\addot}},
146 byreviewer = {{reviewed by}}{rev\addot}},
147 bycollaborator = {{in collaboration with}}{in collab\addotsspace with}},
148 bytranslator = {{translated \lbox@lfromlang\ by}}{trans\addot\ \lbox@sfromlang}},
149 bycommentator = {{commented by}}{comm\addot}},
150 byannotator = {{annotated by}}{annot\addot}},
151 byeditortr = {{edited and translated \lbox@lfromlang\ by}}%
152 {ed\addotsspace and trans\addot\ \lbox@sfromlang}},
153 byeditorco = {{edited and commented by}}%
154 {ed\addotsspace and comm\addot}},
155 byeditoran = {{edited and annotated by}}%
156 {ed\addotsspace and annot\addot}},
157 byeditorin = {{edited, with an introduction, by}}%
158 {ed.\addotsspace with introduction}},
159 byeditorfo = {{edited, with a foreword, by}}%
160 {ed.\addotsspace with foreword}},
161 byeditoraf = {{edited, with an afterword, by}}%
162 {ed.\addotsspace with afterword}},
163 byeditortrco = {{edited, translated \lbox@lfromlang\finalandcomma\ and commented by}}%
164 {ed.,\addabbrvspace trans\addot\ \lbox@sfromlang\finalandcomma\ and
↵ comm\addot}},
165 byeditortran = {{edited, translated \lbox@lfromlang\finalandcomma\ and annotated by}}%
166 {ed.,\addabbrvspace trans\addot\ \lbox@sfromlang\finalandcomma\ and
↵ annot\addot}},
167 byeditortrin = {{edited and translated \lbox@lfromlang, with an introduction, by}}%
168 {with introduction, ed\addotsspace and trans\addot\ \lbox@sfromlang}},
169 byeditortrfo = {{edited and translated \lbox@lfromlang, with a foreword, by}}%
170 {with foreword, ed\addotsspace and trans\addot\ \lbox@sfromlang}},
171 byeditortraf = {{edited and translated \lbox@lfromlang, with an afterword, by}}%
172 {with afterword, ed\addotsspace and trans\addot\ \lbox@sfromlang}},
173 byeditorcoin = {{edited and commented, with an introduction, by}}%
174 {with introduction, ed\addotsspace and comm\addot}},
175 byeditorcofo = {{edited and commented, with a foreword, by}}%
176 {with foreword, ed\addotsspace and comm\addot}},
177 byeditorcoaf = {{edited and commented, with an afterword, by}}%
178 {with afterword, ed\addotsspace and comm\addot}},
179 byeditoranin = {{edited and annotated, with an introduction, by}}%
180 {with introduction, ed\addotsspace and annot\addot}},
181 byeditoranfo = {{edited and annotated, with a foreword, by}}%
182 {with foreword, ed\addotsspace and annot\addot}},
183 byeditoranaf = {{edited and annotated, with an afterword, by}}%
184 {with afterword, ed\addotsspace and annot\addot}},
185 byeditortrcoin = {{edited, translated \lbox@lfromlang\finalandcomma\ and commented, with
↵ an introduction, by}}%
186 {with introduction, ed.\addabbrvspace trans\addot\
↵ \lbox@sfromlang\finalandcomma\ and comm\addot}},
```

```

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

```

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

```

219 withinroduction = {{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 withinroduction = {{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\adddotsspace as}},

```



```

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

```

There is also a different abbreviation for ‘paragraph’.

```

235 paragraph = {{paragraph}{para\addot}},
236 paragraphs = {{paragraphs}{paras\addot}},

```

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

```

Languages are abbreviated.

```

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