

biblatex-bath: Harvard referencing style as recommended by the University of Bath Library

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Package v7.0 – 1 April 2025

1 Introduction

This package provides a **biblatex** style to format reference lists in the **Harvard style** recommended by the University of Bath Library.

1.1 Installation

The files you need are included in the zip archive available from **GitHub**. If you use the zip archive from **CTAN**, you will need to run `luatex biblatex-bath.dtx` to generate them.

You can use this style simply by copying all the `.bbx`, `.cbx`, `.dbx` and `.lbx` files into your working directory, that is, the directory holding the main `.tex` file for your document. If you want the style to be available for all your documents without having to copy the files over each time, you can install them using the instructions below.

1.1.1 Managed way

The latest stable release of `biblatex-bath` has been packaged for TeX Live and MiKTeX. If you are running TeX Live and have `tlmgr` installed, you can install the package simply by running `tlmgr install biblatex-bath`. If you are running MiKTeX, you can install the package by running `mpm --install=biblatex-bath`. Both `tlmgr` and `mpm` have GUI versions that you might find friendlier.

1.1.2 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`
 - `bath.bbx`, `bath.cbx`, `bath.dbx`
 - `english-bath.lbx`, `british-bath.lbx`
 - `biblatex-bath.bib`
 - `biblatex-bath.ins`
- Running `make` generates the above files and also `biblatex-bath.pdf`. Ensure you have (at least) the `luatexja`, `adobemapping` and `ipaex` packages installed first.
- 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`.

*To contact the maintainer about this package, please visit the repository where the code is hosted: <https://github.com/alex-ball/bathbib>.

1.1.3 Manual way

You do not need to follow the first step if you downloaded the zip archive from [GitHub](#). You do not need to follow the second step if you already have the PDF documentation.

1. Run `luatex biblatex-bath.dtx` to generate the source files.
2. Compile `biblatex-bath.dtx` with [LuaLaTeX](#) and [Biber](#) to generate the documentation. You will need, among other things, the [luatexja](#), [adobemapping](#) and [haranoaji](#) packages installed; this is just for the documentation, not for the biblatex style itself.
3. If you are using TeX Live, find your home TeX tree using the following command at the command prompt/terminal:

```
kpsewhich -var-value=TEXMFHOME
```

If you are using MikTeX, consult the MikTeX manual entry for [integrating local additions](#). You can use one of the roots (TeX trees) already defined – preferably one of the User roots – or set up a new one.

4. Move the files to your TeX tree as follows:
 - `source/latex/biblatex-bath`: `biblatex-bath.dtx`, `(biblatex-bath.ins)`
 - `tex/latex/biblatex-bath`: `bath.bbx`, `bath.cbx`, `bath.dbx`, `english-bath.lbx`, `british-bath.lbx`
 - `doc/latex/biblatex-bath`: `biblatex-bath.pdf`, `README.md`
5. You may then have to update your installation’s file name database before TeX and friends can see the files.

2 Using the style

This style has been tested with `biblatex` versions 3.12 and 3.14.

To use the style, specify it when you load `biblatex`. To get the sorting order of your *citations* right, specify the `ynt` sorting scheme. To avoid possible inconsistencies (e.g. in how disambiguation letters are assigned), force all entries to use the global reference context:

```
\usepackage[style=bath,sorting=ynt]{biblatex}
\assignrefcontextentries[]{*}
```

Remember also to specify your `.bib` file in the preamble:

```
\addbibresource{file.bib}
```

To get the sorting order of your *references* right, create a new reference context just before you print your bibliography, using the `nyt` sorting scheme:

```
\newrefcontext[sorting=nyt]
\printbibliography
```

If you forget these extra steps, the `nyt` sorting scheme will be used throughout.

To make a citation in the text, use the key that corresponds to the entry in your `.bib` file:

```
While collections can be supplemented by other means \autocite{devlin.etal2021ipp},
the absence of an invisible collection amongst historians is noted by
\textcite[556]{stieg1981inh}. It may be, as \textcite{burchard1965hhl} points
out, that they have no assistants or are reluctant to delegate, or it may be
down to economic factors \autocite{adams2009tc1, adams2014tc2, adams2017tc3,
gb.pa2014}\dots
```

While collections can be supplemented by other means (Devlin, Martin and Ostrovnaya, 2021), the absence of an invisible collection amongst historians is noted by Stieg (1981b, p.556). It may be, as Burchard (1965) points out, that they have no assistants or are reluctant to delegate, or it may be down to economic factors (Adams, 2009; 2014; *Pensions Act 2014*; Adams, 2017)...

Please refer to the documentation for `biblatex` for the full range of commands available for in-text citations.

It is strongly recommended to use Biber in place of BibTeX to process your references, as the style relies on Biber functionality to deal with some of the more exotic types of entry.

3 Breaking changes between versions

The following sections list implementation changes that might affect the way in which you write your bibliography database files.

In addition to the changes listed, when upgrading between major versions, you should expect some changes in formatting relating to the evolution of the Harvard (Bath) style itself. Some of the style's internal settings and structures may also change without warning.

3.1 Version 2

- The code for styling legal references has been completely overhauled, so you can represent them more semantically in your bibliography file. The examples below show the fields you should now use. As far as possible they have been made consistent with the `biblatex-oscola` style, a specialist style implementing the *Oxford Standard for the Citation of Legal Authorities*, to enable the same entries to be used with both styles.

For the sake of backwards compatibility, the version 1 semantics still work, but should be considered deprecated; support may be withdrawn in future (major) versions of this style.

- In version 1, the `titleaddon` field was printed unadorned, so you had to supply your own brackets. This was to allow greater freedom to 'hack' entries.

With version 2, you should not need to resort to such dirty tricks, so the style now applies the brackets for you, in common with styles such as `biblatex-apa`. Again, for the sake of backwards compatibility, before it does this it strips off any brackets you may have added by hand around your field value.

There is now a companion BibTeX style available (`bathx` in version 2+ of the `bath-bst` package) which is compatible with this style in the sense that it will render the same `.bib` file the same way, so long as some adjustments are made that won't affect the `biblatex` rendering (mainly concerning the handling of dates).

3.2 Version 3

- Journal titles are now coerced to sentence case, so any capital letters you want to keep need to be protected with braces.
- Entries of type `unpublished` are now explicitly marked as unpublished.
- With entry types that usually expect an `institution` or `organization` instead of a `publisher`, if you gave a `publisher` in earlier versions the `institution/organization` would be ignored. Now they are printed before the publication block.

- Some changes to the Harvard (Bath) style cannot be applied automatically (e.g. the update to how standards are referenced), so you may need to update your .bib file accordingly.



3.3 Version 5

- Series names (except those in `legislation` and `jurisdiction` entries) are now coerced to sentence case, so any capital letters you want to keep need to be protected with braces.
- The ‘[Online]’ tag is now also triggered by `urldate/urlyear`.
- The style now sets `\bibhang` to `0pt` instead of `\parindent` (or `1em`).

3.4 Version 6

- Entry type clarifications such as ‘Photograph’ and ‘Computer program’ are now handled differently from translated titles, in particular as regards their position relative to the version, and how they interact with the ‘[Online]’ tag. As a result, they should now be placed in `entrysubtype` rather than `titleaddon`.
- All elements of the title block (including `titleaddon`, `version`, and `entrysubtype`) now move to the head of the reference in the absence of an author/editor.


4 Examples


The examples below are shown in three parts. The first, marked with , shows an extract from the *Referencing guide: Harvard Bath* or *Referencing images*. The second, marked with , shows the reference as formatted by `biblatex`. The last shows how the reference was entered in the .bib file. The bottom right corner shows the source of the example: ‘RX’ indicates the ‘Reference examples (A-Z)’ section of the Guide; ‘RL’ indicates the ‘Organise a reference list’ section of the Guide; ‘RI’ indicates *Referencing images*.

You may notice that the examples tend to use BibTeX aliases and conventions for fields (e.g. `address`, `journal`, `year`) rather than the native `biblatex` fields. This is simply to ease transitions to and from BibTeX, and not a symptom of recalcitrance on the part of the author.

4.1 Books and book chapters

Book with author(s)


 Rang, H.P., Dale, M.M., Ritter, J.M., Flower, R.J. and Henderson, G., 2012. *Rang and Dale’s pharmacology*. 7th ed. Edinburgh: Elsevier Churchill Livingstone.

 Rang, H.P., Dale, M.M., Ritter, J.M., Flower, R.J. and Henderson, G., 2012. *Rang and Dale’s pharmacology*. 7th ed. Edinburgh: Elsevier Churchill Livingstone.

```
@book{rang.etal2012rdp,
  author = {Rang, H. P. and Dale, M. M. and Ritter, J. M. and Flower, R. J. and Henderson, G.},
  year = {2012},
  title = {Rang and {Dale's} Pharmacology},
  edition = {7},
  address = {Edinburgh},
  publisher = {Elsevier Churchill Livingstone}}
```

RX

 Open University, 1972. *Electricity and magnetism*. Bletchley: Open University Press.

 Open University, 1972. *Electricity and magnetism*. Bletchley: Open University Press.

```
@book{ou1972em,
  author = {{Open University}},
  year = {1972},
  title = {Electricity and Magnetism},
  address = {Bletchley},
  publisher = {Open University Press}}
```

RX

- 📖 Solomon, M.R., Askegaard, S., Hogg, M. and Bamossy, G.J., 2019. *Consumer behaviour: a European perspective*. 7th ed. Harlow: Pearson.
- ⚙️ Solomon, M.R., Askegaard, S., Hogg, M. and Bamossy, G.J., 2019. *Consumer behaviour: a European perspective*. 7th ed. Harlow: Pearson.

```
@book{solomon.etal2019cbe,
  author = {Solomon, M. R. and Askegaard, S. and Hogg, M. and Bamossy, G. J.},
  year = {2019},
  title = {Consumer Behaviour: a {European} Perspective},
  edition = {7},
  address = {Harlow},
  publisher = {Pearson}}
```

RX

Book with editor(s) instead of author(s)

- 📖 Rothman, K.J., Greenland, S. and Lash, T.L., eds, 2008. *Modern epidemiology*. 3rd ed. Philadelphia, Pa.: Lippincott Williams & Wilkins.
- ⚙️ Rothman, K.J., Greenland, S. and Lash, T.L., eds, 2008. *Modern epidemiology*. 3rd ed. Philadelphia, Pa.: Lippincott Williams & Wilkins.

```
@book{rothman.etal2008me,
  editor = {Kenneth J. Rothman and Sander Greenland and Timothy L. Lash},
  year = {2008},
  title = {Modern Epidemiology},
  edition = {3},
  address = {Philadelphia, Pa.},
  publisher = {Lippincott Williams \& Wilkins}}
```

RX

Electronic book

- 📖 Haynes, W.M., ed., 2014. *CRC handbook of chemistry and physics* [Online]. 94th ed. Boca Raton, Fla.: CRC Press/Taylor and Francis. Available from: <http://www.hbcnetbase.com> [Accessed 16 June 2016].
- ⚙️ Haynes, W.M., ed., 2014. *CRC handbook of chemistry and physics* [Online]. 94th ed. Boca Raton, Fla.: CRC Press/Taylor and Francis. Available from: <http://www.hbcnetbase.com> [Accessed 16 June 2016].

```
@book{haynes2014crc,
  editor = {Haynes, W. M.},
  year = {2014},
  title = {{CRC} Handbook of Chemistry and Physics},
  edition = {94},
  address = {Boca Raton, Fla.},
  publisher = {CRC Press/{Taylor and Francis}},
  url = {http://www.hbcnetbase.com},
  urldate = {2016-06-16}}
```

RX

📖 Blockley, D., 2021. *Engineering: a very short introduction* [Online]. Oxford: Oxford University Press. Available from: <https://www.amazon.co.uk/kindle> [Accessed 30 June 2021].

⚙️ Blockley, D., 2021. *Engineering: a very short introduction* [Online]. Oxford: Oxford University Press. Available from: <https://www.amazon.co.uk/kindle> [Accessed 30 June 2021].

```
@book{blockley2021evs,  
  author = {Blockley, D.},  
  year = {2021},  
  title = {Engineering: a Very Short Introduction},  
  address = {Oxford},  
  publisher = {Oxford University Press},  
  url = {https://www.amazon.co.uk/kindle},  
  urldate = {2021-06-30}}
```

RX

Book known by its title

💡 Use the most appropriate reference entry type instead of, say, book or collection.

📖 British National Formulary, 2020. 79th ed. London: Pharmaceutical Press.

⚙️ British National Formulary, 2020a. 79th ed. London: Pharmaceutical Press.

```
@reference{bnf2020,  
  year = {2020},  
  title = {{British National Formulary}},  
  edition = {79},  
  address = {London},  
  publisher = {Pharmaceutical Press}}
```

RX

📖 British National Formulary, 2020. 79th ed. *Aspirin*. London: Pharmaceutical Press, pp.280–281.

⚙️ British National Formulary, 2020b. 79th ed. *Aspirin*. London: Pharmaceutical Press, pp.280–281.

```
@inreference{aspirin2020bnf,  
  title = {Aspirin},  
  year = {2020},  
  booktitle = {{British National Formulary}},  
  edition = {79},  
  address = {London},  
  publisher = {Pharmaceutical Press},  
  pages = {280-281}}
```

RX

📖 British National Formulary, 2019. *Aspirin* [Online]. London: Pharmaceutical Press. Available from: https://www.medicinescomplete.com/#/content/bnf/_456850132 [Accessed 26 November 2019].

⚙️ British National Formulary, 2019. *Aspirin* [Online]. London: Pharmaceutical Press. Available from: https://www.medicinescomplete.com/#/content/bnf/_456850132 [Accessed 26 November 2019].

```
@inreference{aspirin2019bnf,  
  title = {Aspirin},  
  year = {2019},  
  booktitle = {{British National Formulary}},  
  address = {London},  
  publisher = {Pharmaceutical Press},  
  url = {https://www.medicinescomplete.com/#/content/bnf/_456850132},  
  urldate = {2019-11-26}}
```

RX

- ❶ If you use the BibT_EX backend, you will have to repeat the contents of the `booktitle` field in the `sorttitle` field yourself to ensure the entry is placed correctly in the reference list. If you use Biber, this is done automatically for you.

Chapter/paper from a collection (by different authors) in an edited book

- 📖 Burchard, J.E., 1965. How humanists use a library. In: C.F.J. Overhage and J.R. Harman, eds. *Intrex: report on a planning conference and information transfer experiments*. Cambridge, Mass.: MIT Press, pp.41–87.
- ⚙️ Burchard, J.E., 1965. How humanists use a library. In: C.F.J. Overhage and J.R. Harman, eds. *Intrex: report on a planning conference and information transfer experiments*. Cambridge, Mass.: MIT Press, pp.41–87.

```
@incollection{burchard1965hhl,  
  author = {Burchard, J. E.},  
  year = {1965},  
  title = {How Humanists use a Library},  
  editor = {C. F. J. Overhage and J. R. Harman},  
  booktitle = {Intrex},  
  booksubtitle = {Report on a Planning Conference and Information Transfer Experiments},  
  address = {Cambridge, Mass.},  
  publisher = {MIT Press},  
  pages = {41-87}}
```

RL

- 📖 Reid, D.R., 1967. Physical testing of polymer films. In: S.H. Pinner, ed. *Modern packaging films*. London: Butterworths, pp.143–183.
- ⚙️ Reid, D.R., 1967. Physical testing of polymer films. In: S.H. Pinner, ed. *Modern packaging films*. London: Butterworths, pp.143–183.

```
@incollection{reid1967ptp,  
  author = {D. R. Reid},  
  year = {1967},  
  title = {Physical Testing of Polymer Films},  
  editor = {S. H. Pinner},  
  booktitle = {Modern Packaging Films},  
  address = {London},  
  publisher = {Butterworths},  
  pages = {143-183}}
```

RX

4.2 Articles and periodicals

Journal article

- 📖 Stieg, M.F., 1981a. Continuing education and the reference librarian in the academic and research library. *Library journal*, 105(22), pp.2547–2551.
- ⚙️ Stieg, M.F., 1981a. Continuing education and the reference librarian in the academic and research library. *Library journal*, 105(22), pp.2547–2551.

```
@article{stieg1981cer,  
  author = {Stieg, M. F.},  
  year = {1981},  
  title = {Continuing Education and the Reference Librarian in the Academic and Research Library},  
  journal = {Library Journal},  
  volume = {105},  
  number = {22},  
  pages = {2547-2551}}
```

RL

📖 Stieg, M.F., 1981b. The information needs of historians. *College and research libraries*, 42(6), pp.549–560.

⚙️ Stieg, M.F., 1981b. The information needs of historians. *College and research libraries*, 42(6), pp.549–560.

```
@article{stieg1981inh,  
  author = {Stieg, M. F.},  
  year = {1981},  
  title = {The Information Needs of Historians},  
  journal = {College and Research Libraries},  
  volume = {42},  
  number = {6},  
  pages = {549-560}}
```

RL

📖 Newman, R., 2010. Malaria control beyond 2010. *British medical journal*, 341(7765), pp.157–208.

⚙️ Newman, R., 2010. Malaria control beyond 2010. *British medical journal*, 341(7765), pp.157–208.

```
@article{newman2010mcb,  
  author = {Newman, R.},  
  year = {2010},  
  title = {Malaria control beyond 2010},  
  journal = {{British} Medical Journal},  
  volume = {341},  
  number = {7765},  
  pages = {157-208}}
```

RX



📖 Wetzstein, G., Ozcan, A., Gigan, S., Fan, S., Englund, D., Soljacic, M., Denz, C., Miller, D.A.B. and Psaltis, D., 2020. Inference in artificial intelligence with deep optics and photonics. *Nature*, 588(7836), pp.39–47.

⚙️ Wetzstein, G., Ozcan, A., Gigan, S., Fan, S., Englund, D., Soljacic, M., Denz, C., Miller, D.A.B. and Psaltis, D., 2020. Inference in artificial intelligence with deep optics and photonics. *Nature*, 588(7836), pp.39–47.

```
@article{wetzstein.etal2020iai,  
  author = {Wetzstein, G. and Ozcan, A. and Gigan, S. and Fan, S. and  
    Englund, D. and Soljacic, M. and Denz, C. and Miller, D. A. B. and  
    Psaltis, D.},  
  year = {2020},  
  title = {Inference in Artificial Intelligence with Deep Optics and Photonics},  
  journal = {Nature},  
  volume = {588},  
  number = {7836},  
  pages = {39-47}}
```



RX

Electronic journal article

-  Devlin, S.M., Martin, A. and Ostrovnaya, I., 2021. Identifying prognostic pairwise relationships among bacterial species in microbiome studies. *PLOS computational biology* [Online], 17(11). Available from: <https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1009501> [Accessed 9 December 2021].
-  Devlin, S.M., Martin, A. and Ostrovnaya, I., 2021. Identifying prognostic pairwise relationships among bacterial species in microbiome studies. *PLOS computational biology* [Online], 17(11). Available from: <https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1009501> [Accessed 9 December 2021].

```
@article{devlin.etal2021ipp,  
  author = {Devlin, S. M. and Martin, A. and Ostrovnaya, I.},  
  year = {2021},  
  title = {Identifying Prognostic Pairwise Relationships Among Bacterial  
    Species in Microbiome Studies},  
  journal = {{PLOS} Computational Biology},  
  volume = {17},  
  number = {11},  
  url = {https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1009501},  
  urldate = {2021-12-09}}
```

RX

-  Steward, S., Connelly, D. and Robinson, J., 2020. Everything you should know about the coronavirus outbreak. *The pharmaceutical journal* [Online]. Available from: <https://www.pharmaceutical-journal.com/news-and-analysis/features/everything-you-should-know-about-the-coronavirus-outbreak/20207629.article> [Accessed 30 April 2020].
-  Steward, S., Connelly, D. and Robinson, J., 2020. Everything you should know about the coronavirus outbreak. *The pharmaceutical journal* [Online]. Available from: <https://www.pharmaceutical-journal.com/news-and-analysis/features/everything-you-should-know-about-the-coronavirus-outbreak/20207629.article> [Accessed 30 April 2020].

```
@article{steward.etal2020eys,  
  author = {Steward, S. and Connelly, D. and Robinson, J.},  
  year = {2020},  
  title = {Everything You Should Know About the Coronavirus Outbreak},  
  journal = {The Pharmaceutical Journal},  
  url = {https://www.pharmaceutical-journal.com/news-and-analysis/features/everything-you-should-know-about-the-coronavirus-outbreak/20207629.article},  
  urldate = {2020-04-30}}
```

RX

- 📄 Liontou, C., Kontopodis, E., Oikonomidis, N., Maniotis, C., Tassopoulos, A., Tsiafoutis, I., Lazaris, E. and Koutouzis, M., 2019. Distal radial access: a review article. *Cardiovascular revascularization medicine* [Online], in press. Available from: <https://www.sciencedirect.com/science/article/pii/S1553838919303367> [Accessed 19 June 2019].
- ⚙️ Liontou, C., Kontopodis, E., Oikonomidis, N., Maniotis, C., Tassopoulos, A., Tsiafoutis, I., Lazaris, E. and Koutouzis, M., 2019. Distal radial access: a review article. *Cardiovascular revascularization medicine* [Online], in press. Available from: <https://www.sciencedirect.com/science/article/pii/S1553838919303367> [Accessed 19 June 2019].

```
@article{liontou.etal2019dra,
  author = {Liontou, C. and Kontopodis, E. and Oikonomidis, N. and Maniotis, C. and
    Tassopoulos, A. and Tsiafoutis, I. and Lazaris, E. and Koutouzis, M.},
  year = {2019},
  title = {Distal Radial Access: a Review Article},
  journal = {Cardiovascular Revascularization Medicine},
  pubstate = {inpress},
  url = {https://www.sciencedirect.com/science/article/pii/S1553838919303367},
  urldate = {2019-06-19}}
```

RX

💡 If citing an article yet to be officially published, use the `pubstate` field with the keyword `inpress` for ‘in press’ and `inpreparation` or `submitted` (whichever is more accurate) for ‘preprint’.

Preprint or trial study in a digital repository

- 📄 Shah, I. and Corrick, I., 2016. *How should central banks respond to non-neutral inflation expectations?* Bath: University of Bath. *OPUS* [Online]. Available from: <http://opus.bath.ac.uk> [Accessed 4 May 2016].
- ⚙️ Shah, I. and Corrick, I., 2016. *How should central banks respond to non-neutral inflation expectations?* Bath: University of Bath. *OPUS* [Online]. Available from: <http://opus.bath.ac.uk> [Accessed 4 May 2016].

```
@report{shah.corrick2016hsc,
  author = {Shah, I. and Corrick, I.},
  year = {2016},
  title = {How should central banks respond to non-neutral inflation expectations?},
  address = {Bath},
  institution = {University of Bath},
  library = {OPUS},
  url = {http://opus.bath.ac.uk},
  urldate = {2016-05-04}}
```

RX

- 📖 Ganju, V., 2021. *A study of EnGeneIC Dream Vectors (EDV's) packaged with the chemotherapy, E-EDV-D682 given simultaneously as non-targeted EDVs carrying an immune enhancer called EDV-GC, in participants with advanced pancreatic and other cancers whose disease has progressed after one or two treatment regimes, or where other standard therapies are not appropriate.* Sydney: University of Sydney. *Australian and New Zealand Clinical Trials Registry* [Online]. Available from: <http://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=365258> [Accessed 29 April 2021].
- ⚙ Ganju, V., 2021. *A study of EnGeneIC Dream Vectors (EDV's) packaged with the chemotherapy, E-EDV-D682 given simultaneously as non-targeted EDVs carrying an immune enhancer called EDV-GC, in participants with advanced pancreatic and other cancers whose disease has progressed after one or two treatment regimes, or where other standard therapies are not appropriate.* Sydney: University of Sydney. *Australian and New Zealand Clinical Trials Registry* [Online]. Available from: <http://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=365258> [Accessed 29 April 2021].

```
@report{ganju2021sed,
  author = {Ganju, V.},
  year = {2021},
  title = {A study of {EnGeneIC} {Dream} {Vectors} {(EDV's)} packaged with the chemotherapy,
    {E-EDV-D682} given simultaneously as non-targeted {EDVs} carrying an immune enhancer
    called {EDV-GC}, in participants with advanced pancreatic and other cancers whose disease
    has progressed after one or two treatment regimes, or where other standard therapies are
    not appropriate},
  address = {Sydney},
  institution = {University of Sydney},
  library = {Australian and New Zealand Clinical Trials Registry},
  url = {http://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=365258},
  urldate = {2021-04-29}}
```

RX

💡 The Harvard (Bath) style treats preprints as grey literature, and so the `report` entry type is the best match semantically. Use `library` to specify the name of the preprint repository.

In standard biblatex, you would typically use the natural entry type for the work and provide preprint details using the `eprinttype`, `eprintclass` and `eprint` fields.

Newspaper article

- 📖 Haurant, S., 2004. Britain's borrowing hits £1 trillion. *The Guardian*, 29 July, p.16c.
- ⚙ Haurant, S., 2004. Britain's borrowing hits £1 trillion. *The Guardian*, 29 July, p.16c.

```
@article{haurant2004bbh,
  author = {Haurant, S.},
  date = {2004-07-29},
  title = {Britain's Borrowing Hits \pounds 1 Trillion},
  journal = {{The Guardian}},
  pages = {16c}}
```

RX

- 📖 The Independent, 1992. Picking up the bills. *The Independent*, 4 June, p.28a.
- ⚙ The Independent, 1992. Picking up the bills. *The Independent*, 4 June, p.28a.

```
@article{independent1992pub,
  author = {{The Independent}},
  date = {1992-06-04},
  title = {Picking Up the Bills},
  journal = {{The Independent}},
  pages = {28a}}
```

RX

📄 Cogley, M., 2020. Corporate confidence slumps to record low. *The Telegraph* [Online], 4 May. Available from: <https://www.telegraph.co.uk/business/2020/05/03/corporate-confidence-slumps-all-time-low/> [Accessed 5 May 2020].

⚙️ Cogley, M., 2020. Corporate confidence slumps to record low. *The Telegraph* [Online], 4 May. Available from: <https://www.telegraph.co.uk/business/2020/05/03/corporate-confidence-slumps-all-time-low/> [Accessed 5 May 2020].

```
@article{cogley2020ccs,  
  author = {Cogley, M.},  
  date = {2020-05-04},  
  title = {Corporate Confidence Slumps to Record Low},  
  journal = {{The Telegraph}},  
  url = {https://www.telegraph.co.uk/business/2020/05/03/corporate-confidence-slumps-all-time-low/},  
  urldate = {2020-05-05}}
```

RX

4.3 Conference papers

Conference paper (when proceedings have a named editor)

📄 Crawford, G.I., 1965. Oxygen in metals. In: J.M.A. Lenihan and S.J. Thompson, eds. *Activation analysis: proceedings of a NATO Advanced Study Institute*, 2–4 August 1964, Glasgow. London: Academic Press, pp.113–118.

⚙️ Crawford, G.I., 1965. Oxygen in metals. In: J.M.A. Lenihan and S.J. Thompson, eds. *Activation analysis: proceedings of a NATO Advanced Study Institute*, 2–4 August 1964, Glasgow. London: Academic Press, pp.113–118.

```
@inproceedings{crawford1965oim,  
  author = {Crawford, G. I.},  
  year = {1965},  
  title = {Oxygen in Metals},  
  editor = {J. M. A. Lenihan and S. J. Thompson},  
  booktitle = {Activation Analysis},  
  booksubtitle = {Proceedings of a {NATO} {Advanced} {Study} {Institute}},  
  eventdate = {1964-08-02/1964-08-04},  
  venue = {Glasgow},  
  address = {London},  
  publisher = {Academic Press},  
  pages = {113-118}}
```

RX

Conference paper (when proceedings have no named editor or are part of a major series)

📄 Soper, D., 1972. Review of bracken control experiments with asulam. *Proceedings of the 11th British Weed Control Conference*, 15–17 November 1972, Brighton. Brighton: University of Sussex, pp.24–31.


⚙️ Soper, D., 1972. Review of bracken control experiments with asulam. *Proceedings of the 11th British Weed Control Conference*, 15–17 November 1972, Brighton. Brighton: University of Sussex, pp.24–31.


```
@inproceedings{soper1972rbc,  
  author = {Soper, D.},  
  year = {1972},  
  title = {Review of Bracken Control Experiments with Asulam},  
  booktitle = {Proceedings of the 11th {British} {Weed} {Control} {Conference}},  
  eventdate = {1972-11-15/1972-11-17},  
  venue = {Brighton},  
  address = {Brighton},  
  publisher = {University of Sussex},  
  pages = {24-31}}
```

RX

4.4 Grey literature

Thesis/dissertation


 Burrell, J.G., 1973. *The importance of school tours in education*. Thesis (M.A.). Queen's University, Belfast.


 Burrell, J.G., 1973. *The importance of school tours in education*. Thesis (M.A.). Queen's University, Belfast.

```
@thesis{burrell1973ist,
  author = {Burrell, J. G.},
  year = {1973},
  title = {The Importance of School Tours in Education},
  type = {Thesis \parenttext{M.A.}},
  school = {Queen's University, Belfast}}
```

RX


Report, working paper, or research briefing


 UNESCO, 1993. *General information programme and UNISIST*. (PGI-93/WS/22). Paris: UNESCO.

 UNESCO, 1993. *General information programme and UNISIST*. (PGI-93/WS/22). Paris: UNESCO.

```
@report{unesco1993gip,
  author = {{UNESCO}},
  year = {1993},
  title = {General Information Programme and {UNISIST}},
  address = {Paris},
  institution = {UNESCO},
  number = {PGI-93/WS/22}}
```


RX


 BRE, 2007. *Designing quality buildings: a BRE guide*. (Report 497). Bracknell: BRE.

 BRE, 2007. *Designing quality buildings: a BRE guide*. (Report 497). Bracknell: BRE.

```
@techreport{bre2007dqb,
  author = {{BRE}},
  year = {2007},
  title = {Designing Quality Buildings: a {BRE} Guide},
  address = {Bracknell},
  institution = {BRE},
  type = {Report},
  number = {497}}
```


RX

 Deneulin, S. and Dinerstein, A.C., 2010. *Hope movements: social movements in the pursuit of human development*. (Bath papers in international development and wellbeing, no. 8). Bath: University of Bath.

 Deneulin, S. and Dinerstein, A.C., 2010. *Hope movements: social movements in the pursuit of human development*. (Bath papers in international development and wellbeing, no. 8). Bath: University of Bath.

```
@report{deneulin.dinerstein2010hms,
  author = {Deneulin, S. and Dinerstein, A. C.},
  year = {2010},
  title = {Hope Movements: Social Movements in the Pursuit of Human Development},
  address = {Bath},
  institution = {University of Bath},
  series = {Bath Papers in International Development and Wellbeing},
  number = {no.-8}}
```

RX

-  The style inserts a comma between the `series` and `number` fields, but does not insert one between `type` and `number`.

Standard

📖 BSI, 1990. *BS 5605:1990 Recommendations for citing and referencing published material*. London: BSI.

⚙️ BSI, 1990. *BS 5605:1990 Recommendations for citing and referencing published material*. London: BSI.

```
@standard{bs5605:1990,  
  author = {{BSI}},  
  year = {1990},  
  title = {{BS}-5605:1990 {Recommendations} for Citing and Referencing Published Material},  
  address = {London},  
  organization = {BSI}}
```

RX

📖 ASTM, 2019. *ASTM D1655 - 19 Standard specification for aviation turbine fuels*. West Conshohocken, Pa.: ASTM.

⚙️ ASTM, 2019. *ASTM D1655 - 19 Standard specification for aviation turbine fuels*. West Conshohocken, Pa.: ASTM.

```
@standard{astm.d1655,  
  author = {{ASTM}},  
  year = {2019},  
  title = {{ASTM-D1655} - 19 {Standard} Specification for Aviation Turbine Fuels},  
  address = {West Conshohocken, Pa.},  
  organization = {ASTM}}
```

RX

Patent

📖 Phillip Morris Inc., 1981. *Optical perforating apparatus and system*. European patent application 0021165A1. 1981-01-07.

⚙️ Phillip Morris Inc., 1981. *Optical perforating apparatus and system*. European patent application 0021165A1. 1981-01-07.

```
@patent{pm1981opa,  
  author = {{Phillipp Morris Inc.}},  
  year = {1981},  
  title = {Optical perforating apparatus and system},  
  type = {European patent application},  
  number = {0021165A1. 1981-01-07}}
```

RX

❗ Note that biblatex has special localisation keys for full patents and patent requests/applications.

Unpublished written material and personal communications

📖 Harris, G., 2013. *Focus group recommendations: internal task group report*. Unpublished.

⚙️ Harris, G., 2013. *Focus group recommendations: internal task group report*. Unpublished.

```
@unpublished{harris2013fgr,  
  author = {Harris, G.},  
  year = {2013},  
  title = {Focus group recommendations: internal task group report}}
```

RX

- 📖 Hadley, S., 2015. *Biomechanics: introductory reading, BM289: sport biomechanics*. University of Bath. Unpublished.
- ⚙️ Hadley, S., 2015. *Biomechanics: introductory reading, BM289: sport biomechanics*. University of Bath. Unpublished.

```
@unpublished{hadley2015bir,
  author = {Hadley, S.},
  year = {2015},
  title = {Biomechanics: introductory reading, {BM289}: sport biomechanics},
  howpublished = {University of Bath}}
```

RX

- 📖 Thomas, D., 2015. Word count and referencing style. *Frequently asked questions discussion board: PHYS 2011: housing studies*. University of Bath. Unpublished.
- ⚙️ Thomas, D., 2015. Word count and referencing style. *Frequently asked questions discussion board: PHYS 2011: housing studies*. University of Bath. Unpublished.

```
@unpublished{thomas2015wcr,
  author = {Thomas, D.},
  year = {2015},
  title = {Word count and referencing style},
  booktitle = {Frequently asked questions discussion board: {PHYS} 2011: housing studies},
  howpublished = {University of Bath}}
```

RX

4.5 Audiovisual materials

Image

- 📖 NASA, 2015. *NASA astronaut Tim Kopra on Dec. 21 spacewalk* [Online]. Washington: NASA. Available from: <http://www.nasa.gov/image-feature/nasa-astronaut-tim-kopra-on-dec-21-spacewalk> [Accessed 7 January 2015].
- ⚙️ NASA, 2015. *NASA astronaut Tim Kopra on Dec. 21 spacewalk* [Online]. Washington: NASA. Available from: <http://www.nasa.gov/image-feature/nasa-astronaut-tim-kopra-on-dec-21-spacewalk> [Accessed 7 January 2015].

```
@image{nasa2015nat,
  author = {{NASA}},
  year = {2015},
  title = {{NASA} Astronaut {Tim} {Kopra} on {Dec.\@} 21 Spacewalk},
  address = {Washington},
  publisher = {NASA},
  url = {http://www.nasa.gov/image-feature/nasa-astronaut-tim-kopra-on-dec-21-spacewalk},
  urldate = {2015-01-07}}
```

RI

- 📖 Iliff, D., 2006. *Royal Crescent in Bath, England - July 2006* [Online]. San Francisco: Wikimedia Foundation. Available from: https://commons.wikimedia.org/wiki/File:Royal_Crescent_in_Bath,_England_-_July_2006.jpg [Accessed 7 January 2016].
- ⚙️ Iliff, D., 2006. *Royal Crescent in Bath, England - July 2006* [Online]. San Francisco: Wikimedia Foundation. Available from: https://commons.wikimedia.org/wiki/File:Royal_Crescent_in_Bath,_England_-_July_2006.jpg [Accessed 7 January 2016].

```
@image{iliff2006rcb,
  author = {D. Iliff},
  year = {2006},
  title = {{Royal} {Crescent} in {Bath,} {England} - {July} 2006},
  address = {San Francisco},
  organization = {Wikimedia Foundation},
  url = {https://commons.wikimedia.org/wiki/File:Royal_Crescent_in_Bath,_England_-_July_2006.jpg},
  urldate = {2016-01-07}}
```

RI

💡 You can use either the **publisher** or the **organization** field to record the source of the image.

📖 Bristol Region Building Record, 1965. *Green Park House (since demolished), viewed from southwest* [Photograph]. BRBR, D/877/1. Archives & Research Collections, University of Bath Library.

⚙️ Bristol Region Building Record, 1965. *Green Park House (since demolished), viewed from southwest* [Photograph]. BRBR, D/877/1. Archives & Research Collections, University of Bath Library.

```
@image{brbr1965gph,  
  author = {{Bristol Region Building Record}},  
  year = {1965},  
  title = {{Green} {Park} {House} (since demolished), viewed from southwest},  
  entrysubtype = {Photograph},  
  number = {BRBR, D/877/1},  
  library = {Archives \& Research Collections, University of Bath Library}}
```

RJ

💡 Use the **library** field to record the name of the archive. If the image is on display rather than archived, use **institution** instead for the museum, gallery or building. If you also wish to provide the name of the organisation that published the image, use the **publisher** field if the location you provide relates to the publisher, but the **organization** field if the location relates to the archive.

💡 Put archival locator information (e.g. box or shelf number) in the **number** field. Alternatively, you can split the information across the (non-standard) **collection** ('BRBR') and **shelfmark** ('D/877/1') fields.

💡 Put the clarification of the resource type in **entrysubtype**. In most cases, you can use **titleaddon** instead, but **entrysubtype** will correctly suppress 'Online' being shown while **titleaddon** will not.

Map


📖 Andrews, J. and Dury, A., 1773. *Map of Wiltshire*, 1 inch to 2 miles. Devizes: Wiltshire Record Society.

⚙️ Andrews, J. and Dury, A., 1773. *Map of Wiltshire*, 1 inch to 2 miles. Devizes: Wiltshire Record Society.

```
@manual{andrews.dury1773wilts,  
  author = {Andrews, J. and Dury, A.},  
  year = {1773},  
  title = {Map of {Wiltshire}},  
  series = {1 inch to 2 miles},  
  address = {Devizes},  
  publisher = {Wiltshire Record Society}}
```

RX


❗ The book entry type would also work for this reference.


 Ordnance Survey, 2020. *Street view map of University of Bath* [Online], 1:5000, OS VectorMap® Local. Available from: <https://digimap.edina.ac.uk/roam/map/os> [Accessed 30 April 2020].

 Ordnance Survey, 2020. *Street view map of University of Bath* [Online], 1:5000, OS VectorMap® Local. Available from: <https://digimap.edina.ac.uk/roam/map/os> [Accessed 30 April 2020].

```
@manual{os2020bath,
  author = {{Ordnance Survey}},
  year = {2020},
  title = {Street view map of {University of Bath}},
  series = {1:5000, {OS VectorMap® Local}},
  url = {https://digimap.edina.ac.uk/roam/map/os},
  urldate = {2020-04-30}}
```

RX


 Google, 2020. *Harbourside, Bristol* [Online], Google Maps. Available from: <https://www.google.co.uk/maps/place/Harbourside,+Bristol/> [Accessed 30 April 2020].


 Google, 2020. *Harbourside, Bristol* [Online], Google Maps. Available from: <https://www.google.co.uk/maps/place/Harbourside,+Bristol/> [Accessed 30 April 2020].

```
@manual{google2020harbourside,
  author = {{Google}},
  year = {2020},
  title = {{Harbourside, Bristol}},
  series = {{Google Maps}},
  url = {https://www.google.co.uk/maps/place/Harbourside,+Bristol/},
  urldate = {2020-04-30}}
```

RX


Film, video or DVD

 *Macbeth*, 1948. Film. Directed by Orson Welles. USA: Republic Pictures.


 *Macbeth*, 1948. Film. Directed by Orson Welles. USA: Republic Pictures.

```
@video{macbeth1948,
  year = {1948},
  title = {Macbeth},
  type = {Film},
  note = {Directed by Orson Welles},
  address = {USA},
  publisher = {Republic Pictures}}
```

RX

 In the above entry, the following would also work instead of using note:

```
editor = {Orson Welles},
editortype = {director},
```

 You can also use movie as an alias for video.

- 📺 *The elephant man* [Online], 1980. Film. Directed by David Lynch. USA: Brooksfilms. Available from: BBC iPlayer [Accessed 4 May 2021].
- ⚙️ *The elephant man* [Online], 1980. Film. Directed by David Lynch. USA: Brooksfilms. Available from: BBC iPlayer [Accessed 4 May 2021].

```
@video{elephant-man1980,
  year = {1980},
  title = {The elephant man},
  type = {Film},
  note = {Directed by David Lynch},
  address = {USA},
  publisher = {Brooksfilms},
  library = {BBC iPlayer},
  urldate = {2021-05-04}}
```

RX

Online video/audio

- 📺 Moran, C., 2016. *Save our libraries* [Online]. Available from: <https://youtu.be/gKTfCz4JtVE> [Accessed 29 April 2016].
- ⚙️ Moran, C., 2016. *Save our libraries* [Online]. Available from: <https://youtu.be/gKTfCz4JtVE> [Accessed 29 April 2016].

```
@video{moran2016sol,
  author = {Moran, C.},
  year = {2016},
  title = {Save Our Libraries},
  url = {https://youtu.be/gKTfCz4JtVE},
  urldate = {2016-04-29}}
```

RX

- 📺 Chakrabarti, V., 2016. *How architecture and city planning can combat social inequality* [Online]. Available from: <https://www.curbed.com/2016/5/5/11593058/vishaan-chakrabarti-pau-curbed-appeal-podcast> [Accessed 28 March 2019].
- ⚙️ Chakrabarti, V., 2016. *How architecture and city planning can combat social inequality* [Online]. Available from: <https://www.curbed.com/2016/5/5/11593058/vishaan-chakrabarti-pau-curbed-appeal-podcast> [Accessed 28 March 2019].

```
@audio{chakrabarti2016hac,
  author = {Chakrabarti, V.},
  year = {2016},
  title = {How Architecture and City Planning Can Combat Social Inequality},
  url = {https://www.curbed.com/2016/5/5/11593058/vishaan-chakrabarti-pau-curbed-appeal-podcast},
  urldate = {2019-03-28}}
```

RX

Television or radio broadcast

- 📺 Hurry up and wait, 2021. *Inside no.9, Episode 6:4*. TV. BBC2, 31 May. 21.30 hrs.
- ⚙️ Hurry up and wait, 2021. *Inside no.9, Episode 6:4*. TV. BBC2, 31 May. 21.30 hrs.

```
@video{inn2021huw,
  date = {2021-05-31T21:30:00},
  title = {Hurry up and wait},
  series = {Inside No.9},
  number = {{Episode} 6:4},
  type = {TV},
  publisher = {BBC2}}
```

RX

- 💡 Use **type** for the medium and **publisher** for the channel.
- 💡 If the episode has an individual title, use **series** for the series and **number** for the episode number. Otherwise, give both series and episode number as the **title**.

- 📖 Rick Stein's French odyssey: Episode 5, 2006. TV. BBC2, 23 August. 20.30 hrs.
- ⚙️ Rick Stein's French odyssey: Episode 5, 2006. TV. BBC2, 23 August. 20.30 hrs.

```
@video{rsfo2006ep5,
  date = {2006-08-23T20:30:00},
  title = {Rick {Stein's} {French} Odyssey},
  subtitle = {{Episode} 5},
  type = {TV},
  publisher = {BBC2}}
```

RX

- 📖 The Archers, 2006. Radio. BBC Radio 4, 23 August. 19.02 hrs.
- ⚙️ The Archers, 2006. Radio. BBC Radio 4, 23 August. 19.02 hrs.

```
@audio{archers20060823,
  date = {2006-08-23T19:02:00},
  title = {The {Archers}},
  type = {Radio},
  publisher = {BBC Radio 4}}
```

RX

❗ You can also use `music` as an alias for audio.

- 📖 The secret, 2020. *Tiger king: murder, mayhem and madness, Episode 3* [Online]. TV. Available from: Netflix [Accessed 4 May 2021].
- ⚙️ The secret, 2020. *Tiger king: murder, mayhem and madness, Episode 3* [Online]. TV. Available from: Netflix [Accessed 4 May 2021].

```
@video{tkmmm2020ts,
  year = {2020},
  title = {The Secret},
  series = {Tiger King: Murder, Mayhem and Madness},
  number = {{Episode} 3},
  type = {TV},
  library = {Netflix},
  urldate = {2021-05-04}}
```

RX

Music score



- 📖 Beethoven, L. van, 1950. *Symphony no.1 in C, Op.21*. Harmondsworth: Penguin.
- ⚙️ Beethoven, L. van, 1950. *Symphony no.1 in C, Op.21*. Harmondsworth: Penguin.

```
@book{beethoven1950symp1,
  author = {Ludwig van Beethoven},
  year = {1950},
  title = {Symphony no.1 in {C,} {Op.21}},
  address = {Harmondsworth},
  publisher = {Penguin}}
```

RX



4.6 Digital media

Website or webpage

-  World Health Organization, 2018. *The top 10 causes of death* [Online]. Geneva: World Health Organization. Available from: <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death> [Accessed 29 June 2020].
-  World Health Organization, 2018. *The top 10 causes of death* [Online]. Geneva: World Health Organization. Available from: <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death> [Accessed 29 June 2020].

```
@online{who2018ttc,  
  author = {{World Health Organization}},  
  year = {2018},  
  title = {The Top 10 Causes of Death},  
  address = {Geneva},  
  organization = {World Health Organization},  
  url = {https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death},  
  urldate = {2020-06-29}}
```



RX

-  Manco, J., 2013. *Vernacular architecture* [Online]. Available from: <https://www.buildinghistory.org/style/vernacular.shtml> [Accessed 20 February 2020].
-  Manco, J., 2013. *Vernacular architecture* [Online]. Available from: <https://www.buildinghistory.org/style/vernacular.shtml> [Accessed 20 February 2020].

```
@online{manco2013va,  
  author = {Manco, J.},  
  year = {2013},  
  title = {Vernacular Architecture},  
  url = {https://www.buildinghistory.org/style/vernacular.shtml},  
  urldate = {2020-02-20}}
```

RX



This template is also used for retrievable Generative AI content.

-  ChatGPT, 2023. *Why is citing and referencing your sources important?* [Online]. San Francisco, Calif.: OpenAI. Available from: <https://chat.openai.com/share/782cb099-a0dc-45b1-8da4-0e99713f2d45> [Accessed 4 September 2023].
-  ChatGPT, 2023. *Why is citing and referencing your sources important?* [Online]. San Francisco, Calif.: OpenAI. Available from: <https://chat.openai.com/share/782cb099-a0dc-45b1-8da4-0e99713f2d45> [Accessed 4 September 2023].

```
@online{chatgpt2023wcr,  
  author = {{ChatGPT}},  
  year = {2023},  
  title = {Why is Citing and Referencing Your Sources Important?},  
  address = {San Francisco, Calif.},  
  organization = {OpenAI},  
  url = {https://chat.openai.com/share/782cb099-a0dc-45b1-8da4-0e99713f2d45},  
  urldate = {2023-09-04}}
```


RX

Social media

-  Gaiman, N., 2021. *Facebook post* [Online], 21 April. Available from: <https://www.facebook.com/neilgaiman/posts/305187897642814> [Accessed 13 May 2021].
-  Gaiman, N., 2021. *Facebook post* [Online], 21 April. Available from: <https://www.facebook.com/neilgaiman/posts/305187897642814> [Accessed 13 May 2021].

```
@online{gaiman2021fbp,  
  author = {Gaiman, N.},  
  date = {2021-04-21},  
  title = {Facebook post},  
  url = {https://www.facebook.com/neilgaiman/posts/305187897642814},  
  urldate = {2021-05-13}}
```

RX

-  Library at University of Bath [@bathunilibrary], 2021. *Twitter post* [Online], 10 May. Available from: <https://twitter.com/BathUniLibrary/status/1391774402618998795?s=20> [Accessed 12 May 2021].
-  Library at University of Bath [@bathunilibrary], 2021. *Twitter post* [Online], 10 May. Available from: <https://twitter.com/BathUniLibrary/status/1391774402618998795?s=20> [Accessed 12 May 2021].

```
@online{ublib2021tp,  
  author = {{Library at University of Bath}},  
  nameaddon = {@bathunilibrary},  
  date = {2021-05-10},  
  title = {Twitter post},  
  url = {https://twitter.com/BathUniLibrary/status/1391774402618998795?s=20},  
  urldate = {2021-05-12}}
```

RX

-  University of Bath Library [@unibathlib], 2021. *Instagram post* [Online], 15 March. Available from: https://www.instagram.com/p/CMb5GHjFv9A/?utm_source=ig_web_copy_link [Accessed 7 May 2021].
-  University of Bath Library [@unibathlib], 2021. *Instagram post* [Online], 15 March. Available from: https://www.instagram.com/p/CMb5GHjFv9A/?utm_source=ig_web_copy_link [Accessed 7 May 2021].

```
@online{ublib2021ip,  
  author = {{University of Bath Library}},  
  nameaddon = {@unibathlib},  
  date = {2021-03-15},  
  title = {Instagram post},  
  url = {https://www.instagram.com/p/CMb5GHjFv9A/?utm_source=ig_web_copy_link},  
  urldate = {2021-05-07}}
```

RX

Email discussion list

-  Clark, T., 5 July 2004. A European UK Libraries Plus? *Lis-link* [Online]. Available from: lis-link@jiscmail.ac.uk [Accessed 30 July 2004].
-  Clark, T., 5 July 2004. A European UK Libraries Plus? *Lis-link* [Online]. Available from: lis-link@jiscmail.ac.uk [Accessed 30 July 2004].

```
@letter{clark2004euk,  
  author = {Clark, T.},  
  date = {2004-07-05},  
  title = {A {European} {UK} {Libraries} {Plus}?},  
  journal = {Lis-link},  
  url = {lis-link@jiscmail.ac.uk},  
  urldate = {2004-07-30}}
```

RX

- 💡 Use the `journal` field to specify the mailing list. If you omit the `journal` field, the entry will be formatted as an unpublished work.

Database

- 📖 Bureau van Dijk, 2008. *BT Group plc company report. FAME* [Online]. London: Bureau van Dijk. Available from: <http://www.portal.euromonitor.com> [Accessed 6 November 2014].
- ⚙️ Bureau van Dijk, 2008. *BT Group plc company report. FAME* [Online]. London: Bureau van Dijk. Available from: <http://www.portal.euromonitor.com> [Accessed 6 November 2014].

```
@dataset{bvd2008bt,  
  author = {Bureau van Dijk},  
  year = {2008},  
  title = {{BT} {Group} PLC Company Report},  
  library = {FAME},  
  address = {London},  
  publisher = {Bureau van Dijk},  
  url = {http://www.portal.euromonitor.com},  
  urldate = {2014-11-06}}
```

RX

- 💡 Use the `title` field for the entry title, and the `library` field for the name of the database itself.

Dataset

- 📖 Wilson, D., 2013. *Real geometry and connectedness via triangular description: CAD example bank* [Online]. Bath: University of Bath. Available from: <https://doi.org/10.15125/BATH-00069> [Accessed 20 April 2016].
- ⚙️ Wilson, D., 2013. *Real geometry and connectedness via triangular description: CAD example bank* [Online]. Bath: University of Bath. Available from: <https://doi.org/10.15125/BATH-00069> [Accessed 20 April 2016].

```
@dataset{wilson2013rgc,  
  author = {Wilson, D.},  
  year = {2013},  
  title = {Real Geometry and Connectedness via Triangular Description},  
  subtitle = {{CAD} Example Bank},  
  address = {Bath},  
  publisher = {University of Bath},  
  doi = {10.15125/BATH-00069},  
  urldate = {2016-04-20}}
```

RX

Computer program

- 📖 @screencasto, n.d. *Screencast-O-Matic (v.2)* [computer program]. Available from: <https://screencast-o-matic.com/> [Accessed 16 May 2016].
- ⚙️ @screencasto, n.d. *Screencast-O-Matic (v.2)* [computer program]. Available from: <https://screencast-o-matic.com/> [Accessed 16 May 2016].

```
@software{screencasto,  
  author = {@screencasto},  
  title = {{Screencast-O-Matic}},  
  version = {2},  
  entrysubtype = {computer program},  
  url = {https://screencast-o-matic.com/},  
  urldate = {2016-05-16}}
```

RX

- 💡 Put the clarification of the resource type in `entrysubtype`. In most cases, you can use `titleaddon` instead, but `titleaddon` is shown immediately after the title and may be shown

alongside the ‘Online’ label, whereas `entrysubtype` is printed after the `version` and supersedes the ‘Online’ label.

4.7 Works in languages other than English

Work in translation

- 📖 Aristotle, 2007. *Nicomachean ethics* (W.D. Ross, Trans.). South Dakota: NuVisions.
- ⚙️ Aristotle, 2007. *Nicomachean ethics* (W.D. Ross, Trans.). South Dakota: NuVisions.

```
@book{aristotle2007ne,  
  author = {Aristotle},  
  year = {2007},  
  title = {Nicomachean Ethics},  
  translator = {W. D. Ross},  
  address = {South Dakota},  
  publisher = {NuVisions}}
```

RX

Work in the Roman alphabet

- 📖 Esquivel, L., 2003. *Como agua para chocolate* [Like water for chocolate]. Barcelona: Debolsillo.
- ⚙️ Esquivel, L., 2003. *Como agua para chocolate* [Like water for chocolate]. Barcelona: Debolsillo.

```
@book{esquivel2003cap,  
  author = {Esquivel, L.},  
  year = {2003},  
  title = {Como Agua para Chocolate},  
  titleaddon = {Like water for chocolate},  
  address = {Barcelona},  
  publisher = {Debolsillo}}
```

RX

💡 Use the `titleaddon` field to supply the English translation of the title.

- 📖 Thurfjell, W., 1975. Vart har våran doktor tagit vägen? [Where has our doctor gone?]. *Läkartidningen*, 72, p.789.
- ⚙️ Thurfjell, W., 1975. Vart har våran doktor tagit vägen? [Where has our doctor gone?]. *Läkartidningen*, 72, p.789.

```
@article{thurfjell1975vhv,  
  author = {Thurfjell, W.},  
  year = {1975},  
  title = {Vart har våran doktor tagit vägen?},  
  titleaddon = {Where has our doctor gone?},  
  journal = {Läkartidningen},  
  volume = {72},  
  pages = {789}}
```

RX

Work in a non-Roman alphabet

- 📖 Hua, L. 華林甫, 1999. Qingdai yilai Sanxia diqu shuihan zaihai de chubu yanjiu 清代以來三峽地區水旱災害的初步研 [A preliminary study of floods and droughts in the Three Gorges region since the Qing dynasty]. *Zhongguo shehui kexue* 中國社會科學, 1, pp.168–79.
- ⚙️ Hua, L. 華林甫, 1999b. Qingdai yilai Sanxia diqu shuihan zaihai de chubu yanjiu 清代以來三峽地區水旱災害的初步研 [A preliminary study of floods and droughts in the Three Gorges region since the Qing dynasty]. *Zhongguo shehui kexue* 中國社會科學, 1, pp.168–79.

```
@article{hua1999qys1,
  author = {given=Linfu, family=Hua, cjk=華林甫},
  year = {1999},
  title = {Qingdai yilai {Sanxia} diqu shuihan zaihai de chubu yanjiu
    {清代以來三峽地區水旱災害的初步研}},
  titleaddon = {A preliminary study of floods and droughts in the {Three} {Gorges} region since
    the {Qing} dynasty},
  journal = {Zhongguo shehui kexue \emph{中國社會科學}},
  volume = {1},
  pages = {168-79}}
```

RX

- 💡 To supply a transliterated version of an author name, specify the name using the name parts family, given and cjk. Please note that if you do supply a cjk component, any prefix or suffix component you may supply will be ignored.

- 📖 Hua, L., 1999. Qingdai yilai Sanxia diqu shuihan zaihai de chubu yanjiu [A preliminary study of floods and droughts in the Three Gorges region since the Qing dynasty]. *Zhongguo shehui kexue*, 1, pp.168–79.
- ⚙️ Hua, L., 1999a. Qingdai yilai Sanxia diqu shuihan zaihai de chubu yanjiu [A preliminary study of floods and droughts in the Three Gorges region since the Qing dynasty]. *Zhongguo shehui kexue*, 1, pp.168–79.

```
@article{hua1999qys2,
  author = {Hua, Linfu},
  year = {1999},
  title = {Qingdai yilai {Sanxia} diqu shuihan zaihai de chubu yanjiu},
  titleaddon = {A preliminary study of floods and droughts in the {Three} {Gorges} region since
    the {Qing} dynasty},
  journal = {Zhongguo shehui kexue},
  volume = {1},
  pages = {168-79}}
```

RX

- 💡 Although not a feature of the Harvard (Bath) Style, if you want to suppress the punctuation between the family name and the initial (and thereby be more faithful to the original orthography), you can specify this using biblatex's data annotations feature, using the keyword cjk:

- 📖 Hua L. 華林甫, 2001. *Lorem ipsum*.
- ⚙️ Hua L. 華林甫, 2001. *Lorem ipsum*.

```
@book{hua2001foo,
  author = {given=Linfu, family=Hua, cjk=華林甫},
  author+an = {1=cjk},
  year = {2001},
  title = {Lorem ipsum}}
```


📖 Pamporov, A., 2006. *Romskoto vsekidnevie v Balgariya* [Roma everyday life in Bulgaria]. Veliko Tarnovo: Faber.

⚙️ Pamporov, A., 2006. *Romskoto vsekidnevie v Balgariya* [Roma everyday life in Bulgaria]. Veliko Tarnovo: Faber.

```
@book{pamporov2006rvb,  
  author = {Pamporov, A.},  
  year = {2006},  
  title = {Romskoto vsekidnevie v {Balgariya}},  
  titleaddon = {Roma everyday life in Bulgaria},  
  address = {Veliko Tarnovo},  
  publisher = {Faber}}
```

RX

4.8 Government and parliamentary document

House of Commons paper

💡 Use this form for reports of House of Commons select committees.

📖 Great Britain. Parliament. House of Commons, 2004. *National Savings investment deposits: account 2002–2003*. (HC 2003/04, 30). London: National Audit Office.

⚙️ Great Britain. Parliament. House of Commons, 2004. *National Savings investment deposits: account 2002–2003*. (HC 2003/04, 30). London: National Audit Office.

```
@report{gb.hc2003/04-30,  
  author = {{Great Britain. Parliament. House of Commons}},  
  year = {2004},  
  title = {National {Savings} Investment Deposits},  
  subtitle = {Account 2002--2003},  
  address = {London},  
  publisher = {National Audit Office},  
  series = {{HC} 2003/04},  
  number = {30}}
```

RX

House of Lords paper

💡 Use this form for reports of House of Lords select committees.

📖 Great Britain. Parliament. House of Lords, 1987. *Social fund (maternity and funeral expenses) bill*. (HL 1986/87, (66)). London: HMSO.

⚙️ Great Britain. Parliament. House of Lords, 1987. *Social fund (maternity and funeral expenses) bill*. (HL 1986/87, (66)). London: HMSO.

```
@report{gb.hl1986/87-66,  
  author = {{Great Britain. Parliament. House of Lords}},  
  year = {1987},  
  title = {Social Fund (Maternity and Funeral Expenses) Bill},  
  address = {London},  
  publisher = {HMSO},  
  series = {{HL} 1986/87},  
  number = {66}}
```

RX

🔧 For joint committees, you will have to hack this slightly, putting the session years in **series** and the HL and HC numbers in **number**.

Command paper

- 📖 Great Britain. Ministry of Defence, 2004. *Delivering security in a changing world: defence white paper*. (Cm. 6041). London: TSO.
- ⚙️ Great Britain. Ministry of Defence, 2004. *Delivering security in a changing world: defence white paper*. (Cm. 6041). London: TSO.

```
@report{gb.cm6041,
  author = {{Great Britain. Ministry of Defence}},
  year = {2004},
  title = {Delivering Security in a Changing World},
  subtitle = {Defence White Paper},
  address = {London},
  publisher = {TSO},
  series = {Cm},
  number = {6041}}
```

RX

House of Commons/House of Lords bill

- 📖 Great Britain. Parliament. House of Commons, 1988. *Local government finance bill*. (Bills | 1987/88, 66). London: HMSO.
- ⚙️ Great Britain. Parliament. House of Commons, 1988. *Local government finance bill*. (Bills | 1987/88, 66). London: HMSO.

```
@legislation{gb.bill1987/88-66,
  author = {{Great Britain. Parliament. House of Commons}},
  year = {1988},
  title = {Local Government Finance Bill},
  address = {London},
  publisher = {HMSO},
  series = {{Bills | 1987/88}},
  number = {66}}
```

RX

Act of Parliament (UK Statutes) before 1963

- 📖 *Witchcraft Act 1735* (9 Geo.2, c.5).
- ⚙️ *Witchcraft Act 1735* (9 Geo.2, c.5).

```
@legislation{gb.wa1735,
  title = {Witchcraft {Act}},
  year = {1735},
  series = {9 Geo.2},
  chapter = {5}}
```

RX

- ❗ You could instead combine the series and chapter in the number field:

```
number = {9 Geo.2, c.5}
```

Act of Parliament (UK Statutes) 1963 onwards

- 📖 *Pensions Act 2014*, c.19. London: TSO.
- ⚙️ *Pensions Act 2014*, c.19. London: TSO.

```
@legislation{gb.pa2014,
  title = {Pensions {Act}},
  year = {2014},
  chapter = {19},
  address = {London},
  publisher = {TSO}}
```

RX

Statutory instrument

- 📖 *The Human Medicines Regulations 2012* [Online], No.1916, United Kingdom: HMSO. Available from: http://www.legislation.gov.uk/uksi/2012/1916/pdfs/uksi_20121916_en.pdf [Accessed 17 April 2016].
- ⚙️ *The Human Medicines Regulations 2012* [Online], No.1916, United Kingdom: HMSO. Available from: http://www.legislation.gov.uk/uksi/2012/1916/pdfs/uksi_20121916_en.pdf [Accessed 17 April 2016].

```
@legislation{gb.hmr2012,
  entrysubtype = {secondary},
  title = {The {Human} {Medicines} {Regulations}},
  year = {2012},
  number = {No.1916},
  address = {United Kingdom},
  publisher = {HMSO},
  url = {http://www.legislation.gov.uk/uksi/2012/1916/pdfs/uksi_20121916_en.pdf},
  urldate = {2016-04-17}}
```

RX

💡 Use the entrysubtype ‘secondary’ to put the number in the right place.

Parliamentary debate

- 📖 Great Britain. Parliament. House of Commons, 2024. Rwanda Plan Cost and Asylum System. *Hansard* [Online], 744, 9 January 2024. Available from: <https://hansard.parliament.uk/Commons/2024-01-09/debates/57105D77-72DE-4246-9F6E-ED87FCB9A088/RwandaPlanCostAndAsylumSystem> [Accessed 12 December 2024].
- ⚙️ Great Britain. Parliament. House of Commons, 2024. Rwanda Plan Cost and Asylum System. *Hansard* [Online], 744, 9 January 2024. Available from: <https://hansard.parliament.uk/Commons/2024-01-09/debates/57105D77-72DE-4246-9F6E-ED87FCB9A088/RwandaPlanCostAndAsylumSystem> [Accessed 12 December 2024].

```
@legal{gb.hc2024rpc,
  entrysubtype = {parliamentary},
  author = {{Great Britain. Parliament. House of Commons}},
  year = {2024},
  title = {{Rwanda Plan Cost and Asylum System}},
  journal = {Hansard},
  volume = {744},
  eventdate = {2024-01-09},
  url = {https://hansard.parliament.uk/Commons/2024-01-09/debates/57105D77-72DE-4246-9F6E-ED87FCB9A088/RwandaPlanCostAndAsylumSystem},
  urldate = {2024-12-12}}
```

RX


💡 Use the legal entry type. As that entry type is defined loosely by biblatex, use the entrysubtype ‘parliamentary’ to protect the entry against possible formatting changes in future versions of the style.

4.9 Legal document: EU reports/legislation

EU publication

The following example has been removed.


 European Commission, 2015. *General report on the activities of the European Union 2014*. Luxembourg: Publications Office of the European Union.


 European Commission, 2015. *General report on the activities of the European Union 2014*. Luxembourg: Publications Office of the European Union.

```
@report{ec2015gra,  
  author = {{European Commission}},  
  year = {2015},  
  title = {General Report on the Activities of the {European} {Union} 2014},  
  address = {Luxembourg},  
  publisher = {Publications Office of the European Union}}
```

RX


EU regulation or directive, decision, recommendation or opinion

 Council Regulation (EC) 1984/2003 of 8 April 2003 introducing a system for the statistical monitoring of trade in bluefin tuna, swordfish and big eye tuna within the Community [2003] *OJ* L295.

 Council Regulation (EC) 1984/2003 of 8 April 2003 introducing a system for the statistical monitoring of trade in bluefin tuna, swordfish and big eye tuna within the Community [2003] *OJ* L295.

```
@legislation{eu.dir1984/2003,  
  title = {Council {Regulation} ({EC}) 1984/2003 of 8 {April} 2003 Introducing a System for  
    the Statistical Monitoring of Trade in Bluefin Tuna, Swordfish and Big Eye Tuna within  
    the {Community}},  
  shorttitle = {Council {Regulation} \parenttext{EC} 1984/2003},  
  year = {2003},  
  journal = {OJ},  
  series = {L},  
  volume = {295}}
```


RX

 The `shorttitle` will be used in citations instead of the full title.

4.10 Legal document: case reports


Judgment of the European Court of Justice

 *Alessandrini Srl and others v. Commission* (C-295/03 P) [2005] ECR I-5700.

 *Alessandrini Srl and others v. Commission* (C-295/03 P) [2005] ECR I-5700.

```
@jurisdiction{srl.etal-v-comm2005,  
  title = {Alessandrini {Srl} and others v. {Commission}},  
  number = {C-295/03 P},  
  year = {2005},  
  journal = {ECR},  
  volume = {I},  
  pages = {5700}}
```

RX

 Use the `number` field (or the non-standard `casenumber` field) for the case number. For Commission Decisions, use the (non-standard) `casenumber` or (bibtex-oscola) `userb` field for the Commission case number, `number` for the formal decision number, and give ‘Commission’ as the `institution`.

Legal case study

📖 *Seldon v Clarkson Wright & Jakes*, 2009. England and Wales Court of Appeal (Civil Division), 889. *Bailii* [Online]. Available from: <http://www.bailii.org/ew/cases/EWCA/Civ/2009/889.html> [Accessed 23 April 2024].

⚙️ *Seldon v Clarkson Wright & Jakes*, 2009. England and Wales Court of Appeal (Civil Division), 889. *Bailii* [Online]. Available from: <http://www.bailii.org/ew/cases/EWCA/Civ/2009/889.html> [Accessed 23 April 2024].

```
@jurisdiction{seldon-v-c.w.j2009,
  title = {Seldon v-Clarkson Wright} \& {Jakes}},
  year = {2009},
  institution = {{England and Wales Court of Appeal (Civil Division)}},
  number = {889},
  journal = {Bailii},
  url = {http://www.bailii.org/ew/cases/EWCA/Civ/2009/889.html},
  urldate = {2024-04-23}}
```

RX

📖 *Braceurself Ltd v NHS England*, 2013. England and Wales Court of Appeal (Civil Division), 39. *Construction law reports*, 212, pp.95–135.

⚙️ *Braceurself Ltd v NHS England*, 2013. England and Wales Court of Appeal (Civil Division), 39. *Construction law reports*, 212, pp.95–135.

```
@jurisdiction{braceurself-v-nhs.england2013,
  title = {{Braceurself} {Ltd} v-{{NHS} {England}}},
  year = {2013},
  institution = {{England and Wales Court of Appeal (Civil Division)}},
  number = {39},
  journal = {Construction law reports},
  volume = {212},
  pages = {95-135}}
```

RX

💡 Give the court as the `institution` and the case number as `number` (or `casenumber`).

It is also possible to achieve a more traditional or **neutral citation** format, similar to Harvard (Bath)'s pre-2024 format:

📖 *Seldon v Clarkson Wright & Jakes* [2012] UKSC 16.

⚙️ *Seldon v Clarkson Wright & Jakes* [2012] UKSC 16.

```
@jurisdiction{seldon-v-c.w.j2012,
  title = {Seldon v-Clarkson Wright} \& {Jakes}},
  year = {2012},
  journal = {UKSC},
  pages = {16}}
```

RX

❗ Generally speaking, in a neutral citation the year should be in square brackets if it is essential to the citation (unless it is a Scottish case, in which case it is printed bare), and in parentheses if it is not.

💡 By default, the style assumes the year is essential if and only if a volume number is *not* provided; to override this, you can use the **year-essential** option:

```
options = {year-essential=true},
```

To use Scottish style for a case, you can either use the **scottish-style** option or the keyword `sc`:

```
options = {scottish-style},
keywords = {sc},
```

✂ This should cover most cases, but legal references tend to enforce their own conventions no matter what the rest of the reference list is doing, and it is out of scope for this style to cater for every variation. Therefore if you need a different format (e.g. for an American case), you may prefer to format the reference more-or-less by hand:

```
title = {Seldon v-Clarkson Wright \& Jakes},
sortyear = {2009},
note = {[2009] EWCA Civ 889}
```

5 References

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Adams, G., 2014. *Test citation two*. Oxford: Oxford University Press.

Adams, G., 2017. *Test citation three*. Cambridge: Cambridge University Press.

Alessandrini Srl and others v. Commission (C-295/03 P) [2005] ECR I-5700.

Andrews, J. and Dury, A., 1773. *Map of Wiltshire*, 1 inch to 2 miles. Devizes: Wiltshire Record Society.

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Braceurself Ltd v NHS England, 2013. England and Wales Court of Appeal (Civil Division), 39. *Construction law reports*, 212, pp.95–135.

BRE, 2007. *Designing quality buildings: a BRE guide*. (Report 497). Bracknell: BRE.

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British National Formulary, 2019. *Aspirin* [Online]. London: Pharmaceutical Press. Available from: https://www.medicinescomplete.com/#/content/bnf/_456850132 [Accessed 26 November 2019].

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- Great Britain. Ministry of Defence, 2004. *Delivering security in a changing world: defence white paper*. (Cm. 6041). London: TSO.
- Great Britain. Parliament. House of Commons, 1988. *Local government finance bill*. (Bills | 1987/88, 66). London: HMSO.
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6 Licence

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This work is ‘maintained’ (as per LPPL maintenance status) by [Alex Ball](#).

7 Implementation: bibliography style

7.1 Preliminaries

For ease of maintenance, we will patch some definitions with `xpatch` instead of writing out our own in full.

```
20 \RequirePackage{etoolbox,xpatch}
```

Some string analysis is required.

```
21 \RequirePackage{xstring}
```

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

```
22 \ifcsdef{DeclareLanguageMappingSuffix}{%
23   \DeclareLanguageMappingSuffix{-bath}
24 }{%
25   \DeclareLanguageMapping{english}{english-bath}
26   \DeclareLanguageMapping{british}{british-bath}
27 }
```

We provide some additional bibliography strings.

```
28 \NewBibliographyString{%
29   online, hours, at, unpublished, legalchapter,
30   director, performer, reader, conductor,
31   directors, performers, readers, conductors,
32   bydirector, byperformer, byreader, byconductor,
33 }
```

To maintain compatibility with older versions of `biblatex`, we backport some newer features if necessary.

```
35 \ifcsdef{letbibmacro}{-}{%
36   \def\letbibmacro#1#2{%
37     \ifcsundef{abx@macro@#2}
38       {\blx@error
39         {Bibliography macro '#2' undefined}
40         {Use '\string\newbibmacro' to define this macro}}
41     {\csletcs{abx@macro@#1}{abx@macro@#2}}
42   }
43 \ifcsdef{iflabeldateisdate}{-}{%
44   \def\iflabeldateisdate{%
45     \ifboolexpr{%
46       togl {blx@labeldateparts}
47       and not test {\iffieldundef{labeldatesource}}
48       and
49       (test {\iffieldequalstr{labeldatesource}{}}
50         or test {\iffieldequalstr{labeldatesource}{year}})}
51   }
52 \ifcsdef{DeclareBiblatexOption}{-}{%
53   \def\DeclareBiblatexOption@II#1[#2]#3[#4]#5{
54     \IfSubStr#1{global}{\DeclareBibliographyOption[#2]{#3}[#4]{#5}}{-}%
55     \IfSubStr#1{type}{\DeclareTypeOption[#2]{#3}[#4]{#5}}{-}%
56     \IfSubStr#1{entry}{\DeclareEntryOption[#2]{#3}[#4]{#5}}{-}%
57   \def\DeclareBiblatexOption@I#1[#2]#3#4{\@ifnextchar [%
58     {\DeclareBiblatexOption@II#1[#2]#3#4}%
59     {\DeclareBiblatexOption@II#1[#2]#3[]#4}}%
60   \def\DeclareBiblatexOption#1#2{\@ifnextchar [%
61     {\DeclareBiblatexOption@I#1#2}%
62     {\DeclareBiblatexOption@I#1[]#2}}%
```

```
63 }
```

This makes biblatex take notice of parentheses, brackets and angle brackets when deciding whether to suppress double punctuation.

```
64 \def\blx@setsfcodes{%
65   \let\blx@setsfcodes\relax
66   \let\frenchspacing\blx@setfrcodes
67   \let\nonfrenchspacing\blx@setencodes
68   \ifnum\sfcode`\.>2000
69     \blx@setencodes
70   \else
71     \blx@setfrcodes
72   \fi
73   \@setquotesfcodes
74   \sfcode`\(=\@m
75   \sfcode`\)=\@m
76   \sfcode`\[=\@m
77   \sfcode`\]=\@m
78   \sfcode`\<=\@m
79   \sfcode`\>=\@m}
```

7.2 Standard common toggle options

These are options provided by all standard styles.

```
81 \newtoggle{bbx:isbn}
82 \newtoggle{bbx:url}
83 \newtoggle{bbx:doi}
84 \newtoggle{bbx:eprint}
85 \newtoggle{bbx:related}
86
87 \DeclareBiblatexOption[global,type,entry][boolean]{isbn}[true]{%
88   \settoggle{bbx:isbn}{#1}}
89 \DeclareBiblatexOption[global,type,entry][boolean]{url}[true]{%
90   \settoggle{bbx:url}{#1}}
91 \DeclareBiblatexOption[global,type,entry][boolean]{doi}[true]{%
92   \settoggle{bbx:doi}{#1}}
93 \DeclareBiblatexOption[global,type,entry][boolean]{eprint}[true]{%
94   \settoggle{bbx:eprint}{#1}}
95 \DeclareBiblatexOption[global,type,entry][boolean]{related}[true]{%
96   \settoggle{bbx:related}{#1}}
```

7.3 Author–year specific options

7.3.1 Author (label) dashes

The dashed option from the standard author–year style controls whether repeated author/editor names are replaced with a dash.

```
98 \newbibmacro*{bbx:savehash}{%
99   \savefield{fullhash}{\bbx@lasthash}}
100
101 \DeclareBibliographyOption[boolean]{dashed}[true]{%
102   \ifstrequal{#1}{true}
103   {\ExecuteBibliographyOptions{pagetracker}}%
104   \renewbibmacro*{bbx:savehash}{\savefield{fullhash}{\bbx@lasthash}}}
105   {\renewbibmacro*{bbx:savehash}{}}
```

7.3.2 Date options

For some resources (ISO standards, Acts of Parliament), the date is part of the label and should not be repeated in the date slot. So that this can be achieved cleanly by omitting the date, we

declare a `nonodate` option that can suppress the substitution of the missing date by ‘n.d.’

```

107 \newtoggle{bbx:nonodate}
108 \DeclareBiblatexOption{global,type,entry}[boolean]{nonodate}[true]{%
109   \settoggle{bbx:nonodate}{#1}}

```

The `mergedate` option controls the format of the date at the head of the reference in the `date+extradate` macro, and whether and how the same date is displayed later in the `issue+date` macro.

```

111 \providebibmacro*{date+extradate}{%
112 \newbibmacro*{issue+date}{%
113   \printtext[parens]{%
114     \printfield{issue}%
115     \setunit*{\addspace}%
116     \usebibmacro{date}}}%
117 \newunit}

```

We allow the date macro to print the time as well.

```

119 \newbibmacro*{bbx:ifmergeddate}{\@secondoftwo}
120 \renewbibmacro*{date}{%
121   \usebibmacro{bbx:ifmergeddate}{}{%
122     \printdate
123     \setunit*{\bibdatetimesep}%
124   }%
125   \printtime}%

```

The following are similar to the standard author–year options except they respect the `nonodate` option and allow the field format of the date text to be configured.

The `maximum` option merges date/issue with date label.

```

127 \def\bbx@opt@mergedate@maximum{%
128 \renewbibmacro*{date+extradate}{%
129   \iffieldundef{labelyear}
130   {}
131   {\printtext[datelabel]{%
132     \iflabeldateisdate
133     {\printfield{issue}%
134       \setunit*{\addspace}%
135       \printdateextra}
136     {\printlabeldateextra}}}}%
137 \renewbibmacro*{bbx:ifmergeddate}{\iflabeldateisdate}%
138 \renewbibmacro*{issue+date}{%
139   \usebibmacro{bbx:ifmergeddate}
140   {}
141   {\printtext[parens]{%
142     \printfield{issue}%
143     \setunit*{\addspace}%
144     \printdate}}}}

```

The `compact` option merges date with date label.

```

146 \def\bbx@opt@mergedate@compact{%
147 \renewbibmacro*{date+extradate}{%
148   \ifboolexpr{
149     togl {bbx:nonodate}
150     and not test {\iflabeldateisdate}}
151   {}
152   {\printtext[datelabel]{%
153     \iflabeldateisdate
154     {\printdateextra}
155     {\printlabeldateextra}}}}%

```

```

156 \renewbibmacro*{bbx:ifmergeddate}{\iflabeldateisdate}%
157 \renewbibmacro*{issue+date}{%
158   \ifboolexpr{test {\usebibmacro{bbx:ifmergeddate}}
159     and
160     test {\iffieldundef{issue}}}
161   {}
162   {\printtext [parens]{%
163     \printfield{issue}%
164     \setunit*{\addspace}%
165     \usebibmacro{bbx:ifmergeddate}
166     {}
167     {\printdate}}}%
168   \newunit}}

```

The basic option merges year-only date with date label.

```

170 \def\bbx@opt@mergedate@basic{%
171   \renewbibmacro*{date+extradate}{%
172     \ifboolexpr{
173       togl {bbx:nonodate}
174       and not test {\iflabeldateisdate}}
175     {}
176     {\printtext [datelabel]{\printlabeldateextra}}}%
177   \renewbibmacro*{bbx:ifmergeddate}{%
178     \ifboolexpr{
179       test {\iflabeldateisdate}
180       and
181       not test {\ifdateshavedifferentprecision{label}{}}
182     }%
183   }%
184   \renewbibmacro*{issue+date}{%
185     \ifboolexpr{
186       test {\usebibmacro{bbx:ifmergeddate}}
187       and
188       test {\iffieldundef{issue}}
189     }
190     {}
191     {\printtext [parens]{%
192       \printfield{issue}%
193       \setunit*{\addspace}%
194       \printdate}}}%
195   \newunit}}

```

The minimum option merges year-only date with year-only date label.

```

197 \def\bbx@opt@mergedate@minimum{%
198   \renewbibmacro*{date+extradate}{%
199     \ifboolexpr{
200       togl {bbx:nonodate}
201       and not test {\iflabeldateisdate}}
202     {}
203     {\printtext [datelabel]{\printlabeldateextra}}}%
204   \renewbibmacro*{bbx:ifmergeddate}{%
205     \ifboolexpr{
206       test {\iflabeldateisdate}
207       and
208       not test {\ifdateshavedifferentprecision{label}{}}
209       and
210       test {\iffieldundef{extradate}}
211     }%
212   }%
213   \renewbibmacro*{issue+date}{%
214     \ifboolexpr{

```

```

215     test {\usebibmacro{bbx:ifmergeddate}}
216     and
217     test {\iffieldundef{issue}}
218   }
219   {}
220   {\printtext [parens]{%
221     \printfield{issue}%
222     \setunit*{\addspace}%
223     \printdate}}%
224   \newunit}}

```

The false option doesn't merge date/issue with date label

```

226 \def\bbx@opt@mergedate@false{%
227   \renewbibmacro*{date+extradate}{%
228     \iffieldundef{labelyear}
229     {}
230     {\printtext [parens]{\printlabeldateextra}}%
231   \renewbibmacro*{bbx:ifmergeddate}{\@secondoftwo}%
232   \renewbibmacro*{issue+date}{%
233     \printtext [parens]{%
234       \printfield{issue}%
235       \setunit*{\addspace}%
236       \usebibmacro{date}}%
237   \newunit}}

```

Lastly, here is our new (default) option, which 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.

```

239 \def\bbx@opt@mergedate@year{%
240   \renewbibmacro*{date+extradate}{%
241     \iffieldundef{labelyear}{}{%
242       \ifboolexpr{
243         togl {bbx:nonodate}
244         and
245         not test {\iflabeldateisdate}
246       }{}{%
247         \printtext [date label]{\printlabeldateextra}%
248       }%
249       \iflabeldateisdate{%
250         \clearfield{year}%
251       }{}%
252     \ifcsundef{abx@macro@date+extrayear}{}{%
253       \renewbibmacro*{date+extrayear}{\usebibmacro{date+extradate}}%
254     }
255   \renewbibmacro*{issue+date}{%
256     \iffieldundef{issue}{}{%
257       \ifboolexpr{(
258         test {\iffieldundef{volume}}
259         and
260         test {\iffieldundef{number}}
261       ) and
262         test {\iffieldundef{eid}}
263     }{%
264       \newunit
265       \printfield{issue}%
266     }{%
267       \printtext [parens]{%
268         \printfield{issue}%
269       }%
270     }
271   }%

```

```

272 \setunit{\addcomma\space}%
273 \printdate
274 \newunit
275 }%
276 }%
277
278 \def\bbx@opt@mergedate@true{\bbx@opt@mergedate@year}

```

We define the option in terms of the above.

```

280 \DeclareBiblatexOption[global,type,entry][boolean]{mergedate}[true]{%
281 \ifcsdef{bbx@opt@mergedate@#1}
282 {\csuse{bbx@opt@mergedate@#1}}
283 {\PackageError{biblatex}
284 {Invalid option 'mergedate=#1'}
285 {Valid values are 'maximum', 'compact', 'basic', 'minimum',\MessageBreak
286 'year', 'true' (=year), and 'false'.}}

```

7.3.3 Default settings

Things to note in particular:

- With @online entries, the URL is shown even if url=false, globally.
- With @letter entries, the date is written complete at the start of the reference.

```

288 \ExecuteBibliographyOptions{isbn,url,doi,eprint,related}
289 \ExecuteBibliographyOptions[labeldateparts,sorting=nyt,pagetracker,mergedate]
290 \ExecuteBibliographyOptions{%
291 maxcitenames=3,maxbibnames=9999,isbn=false,giveninits=true,dashed=false,
292 alldates=comp,labeldate=year,labelalpha=true}
293 \ExecuteBibliographyOptions[online]{url=true}
294 \ExecuteBibliographyOptions[reference,audio,video,music,movie]{%
295 useeditor=false}
296 \ExecuteBibliographyOptions[letter]{mergedate=maximum}

```

7.4 Drivers for formatting specific entry types

```

298 \newbibmacro*{begentry}{}
299 \newbibmacro*{finentry}{\finentry}

```

7.4.1 Articles

Compared with the standard styles, the main differences in the driver are the omission of ‘in’ and the position of the publication state (which is in the journal+issuetitle macro).

```

301 \DeclareBibliographyDriver{article}{%
302 \usebibmacro{bibindex}%
303 \usebibmacro{begentry}%
304 \usebibmacro{author/translator+others}%
305 \setunit{\printdelim{nametitle}}\newblock
306 \usebibmacro{title}%
307 \newunit\newblock
308 \usebibmacro{byauthor}%
309 \newunit\newblock
310 \usebibmacro{bytranslator+others}%
311 \newunit
312 \usebibmacro{byeditor+others}%
313 \newunit\newblock
314 \usebibmacro{journal+issuetitle}%
315 \newunit
316 \usebibmacro{note+pages}%
317 \newunit\newblock

```



```

318 \iftoggle{bbx:isbn}
319   {\printfield{issn}}
320   {}%
321 \newunit\newblock
322 \usebibmacro{doi+eprint+url}%
323 \newunit\newblock
324 \printfield{addendum}%
325 \setunit{\bibpagerefpunct}\newblock
326 \usebibmacro{pageref}%
327 \newunit\newblock
328 \iftoggle{bbx:related}
329   {\usebibmacro{related:init}%
330   \usebibmacro{related}}
331   {}%
332 \usebibmacro{finentry}}
333
334 \DeclareBibliographyDriver{periodical}{%
335   \usebibmacro{bibindex}%
336   \usebibmacro{begentry}%
337   \usebibmacro{editor}%
338   \setunit{\printdelim{nametitledelim}}\newblock
339   \usebibmacro{title+issuetitle}%
340   \newunit\newblock
341   \usebibmacro{byeditor}%
342   \newunit\newblock
343   \printfield{note}%
344   \newunit\newblock
345   \iftoggle{bbx:isbn}
346     {\printfield{issn}}
347     {}%
348   \newunit\newblock
349   \usebibmacro{doi+eprint+url}%
350   \newunit\newblock
351   \printfield{addendum}%
352   \setunit{\bibpagerefpunct}\newblock
353   \usebibmacro{pageref}%
354   \newunit\newblock
355   \iftoggle{bbx:related}
356     {\usebibmacro{related:init}%
357     \usebibmacro{related}}
358     {}%
359   \usebibmacro{finentry}}

```

7.4.2 Books

Compared with the standard styles, the main difference is that the series is separated by a comma rather than a period. This also affects proceedings and certain forms of grey literature.

```

361 \DeclareBibliographyDriver{book}{%
362   \usebibmacro{bibindex}%
363   \usebibmacro{begentry}%
364   \usebibmacro{author/editor+others/translator+others}%
365   \setunit{\printdelim{nametitledelim}}\newblock
366   \usebibmacro{maintitle+title}%
367   \newunit\newblock
368   \usebibmacro{byauthor}%
369   \newunit\newblock
370   \usebibmacro{byeditor+others}%
371   \newunit\newblock
372   \printfield{edition}%
373   \newunit
374   \iffieldundef{maintitle}

```

```

375     {\printfield{volume}%
376      \printfield{part}}
377     {}%
378 \newunit
379 \printfield{volumes}%
380 \setunit{\addcomma\space}%
381 \usebibmacro{series+number}%
382 \newunit\newblock
383 \printfield{note}%
384 \newunit\newblock
385 \usebibmacro{publisher+location+date}%
386 \newunit\newblock
387 \usebibmacro{chapter+pages}%
388 \newunit\newblock
389 \printfield{pubstate}%
390 \newunit\newblock
391 \iftoggle{bbx:isbn}
392   {\printfield{isbn}}
393   {}%
394 \newunit\newblock
395 \usebibmacro{doi+eprint+url}%
396 \newunit\newblock
397 \printfield{addendum}%
398 \setunit{\bibpagerefpunct}\newblock
399 \usebibmacro{pageref}%
400 \newunit\newblock
401 \iftoggle{bbx:related}
402   {\usebibmacro{related:init}%
403    \usebibmacro{related}}
404   {}%
405 \usebibmacro{finentry}}
406
407 \DeclareBibliographyDriver{collection}{%
408   \usebibmacro{bibindex}%
409   \usebibmacro{begentry}%
410   \usebibmacro{editor+others}%
411   \setunit{\printdelim{nametitledelim}}\newblock
412   \usebibmacro{maintitle+title}%
413   \newunit\newblock
414   \usebibmacro{byeditor+others}%
415   \newunit\newblock
416   \printfield{edition}%
417   \newunit
418   \iffieldundef{maintitle}
419     {\printfield{volume}%
420      \printfield{part}}
421     {}%
422   \newunit
423   \printfield{volumes}%
424   \setunit{\addcomma\space}%
425   \usebibmacro{series+number}%
426   \newunit\newblock
427   \printfield{note}%
428   \newunit\newblock
429   \usebibmacro{publisher+location+date}%
430   \newunit\newblock
431   \usebibmacro{chapter+pages}%
432   \newunit\newblock
433   \printfield{pubstate}%
434   \newunit\newblock
435   \iftoggle{bbx:isbn}
436     {\printfield{isbn}}
437     {}%

```

```

438 \newunit\newblock
439 \usebibmacro{doi+eprint+url}%
440 \newunit\newblock
441 \printfield{addendum}%
442 \setunit{\bibpagerefpunct}\newblock
443 \usebibmacro{pageref}%
444 \newunit\newblock
445 \iftoggle{bbx:related}
446   {\usebibmacro{related:init}%
447   \usebibmacro{related}}
448   {}%
449 \usebibmacro{finentry}}
450
451 \DeclareBibliographyDriver{proceedings}{%
452   \usebibmacro{bibindex}%
453   \usebibmacro{begentry}%
454   \usebibmacro{editor+others}%
455   \setunit{\printdelim{nametitledelim}}\newblock
456   \usebibmacro{maintitle+title}%
457   \newunit\newblock
458   \usebibmacro{byeditor+others}%
459   \newunit\newblock
460   \iffieldundef{maintitle}
461     {\printfield{volume}%
462     \printfield{part}}
463     {}%
464   \newunit
465   \printfield{volumes}%
466   \setunit{\addcomma\space}%
467   \usebibmacro{series+number}%
468   \newunit\newblock
469   \usebibmacro{event+venue+date}%
470   \newunit\newblock
471   \printfield{note}%
472   \newunit\newblock
473   \printlist{organization}%
474   \newunit
475   \usebibmacro{publisher+location+date}%
476   \newunit\newblock
477   \usebibmacro{chapter+pages}%
478   \newunit\newblock
479   \printfield{pubstate}%
480   \newunit\newblock
481   \iftoggle{bbx:isbn}
482     {\printfield{isbn}}
483     {}%
484   \newunit\newblock
485   \usebibmacro{doi+eprint+url}%
486   \newunit\newblock
487   \printfield{addendum}%
488   \setunit{\bibpagerefpunct}\newblock
489   \usebibmacro{pageref}%
490   \newunit\newblock
491   \iftoggle{bbx:related}
492     {\usebibmacro{related:init}%
493     \usebibmacro{related}}
494     {}%
495   \usebibmacro{finentry}}

```

7.4.3 Works in collections

Compared with the standard styles, the main difference is that the editors precede the book title.

```

497 \DeclareBibliographyDriver{inbook}{%
498   \usebibmacro{bibindex}%
499   \usebibmacro{begentry}%
500   \usebibmacro{author/translator+others}%
501   \setunit{\printdelim{nametitle}}\newblock
502   \usebibmacro{title}%
503   \newunit\newblock
504   \usebibmacro{byauthor}%
505   \newunit\newblock
506   \usebibmacro{in:}%
507   \usebibmacro{bybookauthor}%
508   \newunit\newblock
509   \usebibmacro{maintitle+booktitle}%
510   \newunit\newblock
511   \usebibmacro{byeditor+others}%
512   \newunit\newblock
513   \printfield{edition}%
514   \newunit
515   \iffieldundef{maintitle}
516     {\printfield{volume}%
517      \printfield{part}}
518     {}%
519   \newunit
520   \printfield{volumes}%
521   \setunit{\addcomma\space}%
522   \usebibmacro{series+number}%
523   \newunit\newblock
524   \printfield{note}%
525   \newunit\newblock
526   \usebibmacro{publisher+location+date}%
527   \newunit\newblock
528   \usebibmacro{chapter+pages}%
529   \newunit\newblock
530   \printfield{pubstate}%
531   \newunit\newblock
532   \iftoggle{bbx:isbn}
533     {\printfield{isbn}}
534     {}%
535   \newunit\newblock
536   \usebibmacro{doi+eprint+url}%
537   \newunit\newblock
538   \printfield{addendum}%
539   \setunit{\bibpagerefpunct}\newblock
540   \usebibmacro{pageref}%
541   \newunit\newblock
542   \iftoggle{bbx:related}
543     {\usebibmacro{related:init}%
544      \usebibmacro{related}}
545     {}%
546   \usebibmacro{finentry}}
547
548 \DeclareBibliographyDriver{incollection}{%
549   \usebibmacro{bibindex}%
550   \usebibmacro{begentry}%
551   \usebibmacro{author/translator+others}%
552   \setunit{\printdelim{nametitle}}\newblock
553   \usebibmacro{title}%
554   \newunit\newblock
555   \usebibmacro{byauthor}%
556   \newunit\newblock
557   \usebibmacro{in:}%
558   \usebibmacro{bookeditor}%
559   \newunit\newblock

```

```

560 \usebibmacro{maintitle+booktitle}%
561 \usebibmacro{byeditor+others}%
562 \newunit\newblock
563 \printfield{edition}%
564 \newunit
565 \iffieldundef{maintitle}
566   {\printfield{volume}%
567    \printfield{part}}
568   {}%
569 \newunit
570 \printfield{volumes}%
571 \setunit{\addcomma\space}%
572 \usebibmacro{series+number}%
573 \newunit\newblock
574 \printfield{note}%
575 \newunit\newblock
576 \usebibmacro{publisher+location+date}%
577 \newunit\newblock
578 \usebibmacro{chapter+pages}%
579 \newunit\newblock
580 \printfield{pubstate}%
581 \newunit\newblock
582 \iftoggle{bbx:isbn}
583   {\printfield{isbn}}
584   {}%
585 \newunit\newblock
586 \usebibmacro{doi+eprint+url}%
587 \newunit\newblock
588 \printfield{addendum}%
589 \setunit{\bibpagerefpunct}\newblock
590 \usebibmacro{pageref}%
591 \newunit\newblock
592 \iftoggle{bbx:related}
593   {\usebibmacro{related:init}%
594    \usebibmacro{related}}
595   {}%
596 \usebibmacro{finentry}}
597
598 \DeclareBibliographyDriver{inproceedings}{%
599   \usebibmacro{bibindex}%
600   \usebibmacro{begentry}%
601   \usebibmacro{author/translator+others}%
602   \setunit{\printdelim{nametitledelim}}\newblock
603   \usebibmacro{title}%
604   \newunit\newblock
605   \usebibmacro{byauthor}%
606   \newunit\newblock
607   \ifnameundef{editor}{\usebibmacro{in:}}%
608   \usebibmacro{bookeditor}%
609   \newunit\newblock
610   \usebibmacro{maintitle+booktitle}%
611   \usebibmacro{byeditor+others}%
612   \newunit\newblock
613   \iffieldundef{maintitle}
614     {\printfield{volume}%
615      \printfield{part}}
616     {}%
617   \newunit
618   \printfield{volumes}%
619   \setunit{\addcomma\space}%
620   \usebibmacro{series+number}%
621   \newunit\newblock
622   \usebibmacro{event+venue+date}%

```

```

623 \newunit\newblock
624 \printfield{note}%
625 \newunit\newblock
626 \printlist{organization}%
627 \newunit
628 \usebibmacro{publisher+location+date}%
629 \newunit\newblock
630 \usebibmacro{chapter+pages}%
631 \newunit\newblock
632 \printfield{pubstate}%
633 \newunit\newblock
634 \iftoggle{bbx:isbn}
635   {\printfield{isbn}}
636   {}%
637 \newunit\newblock
638 \usebibmacro{doi+eprint+url}%
639 \newunit\newblock
640 \printfield{addendum}%
641 \setunit{\bibpagerefpunct}\newblock
642 \usebibmacro{pageref}%
643 \newunit\newblock
644 \iftoggle{bbx:related}
645   {\usebibmacro{related:init}%
646     \usebibmacro{related}}
647   {}%
648 \usebibmacro{finentry}}

```

7.4.4 Entries in reference works

In these cases, the title is moved after the edition information.

```

650 \DeclareBibliographyDriver{inreference}{%
651   \usebibmacro{bibindex}%
652   \usebibmacro{begentry}%
653   \usebibmacro{author/translator+others}%
654   \setunit{\printdelim{nametitledelim}}\newblock
655   \ifnameundef{author}{%
656     \usebibmacro{title}}%
657   \newunit\newblock
658   \usebibmacro{byauthor}%
659   \newunit\newblock
660   \ifboolexpr{
661     test {\iffieldundef{maintitle}}
662     and
663     test {\iffieldundef{booktitle}}
664   }{}{%
665     \ifnameundef{editor}{\usebibmacro{in:}}%
666     \usebibmacro{bookeditor}%
667     \newunit\newblock
668     \usebibmacro{maintitle+booktitle}}%
669   \usebibmacro{byeditor+others}%
670   \newunit\newblock
671   \printfield{edition}%
672   \newunit
673   \iffieldundef{maintitle}
674     {\printfield{volume}%
675       \printfield{part}}
676     {}%
677   \newunit
678   \ifnameundef{author}{\usebibmacro{title}}%
679   \newunit}{%
680   \printfield{volumes}%
681   \setunit{\addcomma\space}}%

```

```

682 \usebibmacro{series+number}%
683 \newunit\newblock
684 \printfield{note}%
685 \newunit\newblock
686 \usebibmacro{publisher+location+date}%
687 \newunit\newblock
688 \usebibmacro{chapter+pages}%
689 \newunit\newblock
690 \printfield{pubstate}%
691 \newunit\newblock
692 \iftoggle{bbx:isbn}
693   {\printfield{isbn}}
694   {}%
695 \newunit\newblock
696 \usebibmacro{doi+eprint+url}%
697 \newunit\newblock
698 \printfield{addendum}%
699 \setunit{\bibpagerefpunct}\newblock
700 \usebibmacro{pageref}%
701 \newunit\newblock
702 \iftoggle{bbx:related}
703   {\usebibmacro{related:init}%
704     \usebibmacro{related}}
705   {}%
706 \usebibmacro{finentry}}

```

7.4.5 Datasets

The main difference from the standard driver is the use of the `library` macro.

```

708 \DeclareBibliographyDriver{dataset}{%
709   \usebibmacro{bibindex}%
710   \usebibmacro{begentry}%
711   \usebibmacro{author+others/translator+others}%
712   \setunit{\printdelim{nametitledelim}}\newblock
713   \usebibmacro{title}%
714   \newunit\newblock
715   \usebibmacro{byauthor}%
716   \newunit\newblock
717   \usebibmacro{byeditor+others}%
718   \newunit\newblock
719   \printfield{type}%
720   \newunit
721   \printfield{edition}%
722   \setunit{\addcomma\space}%
723   \usebibmacro{series+number}%
724   \newunit\newblock
725   \printfield{note}%
726   \newunit\newblock
727   \usebibmacro{library}%
728   \newunit\newblock
729   \usebibmacro{organization+location+date}%
730   \newunit\newblock
731   \printfield{pubstate}%
732   \newunit\newblock
733   \usebibmacro{doi+eprint+url}%
734   \newunit\newblock
735   \printfield{addendum}%
736   \setunit{\bibpagerefpunct}\newblock
737   \usebibmacro{pageref}%
738   \newunit\newblock
739   \iftoggle{bbx:related}
740     {\usebibmacro{related:init}}

```

```

741   \usebibmacro{related}}
742   {}%
743   \usebibmacro{finentry}}

```

7.4.6 Software

The driver for software entries is based on `misc`. The main difference is in how the type is printed.

```

745 \DeclareBibliographyDriver{software}{%
746   \usebibmacro{bibindex}%
747   \usebibmacro{begentry}%
748   \usebibmacro{author+others/translator+others}%
749   \setunit{\printdelim{nametitle}}\newblock
750   \usebibmacro{title}%
751   \setunit{\addspace}
752   \printfield{type}%
753   \newunit\newblock
754   \usebibmacro{byauthor}%
755   \newunit\newblock
756   \usebibmacro{byeditor+others}%
757   \newunit\newblock
758   \printfield{howpublished}%
759   \newunit\newblock
760   \printfield{note}%
761   \newunit\newblock
762   \usebibmacro{organization+location+date}%
763   \newunit\newblock
764   \printfield{pubstate}%
765   \newunit\newblock
766   \usebibmacro{doi+eprint+url}%
767   \newunit\newblock
768   \printfield{addendum}%
769   \setunit{\bibpagerefpunct}\newblock
770   \usebibmacro{pageref}%
771   \newunit\newblock
772   \iftoggle{bbx:related}
773     {\usebibmacro{related:init}%
774     \usebibmacro{related}}
775     {}%
776   \usebibmacro{finentry}}

```

7.4.7 Manuals

The `manual` driver is useful for a variety of technical publications, such as standards, patents and maps. (Patents have their own driver, in fact, but we set things up so the `manual` driver can be used instead if needed for compatibility.) We use specialist macros for the type/number and publication block.

```

778 \DeclareBibliographyDriver{manual}{%
779   \usebibmacro{bibindex}%
780   \usebibmacro{begentry}%
781   \usebibmacro{author/editor}%
782   \setunit{\printdelim{nametitle}}\newblock
783   \usebibmacro{title}%
784   \newunit\newblock
785   \usebibmacro{byauthor}%
786   \newunit\newblock
787   \usebibmacro{byeditor}%
788   \newunit\newblock
789   \printfield{edition}%
790   \usebibmacro{manual:series+type+number}%
791   \newunit

```



```

792 \printfield{note}%
793 \newunit\newblock
794 \usebibmacro{organization+location+date}%
795 \newunit\newblock
796 \usebibmacro{chapter+pages}%
797 \newunit\newblock
798 \printfield{pubstate}%
799 \newunit\newblock
800 \iftoggle{bbx:isbn}
801   {\printfield{isbn}}
802   {}%
803 \newunit\newblock
804 \usebibmacro{doi+eprint+url}%
805 \newunit\newblock
806 \printfield{addendum}%
807 \setunit{\bibpagerefpunct}\newblock
808 \usebibmacro{pageref}%
809 \newunit\newblock
810 \iftoggle{bbx:related}
811   {\usebibmacro{related:init}%
812     \usebibmacro{related}}
813   {}%
814 \usebibmacro{finentry}}

```

7.4.8 Patents

```

816 \DeclareBibliographyDriver{patent}{%
817   \usebibmacro{bibindex}%
818   \usebibmacro{begentry}%
819   \usebibmacro{author}%
820   \setunit{\printdelim{nametitle}}\newblock
821   \usebibmacro{title}%
822   \newunit\newblock
823   \usebibmacro{byauthor}%
824   \newunit\newblock
825   \printfield{type}%
826   \setunit*\addspace%
827   \printfield{number}%
828   \iflistundef{location}
829     {}
830     {\setunit*\addspace%
831       \printtext [parens]{%
832         \printlist [] [-\value{listtotal}]{location}}}%
833   \newunit\newblock
834   \usebibmacro{byholder}%
835   \newunit\newblock
836   \printfield{note}%
837   \newunit\newblock
838   \usebibmacro{date}%
839   \newunit\newblock
840   \usebibmacro{doi+eprint+url}%
841   \newunit\newblock
842   \printfield{addendum}%
843   \setunit{\bibpagerefpunct}\newblock
844   \usebibmacro{pageref}%
845   \newunit\newblock
846   \iftoggle{bbx:related}
847     {\usebibmacro{related:init}%
848       \usebibmacro{related}}
849     {}%
850   \usebibmacro{finentry}}

```

7.4.9 Online works

Compared with the standard styles, the main difference is that the organization's address is printed and we support the library macro.

```
853 \DeclareBibliographyDriver{online}{%
854   \usebibmacro{bibindex}%
855   \usebibmacro{begentry}%
856   \usebibmacro{author/editor+others/translator+others}%
857   \setunit{\printdelim{nametitledelim}}\newblock
858   \usebibmacro{title}%
859   \newunit\newblock
860   \usebibmacro{byauthor}%
861   \newunit\newblock
862   \usebibmacro{byeditor+others}%
863   \newunit
864   \printfield{note}%
865   \newunit\newblock
866   \usebibmacro{library}%
867   \newunit\newblock
868   \usebibmacro{organization+location+date}%
869   \newunit\newblock
870   \printfield{pubstate}%
871   \newunit\newblock
872   \usebibmacro{doi+eprint+url}%
873   \newunit\newblock
874   \printfield{addendum}%
875   \setunit{\bibpagerefpunct}\newblock
876   \usebibmacro{pageref}%
877   \newunit\newblock
878   \iftoggle{bbx:related}
879     {\usebibmacro{related:init}%
880     \usebibmacro{related}}
881     {}%
882   \usebibmacro{finentry}}
```

7.4.10 Reports

Compared with the standard styles, the main differences are that we use a special macro for printing the type, series and number in parentheses, and we support the library field.

```
884 %t
885 \DeclareBibliographyDriver{report}{%
886   \usebibmacro{bibindex}%
887   \usebibmacro{begentry}%
888   \usebibmacro{author}%
889   \setunit{\printdelim{nametitledelim}}\newblock
890   \usebibmacro{title}%
891   \newunit\newblock
892   \usebibmacro{byauthor}%
893   \newunit\newblock
894   \usebibmacro{series+type+number}%
895   \newunit\newblock
896   \printfield{note}%
897   \newunit\newblock
898   \usebibmacro{institution+location+date}%
899   \newunit\newblock
900   \usebibmacro{chapter+pages}%
901   \newunit\newblock
902   \printfield{pubstate}%
903   \newunit\newblock
904   \iftoggle{bbx:isbn}
905     {\printfield{isrn}}
```

```

906     {}%
907 \newunit\newblock
908 \usebibmacro{library}%
909 \newunit\newblock
910 \usebibmacro{doi+eprint+url}%
911 \newunit\newblock
912 \printfield{addendum}%
913 \setunit{\bibpagerefpunct}\newblock
914 \usebibmacro{pageref}%
915 \newunit\newblock
916 \iftoggle{bbx:related}
917   {\usebibmacro{related:init}%
918   \usebibmacro{related}}
919   {}%
920 \usebibmacro{finentry}}

```

7.4.11 Theses

```

922 \DeclareBibliographyDriver{thesis}{%
923   \usebibmacro{bibindex}%
924   \usebibmacro{begentry}%
925   \usebibmacro{author}%
926   \setunit{\printdelim{nametitledelim}}\newblock
927   \usebibmacro{title}%
928   \newunit\newblock
929   \usebibmacro{byauthor}%
930   \newunit\newblock
931   \printfield{note}%
932   \newunit\newblock
933   \printfield{type}%
934   \newunit
935   \usebibmacro{institution+location+date}%
936   \newunit\newblock
937   \usebibmacro{chapter+pages}%
938   \newunit\newblock
939   \printfield{pubstate}%
940   \newunit\newblock
941   \iftoggle{bbx:isbn}
942     {\printfield{isbn}}
943     {}%
944   \newunit\newblock
945   \usebibmacro{doi+eprint+url}%
946   \newunit\newblock
947   \printfield{addendum}%
948   \setunit{\bibpagerefpunct}\newblock
949   \usebibmacro{pageref}%
950   \newunit\newblock
951   \iftoggle{bbx:related}
952     {\usebibmacro{related:init}%
953     \usebibmacro{related}}
954     {}%
955   \usebibmacro{finentry}}

```

7.4.12 Audiovisual materials

The audio and video drivers are based on misc.

```

957 \DeclareBibliographyDriver{audio}{%
958   \usebibmacro{bibindex}%
959   \usebibmacro{begentry}%
960   \usebibmacro{author/editor+others/translator+others}%
961   \setunit{\printdelim{nametitledelim}}\newblock

```

```

962 \usebibmacro{title}%
963 \newunit\newblock
964 \usebibmacro{series+number}%
965 \ifboolexpr{
966   test {\iffieldequalstr{type}{TV}}
967   or
968   test {\iffieldequalstr{type}{Radio}}
969 }{%
970   \setunit{\addspace}%
971   \usebibmacro{isonline}}-{}%
972 \newunit\newblock
973 \printfield{type}%
974 \newunit\newblock
975 \usebibmacro{byauthor}[given-family:full]%
976 \newunit\newblock
977 \usebibmacro{byeditor+others}[given-family:full]%
978 \newunit\newblock
979 \printfield{howpublished}%
980 \newunit\newblock
981 \printfield{note}%
982 \newunit\newblock
983 \usebibmacro{publisher+location+date}%
984 \newunit\newblock
985 \printfield{pubstate}%
986 \newunit\newblock
987 \usebibmacro{doi+eprint+url}%
988 \newunit\newblock
989 \printfield{addendum}%
990 \setunit{\bibpagerefpunct}\newblock
991 \usebibmacro{pageref}%
992 \newunit\newblock
993 \iftoggle{bbx:related}
994   {\usebibmacro{related:init}%
995    \usebibmacro{related}}
996   {}%
997 \usebibmacro{finentry}}

```

7.4.13 Images

The driver for image is based on misc. The main difference is the support for the library field.

```

999 \DeclareBibliographyDriver{image}{%
1000   \usebibmacro{bibindex}%
1001   \usebibmacro{begentry}%
1002   \usebibmacro{author/editor+others/translator+others}%
1003   \setunit{\printdelim{nametitledelim}}\newblock
1004   \usebibmacro{title}%
1005   \newunit\newblock
1006   \usebibmacro{byauthor}%
1007   \newunit\newblock
1008   \usebibmacro{byeditor+others}%
1009   \newunit\newblock
1010   \printfield{howpublished}%
1011   \newunit\newblock
1012   \printfield{type}%
1013   \newunit
1014   \printfield{note}%
1015   \newunit\newblock
1016   \usebibmacro{collection+shelfmark}%
1017   \newunit\newblock
1018   \usebibmacro{organization+location+date+library}%
1019   \newunit\newblock
1020   \printfield{pubstate}%

```

```

1021 \newunit\newblock
1022 \usebibmacro{doi+eprint+url}%
1023 \newunit\newblock
1024 \printfield{addendum}%
1025 \setunit{\bibpagerefpunct}\newblock
1026 \usebibmacro{pageref}%
1027 \newunit\newblock
1028 \iftoggle{bbx:related}
1029   {\usebibmacro{related:init}%
1030    \usebibmacro{related}}
1031   {}%
1032 \usebibmacro{finentry}}

```

7.4.14 Case reports

```

1034 \DeclareBibliographyDriver{jurisdiction}{%
1035   \savebibmacro{title}%
1036   \xapptobibmacro{labeltitle}{%
1037     \setunit*\addspace}%
1038     \usebibmacro{casenumber}%
1039   }-{}-%
1040   \usebibmacro{bibindex}%
1041   \usebibmacro{begentry}%
1042   \usebibmacro{eucheck}%
1043   \usebibmacro{author}%
1044   \setunit{\printdelim{nametitledelim}}\newblock
1045   \usebibmacro{title}%
1046   \newunit\newblock
1047   \usebibmacro{byauthor}%
1048   \newunit\newblock
1049   \printfield{note}%
1050   \setunit{\addspace}%
1051   \usebibmacro{reporter}%
1052   \newunit\newblock
1053   \iftoggle{bbx:isbn}
1054     {\printfield{isrn}}
1055     {}%
1056   \newunit\newblock
1057   \usebibmacro{doi+eprint+url}%
1058   \newunit\newblock
1059   \printfield{addendum}%
1060   \setunit{\bibpagerefpunct}\newblock
1061   \usebibmacro{pageref}%
1062   \newunit\newblock
1063   \iftoggle{bbx:related}
1064     {\usebibmacro{related:init}%
1065      \usebibmacro{related}}
1066     {}%
1067   \usebibmacro{finentry}%
1068   \restorebibmacro{title}}

```

7.4.15 Legislation

```

1070 \DeclareBibliographyDriver{legislation}{%
1071   \usebibmacro{bibindex}%
1072   \usebibmacro{begentry}%
1073   \usebibmacro{eucheck}%
1074   \usebibmacro{author}%
1075   \setunit{\printdelim{nametitledelim}}\newblock
1076   \usebibmacro{title}%
1077   \newunit\newblock
1078   \usebibmacro{byauthor}%

```

```

1079 \newunit\newblock
1080 \usebibmacro{journal+series+volume+number+chapter+pages}
1081 \newunit\newblock
1082 \printfield{note}%
1083 \newunit\newblock
1084 \usebibmacro{institution+location+date}%
1085 \newunit\newblock
1086 \printfield{pubstate}%
1087 \newunit\newblock
1088 \iftoggle{bbx:isbn}
1089   {\printfield{isrn}}
1090   {}%
1091 \newunit\newblock
1092 \usebibmacro{doi+eprint+url}%
1093 \newunit\newblock
1094 \printfield{addendum}%
1095 \setunit{\bibpagerefpunct}\newblock
1096 \usebibmacro{pageref}%
1097 \newunit\newblock
1098 \iftoggle{bbx:related}
1099   {\usebibmacro{related:init}%
1100    \usebibmacro{related}}
1101   {}%
1102 \usebibmacro{finentry}}

```

7.4.16 Parliamentary debates

This entry type is currently only used for parliamentary debates, but will be used for treaties and explanatory notes on legislation should these ever be included in the Harvard (Bath) specification, with treaties being the default (since that's what upstream biblatex gives as an example). The test for subtype is therefore future-proofing.

```

1103 \newcommand*{\explanatorynote}{explanatory note}
1104 \newcommand*{\parliamentarytype}{parliamentary}
1105 \DeclareBibliographyDriver{legal}{%
1106   \usebibmacro{bibindex}%
1107   \usebibmacro{begentry}%
1108   \iffieldequals{entrysubtype}{\explanatorynote}{%
1109     \printfield[default]{title}%
1110     \setunit{\addspace}\newblock
1111   }{%
1112     \usebibmacro{legal:parliamentary}%
1113     \setunit{\addcomma\space}\newblock
1114   }%
1115   \usebibmacro{byauthor}%
1116   \newunit\newblock
1117   \printfield[default]{note}%
1118   \setunit{\addspace}\newblock
1119   \newunit\newblock
1120   \usebibmacro{doi+eprint+url}%
1121   \newunit\newblock
1122   \printfield{addendum}%
1123   \setunit{\bibpagerefpunct}\newblock
1124   \usebibmacro{pageref}%
1125   \newunit\newblock
1126   \iftoggle{bbx:related}
1127     {\usebibmacro{related:init}%
1128      \usebibmacro{related}}
1129     {}%
1130   \usebibmacro{finentry}}
1131 \newbibmacro{legal:parliamentary}{%
1132   \usebibmacro{author}%

```

```

1133 \setunit{\printdelim{nametitledelim}}\newblock
1134 \usebibmacro{title}%
1135 \newunit\newblock
1136 \usebibmacro{journal+issuetitle}%
1137 \setunit{\addcomma\space}%
1138 \printeventdate}

```

7.4.17 Unpublished and miscellaneous works

```

1140 \DeclareBibliographyDriver{booklet}{%
1141 \usebibmacro{bibindex}%
1142 \usebibmacro{begentry}%
1143 \usebibmacro{author/editor+others/translator+others}%
1144 \setunit{\printdelim{nametitledelim}}\newblock
1145 \usebibmacro{title}%
1146 \newunit\newblock
1147 \usebibmacro{byauthor}%
1148 \newunit\newblock
1149 \usebibmacro{byeditor+others}%
1150 \newunit\newblock
1151 \printfield{howpublished}%
1152 \newunit\newblock
1153 \printfield{type}%
1154 \newunit\newblock
1155 \printfield{note}%
1156 \usebibmacro{collection+shelfmark}%
1157 \newunit\newblock
1158 \usebibmacro{organization+location+date+library}%
1159 \newunit\newblock
1160 \usebibmacro{chapter+pages}%
1161 \newunit\newblock
1162 \printfield{pubstate}%
1163 \newunit\newblock
1164 \usebibmacro{doi+eprint+url}%
1165 \newunit\newblock
1166 \printfield{addendum}%
1167 \setunit{\bibpagerefpunct}\newblock
1168 \usebibmacro{pageref}%
1169 \newunit\newblock
1170 \iftoggle{bbx:related}
1171   {\usebibmacro{related:init}%
1172   \usebibmacro{related}}
1173   {}%
1174 \usebibmacro{finentry}}

```

The letter driver is used for emails. It is based loosely on the one for articles. The particular foible with this type is that the date must be printed complete at the start.

```

1176 \DeclareBibliographyDriver{letter}{%
1177 \usebibmacro{bibindex}%
1178 \usebibmacro{begentry}%
1179 \usebibmacro{author/translator+others}%
1180 \setunit{\printdelim{nametitledelim}}\newblock
1181 \usebibmacro{title}%
1182 \newunit\newblock
1183 \usebibmacro{byauthor}%
1184 \newunit\newblock
1185 \usebibmacro{bytranslator+others}%
1186 \newunit\newblock
1187 \usebibmacro{journal+issuetitle}%
1188 \newunit\newblock
1189 \printfield{howpublished}%

```

```

1190 \newunit
1191 \printfield{note}%
1192 \newunit\newblock
1193 \usebibmacro{collection+shelfmark}%
1194 \newunit\newblock
1195 \usebibmacro{organization+location+date+library}%
1196 \newunit\newblock
1197 \printfield{pubstate}%
1198 \newunit\newblock
1199 \usebibmacro{doi+eprint+url}%
1200 \newunit\newblock
1201 \printfield{addendum}%
1202 \setunit{\bibpagerefpunct}\newblock
1203 \usebibmacro{pageref}%
1204 \newunit\newblock
1205 \iftoggle{bbx:related}
1206   {\usebibmacro{related:init}%
1207    \usebibmacro{related}}
1208   {}%
1209 \usebibmacro{finentry}}
1210
1211 \DeclareBibliographyDriver{misc}{%
1212   \usebibmacro{bibindex}%
1213   \usebibmacro{begentry}%
1214   \usebibmacro{author/editor+others/translator+others}%
1215   \setunit{\printdelim{nametitle}}\newblock
1216   \usebibmacro{title}%
1217   \newunit\newblock
1218   \usebibmacro{byauthor}%
1219   \newunit\newblock
1220   \usebibmacro{byeditor+others}%
1221   \newunit\newblock
1222   \printfield{howpublished}%
1223   \newunit\newblock
1224   \printfield{type}%
1225   \newunit
1226   \printfield{note}%
1227   \newunit\newblock
1228   \usebibmacro{collection+shelfmark}%
1229   \newunit\newblock
1230   \usebibmacro{organization+location+date+library}%
1231   \newunit\newblock
1232   \printfield{pubstate}%
1233   \newunit\newblock
1234   \usebibmacro{doi+eprint+url}%
1235   \newunit\newblock
1236   \printfield{addendum}%
1237   \setunit{\bibpagerefpunct}\newblock
1238   \usebibmacro{pageref}%
1239   \newunit\newblock
1240   \iftoggle{bbx:related}
1241     {\usebibmacro{related:init}%
1242      \usebibmacro{related}}
1243     {}%
1244   \usebibmacro{finentry}}

```

The unpublished driver is used for miscellaneous unpublished written material. It differs from the standard version by supporting `maintitle` and `booktitle`, and including a label at the end. The unpublished label is delegated to a macro in case future versions of the style place conditions on whether it is displayed.


```

1246 \DeclareBibliographyDriver{unpublished}{%
1247   \usebibmacro{bibindex}%
1248   \usebibmacro{begentry}%
1249   \usebibmacro{author}%
1250   \setunit{\printdelim{nametitledelim}}\newblock
1251   \usebibmacro{title}%
1252   \newunit\newblock
1253   \usebibmacro{byauthor}%
1254   \newunit\newblock
1255   \ifnameundef{editor}{\usebibmacro{in:}}%
1256   \usebibmacro{bookeditor}%
1257   \newunit\newblock
1258   \usebibmacro{maintitle+booktitle}%
1259   \usebibmacro{byeditor+others}%
1260   \newunit\newblock
1261   \printfield{howpublished}%
1262   \newunit\newblock
1263   \printfield{type}%
1264   \newunit\newblock
1265   \usebibmacro{event+venue+date}%
1266   \newunit\newblock
1267   \printfield{note}%
1268   \newunit\newblock
1269   \usebibmacro{collection+shelfmark}%
1270   \newunit\newblock
1271   \usebibmacro{organization+location+date+library}%
1272   \newunit\newblock
1273   \usebibmacro{isunpublished}%
1274   \newunit\newblock
1275   \printfield{pubstate}%
1276   \newunit\newblock
1277   \usebibmacro{doi+eprint+url}%
1278   \newunit\newblock
1279   \printfield{addendum}%
1280   \setunit{\bibpageref punct}\newblock
1281   \usebibmacro{pageref}%
1282   \newunit\newblock
1283   \iftoggle{bbx:related}
1284     {\usebibmacro{related:init}%
1285     \usebibmacro{related}}
1286     {}%
1287   \usebibmacro{finentry}}

```

7.4.18 Special drivers

```

1289 \DeclareBibliographyDriver{shorthand}{%
1290   \usedriver
1291     {\DeclareNameAlias{sortname}{default}}
1292     {\thefield{entrytype}}%
1293   \finentry}
1294
1295 \newbool{bbx@inset}
1296 \DeclareBibliographyDriver{set}{%
1297   \booltrue{bbx@inset}%
1298   \entryset{}{}%
1299   \newunit\newblock
1300   \usebibmacro{setpageref}%
1301   \finentry}

```

7.4.19 Aliases

We define some handy semantic aliases.

```

1303 \DeclareBibliographyAlias{mvbook}{book}
1304 \DeclareBibliographyAlias{bookinbook}{inbook}
1305 \DeclareBibliographyAlias{suppbook}{inbook}
1306 \DeclareBibliographyAlias{mvcollection}{collection}
1307 \DeclareBibliographyAlias{suppcollection}{incollection}
1308 \DeclareBibliographyAlias{movie}{audio}
1309 \DeclareBibliographyAlias{music}{audio}
1310 \DeclareBibliographyAlias{mvproceedings}{proceedings}
1311 \DeclareBibliographyAlias{reference}{collection}
1312 \DeclareBibliographyAlias{mvreference}{reference}
1313 \DeclareBibliographyAlias{suppperiodical}{article}
1314 \DeclareBibliographyAlias{review}{article}
1315 \DeclareBibliographyAlias{standard}{manual}
1316 \DeclareBibliographyAlias{software}{misc}
1317 \DeclareBibliographyAlias{video}{audio}
1318 \DeclareBibliographyAlias{*}{misc}

```

7.5 Name handling

The handling of CJK names is based on code supplied to TeX.sx by Moritz Wemheuer in answer to [question 320738](#).

The CJK part is printed after the anglicized name. If the name is also annotated as ‘cjk’ (see ‘Data Annotations’ in the biblatex manual), it is always printed in family-given order with no intermediate punctuation.

```

1320 \newbibmacro*{name:cjk-given-family}[3]{%
1321   \ifitemannotation{cjk}{%
1322     \usebibmacro{name:delim}{#2#1#3}%
1323     \usebibmacro{name:hook}{#2#1#3}%
1324     \mkbibnamefamily{#1}\isdot
1325     \ifdefvoid{#2}{\bibnamedelimd\mkbibnamegiven{#2}}%
1326     \ifdefvoid{#3}{\bibnamedelimd\mkbibnamecjk{#3}}%
1327   }{%
1328     \usebibmacro{name:delim}{#2#1#3}%
1329     \usebibmacro{name:hook}{#2#1#3}%
1330     \ifdefvoid{#2}{\mkbibnamegiven{#2}\isdot\bibnamedelimd}%
1331     \mkbibnamefamily{#1}\isdot
1332     \ifdefvoid{#3}{\bibnamedelimd\mkbibnamecjk{#3}}%
1333   }%
1334 }
1335 \newbibmacro*{name:cjk-family-given}[3]{%
1336   \ifitemannotation{cjk}{%
1337     \usebibmacro{name:delim}{#2#1#3}%
1338     \usebibmacro{name:hook}{#2#1#3}%
1339     \mkbibnamefamily{#1}\isdot
1340     \ifdefvoid{#2}{\bibnamedelimd\mkbibnamegiven{#2}}%
1341     \ifdefvoid{#3}{\bibnamedelimd\mkbibnamecjk{#3}}%
1342   }{%
1343     \usebibmacro{name:delim}{#1}%
1344     \usebibmacro{name:hook}{#1}%
1345     \mkbibnamefamily{#1}\isdot
1346     \ifboolexpe{%
1347       test {\ifdefvoid{#2}}
1348       and
1349       test {\ifdefvoid{#3}}
1350     }{
1351       {\revsdnamepunct}%
1352       \ifdefvoid{#2}{\bibnamedelimd\mkbibnamegiven{#2}\isdot}%
1353       \ifdefvoid{#3}{\bibnamedelimd\mkbibnamecjk{#3}}%
1354     }%
1355   }

```

We update the given-family and family-given name formats to support the above CJK

macros.

```
1357 \DeclareNameFormat{given-family}{%
1358 \ifdefvoid{\namepartcjk}{%
1359 \ifgiveninits{%
1360 \usebibmacro{name:given-family}
1361 {\namepartfamily}
1362 {\namepartgiveni}
1363 {\namepartprefix}
1364 {\namepartsuffix}%
1365 }{%
1366 \usebibmacro{name:given-family}
1367 {\namepartfamily}
1368 {\namepartgiven}
1369 {\namepartprefix}
1370 {\namepartsuffix}%
1371 }%
1372 }{%
1373 \ifgiveninits{%
1374 \usebibmacro{name:cjk-given-family}
1375 {\namepartfamily}
1376 {\namepartgiveni}
1377 {\namepartcjk}%
1378 }{%
1379 \usebibmacro{name:cjk-given-family}
1380 {\namepartfamily}
1381 {\namepartgiven}
1382 {\namepartcjk}%
1383 }%
1384 }%
1385 \usebibmacro{name:andothers}%
1386 }
1387
1388 \DeclareNameFormat{family-given}{%
1389 \ifdefvoid{\namepartcjk}{%
1390 \ifgiveninits{%
1391 \usebibmacro{name:family-given}
1392 {\namepartfamily}
1393 {\namepartgiveni}
1394 {\namepartprefix}
1395 {\namepartsuffix}%
1396 }{%
1397 \usebibmacro{name:family-given}
1398 {\namepartfamily}
1399 {\namepartgiven}
1400 {\namepartprefix}
1401 {\namepartsuffix}%
1402 }%
1403 }{%
1404 \ifgiveninits{%
1405 \usebibmacro{name:cjk-family-given}
1406 {\namepartfamily}
1407 {\namepartgiveni}
1408 {\namepartcjk}%
1409 }{%
1410 \usebibmacro{name:cjk-family-given}
1411 {\namepartfamily}
1412 {\namepartgiven}
1413 {\namepartcjk}%
1414 }%
1415 }
1416 \usebibmacro{name:andothers}%
1417 }
```

With videos, names in credits are printed in full.

```
1419 \DeclareNameFormat{given-family:full}{%
1420   \ifvoid{namepartcjk}{%
1421     \usebibmacro{name:given-family}
1422     {\namepartfamily}
1423     {\namepartgiven}
1424     {\namepartprefix}
1425     {\namepartsuffix}%
1426   }{%
1427     \usebibmacro{name:cjk-given-family}
1428     {\namepartfamily}
1429     {\namepartgiven}
1430     {\namepartcjk}%
1431   }%
1432   \usebibmacro{name:andothers}%
1433 }
```

Names are usually reversed, but not in the `bookeditor` position.

```
1435 \DeclareNameAlias{author}{family-given}
1436 \DeclareNameAlias{editor}{family-given}
1437 \DeclareNameAlias{translator}{family-given}
1438
1439 \DeclareNameWrapperAlias{author}{family-given}
1440 \DeclareNameWrapperAlias{editor}{family-given}
1441 \DeclareNameWrapperAlias{translator}{family-given}
1442
1443 \DeclareNameAlias{bookeditor}{given-family}
```

There are no spaces between initials.

```
1445 \renewcommand*{\bibinitdelim}{}
```

We add support for the standard author–year dash check.

```
1447 \newbibmacro*{bbx:dashcheck}[2]{%
1448   \ifboolexpr{
1449     test {\iffieldequals{fullhash}{\bbx@lasthash}}
1450     and
1451     not test \iffirstonpage
1452     and
1453     (
1454       not bool {bbx@inset}
1455       or
1456       test {\iffieldequalstr{entrysetcount}{1}}
1457     )
1458   }
1459   {#1}
1460   {#2}}
```

The `author`, `editor` and `translator` macros are mostly the same as the standard author–year definitions, with the exception that we add support for the `nameaddon` field for authors.

```
1462 \DeclareFieldFormat{nameaddon}{\mkbibbrackets{#1}}
1463 \renewbibmacro*{author}{%
1464   \ifboolexpr{
1465     test \ifuseauthor
1466     and
1467     not test {\ifnameundef{author}}
1468   }
1469   {\usebibmacro{bbx:dashcheck}
1470     {\bibnamedash}}
```

```

1471     {\usebibmacro{bbx:savehash}%
1472     \printnames{author}%
1473     \iffieldundef{nameaddon}
1474     {}
1475     {\setunit{\addspace}%
1476     \printfield{nameaddon}}%
1477     \iffieldundef{authorstype}
1478     {\setunit{\printdelim{nameyeardelim}}}
1479     {\setunit{\printdelim{authorstypedelim}}}}%
1480 \iffieldundef{authorstype}
1481 {}
1482 {\usebibmacro{authorstrg}%
1483 \setunit{\printdelim{nameyeardelim}}}}%
1484 {\global\undef\bbx@lasthash
1485 \usebibmacro{labeltitle}%
1486 \iftoggle{bbx:labelistitle}{\setunit{\printdelim{nonameyeardelim}}{}}%
1487 \usebibmacro{date+extradate}}
1488
1489 \renewbibmacro*{editor}{%
1490 \usebibmacro{bbx:editor}{editorstrg}}
1491 \renewbibmacro*{editor+others}{%
1492 \usebibmacro{bbx:editor}{editor+othersstrg}}
1493 \newbibmacro*{bbx:editor}[1]{%
1494 \ifboolexpr{
1495 test \ifuseeditor
1496 and
1497 not test {\ifnameundef{editor}}
1498 }
1499 {\usebibmacro{bbx:dashcheck}
1500 {\bibnamedash}
1501 {\printnames{editor}%
1502 \setunit{\printdelim{editortypedelim}}}%
1503 \usebibmacro{bbx:savehash}}%
1504 \usebibmacro{#1}%
1505 \clearname{editor}%
1506 \setunit{\printdelim{nameyeardelim}}}%
1507 {\global\undef\bbx@lasthash
1508 \usebibmacro{labeltitle}%
1509 \iftoggle{bbx:labelistitle}{\setunit{\printdelim{nonameyeardelim}}{}}%
1510 \usebibmacro{date+extradate}}
1511
1512 \renewbibmacro*{translator}{%
1513 \usebibmacro{bbx:translator}{translatorstrg}}
1514 \renewbibmacro*{translator+others}{%
1515 \usebibmacro{bbx:translator}{translator+othersstrg}}
1516 \newbibmacro*{bbx:translator}[1]{%
1517 \ifboolexpr{
1518 test \ifusetranslator
1519 and
1520 not test {\ifnameundef{translator}}
1521 }
1522 {\usebibmacro{bbx:dashcheck}
1523 {\bibnamedash}
1524 {\printnames{translator}%
1525 \setunit{\printdelim{translatortypedelim}}}%
1526 \usebibmacro{bbx:savehash}}%
1527 \usebibmacro{#1}%
1528 \clearname{translator}%
1529 \setunit{\printdelim{nameyeardelim}}}%
1530 {\global\undef\bbx@lasthash
1531 \usebibmacro{labeltitle}%
1532 \iftoggle{bbx:labelistitle}{\setunit{\printdelim{nonameyeardelim}}{}}%
1533 \usebibmacro{date+extradate}}

```

With collections, editors appear in natural order between ‘In’ and the title, followed by ‘ed.’

```
1535 \newbibmacro*{bookeditor}{%
1536   \ifnameundef{editor}{}{%
1537     \printnames[bookeditor]{editor}%
1538     \setunit*{\addcomma\space}%
1539     \usebibmacro{editor+othersstrg}%
1540     \clearname{editor}%
1541   }}
```

We change the `by*` macros so that the format can be changed with an option.

```
1543 \renewbibmacro*{byauthor}[1][byauthor]{%
1544   \ifboolexpr{
1545     test \ifuseauthor
1546     or
1547     test {\ifnameundef{author}}
1548   }{}
1549   {\usebibmacro{bytypestrg}{author}{author}%
1550     \setunit{\addspace}%
1551     \printnames[#1]{author}}
1552
1553 \renewbibmacro*{byeditor}[1][byeditor]{%
1554   \ifnameundef{editor}
1555   {}
1556   {\usebibmacro{bytypestrg}{editor}{editor}%
1557     \setunit{\addspace}%
1558     \printnames[#1]{editor}%
1559     \newunit}%
1560   \ifstrequal{#1}{byeditor}{%
1561     \usebibmacro{byeditora}%
1562     \usebibmacro{byeditorb}%
1563     \usebibmacro{byeditorc}
1564   }{%
1565     \usebibmacro{byeditora}[#1]%
1566     \usebibmacro{byeditorb}[#1]%
1567     \usebibmacro{byeditorc}[#1]}
1568
1569 \newbibmacro*{byeditora}[1][byeditora]{%
1570   \ifnameundef{editora}
1571   {}
1572   {\usebibmacro{bytypestrg}{editora}{editor}%
1573     \setunit{\addspace}%
1574     \printnames[#1]{editora}%
1575     \newunit}}
1576 \newbibmacro*{byeditorb}[1][byeditorb]{%
1577   \ifnameundef{editorb}
1578   {}
1579   {\usebibmacro{bytypestrg}{editorb}{editor}%
1580     \setunit{\addspace}%
1581     \printnames[#1]{editorb}%
1582     \newunit}}
1583 \newbibmacro*{byeditorc}[1][byeditorc]{%
1584   \ifnameundef{editorc}
1585   {}
1586   {\usebibmacro{bytypestrg}{editorc}{editor}%
1587     \setunit{\addspace}%
1588     \printnames[#1]{editorc}%
1589     \newunit}}
```

The style prints translator names (uniquely) in parentheses.

```

1591 \renewbibmacro*{bytranslator}[1][bytranslator]{%
1592   \ifnameundef{translator}
1593   {}
1594   {\setunit{\addspace}%
1595    \printtext[parens]{%
1596     \printnames[#1]{translator}%
1597     \setunit{\addcomma\space}%
1598     \bibcpstring{translator}%
1599     \clearname{translator}}}}
1600
1601 \renewbibmacro*{byeditor+others}[1][byeditor]{%
1602   \ifnameundef{editor}
1603   {}
1604   {\usebibmacro{byeditor+othersstrg}%
1605    \setunit{\addspace}%
1606    \printnames[#1]{editor}%
1607    \clearname{editor}%
1608    \newunit}%
1609   \ifstrequal{#1}{byeditor}{%
1610     \usebibmacro{byeditorx}%
1611     \usebibmacro{bytranslator+others}%
1612   }{%
1613     \usebibmacro{byeditora}[#1]%
1614     \usebibmacro{byeditorb}[#1]%
1615     \usebibmacro{byeditorc}[#1]%
1616     \usebibmacro{bytranslator+others}[#1]}%
1617
1618 \renewbibmacro*{bytranslator+others}[1][bytranslator]{%
1619   \ifnameundef{translator}
1620   {\usebibmacro{withothers}}
1621   {\setunit{\addspace}%
1622    \printtext[parens]{%
1623     \printnames[bytranslator]{translator}%
1624     \setunit{\addcomma\space}%
1625     \bibcpstring{translator}%
1626     \clearname{translator}%
1627     \newunit
1628     \usebibmacro{withothers}}}}

```

7.6 Dates

If the main publication date is missing, we fall back immediately to ‘n.d.’ rather than use the access date or anything like that.

```

1630 \DeclareLabeldate{%
1631   \field{date}
1632   \field{year}
1633   \literal{nodate}
1634 }

```

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.

```

1636 \DeclareStyleSourcemap{
1637   \maps[datatype=bibtex]{
1638     \map[overwrite=true]{
1639       \step[notmatch=\regexp{nonodate}, fieldsource=options, final]
1640       \step[fieldsource=sortyear, final]
1641       \step[fieldset=options, append, fieldvalue={,nonodate}]
1642     }
1643     \map[overwrite=true]{

```

```

1644     \step[notfield=options, final]
1645     \step[fieldsource=sortyear, final]
1646     \step[fieldset=options, fieldvalue={nonodate}]
1647   }
1648 }
1649 }

```

Dates are usually given bare. Times, when printed, are followed by the hours bibstring.

```

1651 \DeclareFieldFormat{datelabel}{#1}
1652 \DeclareFieldFormat{time}{#1-\bibstring{hours}}

```

The punctuation before the label year is controlled by the following commands, and should be a comma. The exceptions to this are `legislation` entries and English/Welsh legal case reports (traditional style), where there should just be a space.

```

1654 \DeclareDelimFormat{nameyeardelimiter}{\addcomma\space}
1655 \DeclareDelimFormat[parencite,bib,biblist]{nameyeardelimiter}{\addcomma\space}
1656 \newcommand{\dononameyeardelimiter}{%
1657   \ifentrytype{legislation}{%
1658     \addspace
1659   }{%
1660     \ifentrytype{jurisdiction}{%
1661       \ifboolexpr{
1662         togl {bbx:eu-oj}
1663         or
1664         test {\iffieldequalstr{journaltitle}{ECR}}
1665         or
1666         test {\iffieldequalstr{type}{ECR}}
1667       }{%
1668         \addspace
1669       }{%
1670         \ifboolexpr{
1671           test {\ifkeyword{sc}}
1672           or
1673           togl {bbx:scotstyle}
1674           or
1675           not test {\iflistundef{institution}}
1676         }{%
1677           \addcomma\space
1678         }{%
1679           \addspace}}%
1680       }{%
1681         \addcomma\space}}%
1682 \DeclareDelimFormat{nonameyeardelimiter}{\dononameyeardelimiter}
1683 \DeclareDelimFormat*[bib,biblist]{nonameyeardelimiter}{\dononameyeardelimiter}
1684 \DeclareDelimFormat[parencite]{nonameyeardelimiter}{%
1685   \ifboolexpr{
1686     test {\ifentrytype{jurisdiction}}
1687     or
1688     test {\ifentrytype{legislation}}
1689   }{\addspace}{\addcomma\space}}

```

The punctuation after the label year is controlled by the following commands, and should be a comma. The exceptions to this are `legislation` and `jurisdiction` entries, where there should just be a space if the label is the title.

```

1691 \DeclareDelimFormat{nametitledelimiter}{%
1692   \ifboolexpr{
1693     (
1694       test {\ifentrytype{jurisdiction}}
1695       or
1696       test {\ifentrytype{legislation}}

```



```

1697     ) and
1698     togl {bbx:labelistitle}
1699   }{\addspace}{\addcomma\space}}
1700 \DeclareDelimFormat[bib,biblist]{nametitledelim}{%
1701   \ifboolexpr{
1702     (
1703       test {\ifentrytype{jurisdiction}}
1704       or
1705       test {\ifentrytype{legislation}}
1706     ) and
1707     togl {bbx:labelistitle}
1708   }{\addspace}{\labelnamepunct}}

```

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`.

```

1710 \newrobustcmd*{\mknoyeardaterangefull}[2]{%
1711   \iffieldundef{#2month}{}{%
1712     \printtext[#2date]}{%
1713     \datecircaprint
1714     \iffieldundef{#2yeardivision}{%
1715       \csuse{mkbibdate#1}{-}{#2month}{#2day}%
1716       \blx@printtime{#2}{-}%
1717     }{%
1718       \csuse{mkbibyeardivisiondate#1}{-}{#2yeardivision}}%
1719     \dateuncertainprint
1720     \iffieldundef{#2endmonth}{}{%
1721       \iffieldequalstr{#2endmonth}{-}{%
1722         \mbox{\bibdaterangesep}%
1723       }{%
1724         \bibdaterangesep
1725         \enddatecircaprint
1726         \iffieldundef{#2yeardivision}{%
1727           \csuse{mkbibdate#1}{-}{#2endmonth}{#2endday}%
1728           \blx@printtime{#2}{end}%
1729         }{%
1730           \csuse{mkbibyeardivisiondate#1}{-}{#2endyeardivision}}%
1731         \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.

```

1732 \newrobustcmd*{\mknoyeardaterangetrunc}[2]{%
1733   \iffieldundef{#2month}{}{%
1734     \printtext[#2date]}{%
1735     \datecircaprint
1736     \iffieldundef{#2yeardivision}{%
1737       \ifboolexpr{
1738         test {\ifdateyearsequal{label}{labelend}}
1739         and
1740         test {\iffieldsequal{#2month}{#2endmonth}}
1741       }{%
1742         \csuse{mkbibdate#1}{-}{-}{#2day}%
1743       }{%
1744         \csuse{mkbibdate#1}{-}{#2month}{#2day}}%
1745     }{%
1746       \csuse{mkbibyeardivisiondate#1}{-}{#2yeardivision}}%
1747     \dateuncertainprint

```

```

1748 \iffielddundef{#2endmonth}{}{%
1749 \iffieldequalstr{#2endmonth}{}{%
1750 \mbox{\bibdaterangesep}%
1751 }{%
1752 \bibdaterangesep
1753 \enddatecircaprint
1754 \iffielddundef{#2yeardivision}{%
1755 \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
1756 }{%
1757 \csuse{mkbibyyeardivisiondate#1}{}{#2endyeardivision}}%
1758 \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.

```

1759 \xpatchcmd{\mkdaterangefull}{%
1760 \iffielddundef{#2year} {\blx@nunit}%
1761 }{%
1762 \iffielddundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
1763 }{\@tempswafalse}{\@tempswatrue}%
1764 \if@tempswa
1765 \xpatchcmd{\mkdaterangefull}{%
1766 \iffielddundef{#2year} {}%
1767 }{%
1768 \iffielddundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
1769 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefull}}%
1770 \fi
1771 \xpatchcmd{\mkdaterangetrunc@i}{%
1772 \iffielddundef{#2year} {\blx@nunit}%
1773 }{%
1774 \iffielddundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
1775 }{\@tempswafalse}{\@tempswatrue}%
1776 \if@tempswa
1777 \xpatchcmd{\mkdaterangetrunc}{%
1778 \iffielddundef{#2year} {}%
1779 }{%
1780 \iffielddundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
1781 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetrunc@i}}%
1782 \fi
1783 \xpatchcmd{\mkdaterangefullexta}{%
1784 \iffielddundef{#2year} {\blx@nunit}%
1785 }{%
1786 \iffielddundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
1787 }{\@tempswafalse}{\@tempswatrue}%
1788 \if@tempswa
1789 \xpatchcmd{\mkdaterangefullexta}{%
1790 \iffielddundef{#2year} {}%
1791 }{%
1792 \iffielddundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
1793 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta}}%
1794 \fi
1795 \xpatchcmd{\mkdaterangetruncextra@i}{%
1796 \iffielddundef{#2year} {\blx@nunit}%
1797 }{%
1798 \iffielddundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
1799 }{\@tempswafalse}{\@tempswatrue}%
1800 \if@tempswa
1801 \xpatchcmd{\mkdaterangetruncextra}{%
1802 \iffielddundef{#2year} {}%
1803 }{%
1804 \iffielddundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
1805 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetruncextra@i}}%

```

1806 `\fi`

By default, title–year combinations are not disambiguated, so we fix that too.

```
1807 \DeclareFieldFormat{extraalpha}{%
1808   \iffieldnums{labelyear}
1809   {\mknumalph{#1}}
1810   {\mkbibparens{\mknumalph{#1}}}}
1811 \DeclareLabelalphaTemplate{
1812   \labelelement{
1813     \field{label}
1814     \field{labelname}
1815     \field{labeltitle}
1816   }
1817   \labelelement{
1818     \field{labelyear}
1819   }
1820 }
1821 \xpatchcmd{\mkdaterangefullexta}{%
1822   \printfield{extradate}%
1823 }{%
1824   \printfield{extraalpha}%
1825 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta once}}%
1826 \xpatchcmd{\mkdaterangefullexta}{%
1827   \printfield{extradate}%
1828 }{%
1829   \printfield{extraalpha}%
1830 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta twice}}%
1831 \xpatchcmd{\mkdaterangefullexta}{%
1832   \printfield{extradate}%
1833 }{%
1834   \printfield{extraalpha}%
1835 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta thrice}}%
1836 \xpatchcmd{\mkdaterangetruncextra@i}{%
1837   \printfield{extradate}%
1838 }{%
1839   \printfield{extraalpha}%
1840 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetruncextra@i once}}%
1841 \xpatchcmd{\mkdaterangetruncextra@i}{%
1842   \printfield{extradate}%
1843 }{%
1844   \printfield{extraalpha}%
1845 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetruncextra@i twice}}%
1846 \xpatchcmd{\mkdaterangetruncextra@i}{%
1847   \printfield{extradate}%
1848 }{%
1849   \printfield{extraalpha}%
1850 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetruncextra@i thrice}}%
```

7.7 Title block

Most titles are set in italics, but some are set roman and unquoted.

```
1852 \DeclareFieldFormat{sentencecase}{\MakeSentenceCase*{#1}}
1853 \DeclareFieldFormat{midsentencecase}{\MakeSentenceCase*{#1}}
1854 \DeclareFieldFormat{title}{\mkbibemph{#1}}
1855 \DeclareFieldFormat
1856   [article,inbook,incollection,inproceedings,legal]%
1857   {title}{#1}
1858 \DeclareFieldFormat
1859   [reference,mvreference]%
1860   {title}{\iftoggle{bbx:labelistitle}{#1}{\mkbibemph{#1}}}
```

```

1861 \DeclareFieldFormat
1862   [inreference]%
1863   {title}{\iftoggle{bbx:labelistitle}{\mkbibemph{#1}}{#1}}
1864 \DeclareFieldFormat
1865   [inreference]%
1866   {booktitle}{\iftoggle{bbx:labelistitle}{#1}{\mkbibemph{#1}}}
1867 \DeclareFieldFormat
1868   [patent,thesis]%
1869   {title}{\mkbibemph{#1}}
1870 \DeclareFieldFormat
1871   [audio,video,music,video]%
1872   {title}{\ifboolexpr{
1873     test {\iffieldequalstr{type}{TV}}
1874     or
1875     test {\iffieldequalstr{type}{Radio}}
1876   }{#1}{\mkbibemph{#1}}}
1877 \DeclareFieldFormat
1878   [unpublished]%
1879   {title}{\iffieldundef{booktitle}{\mkbibemph{#1}}{#1}}
1880 \DeclareFieldFormat
1881   [letter]%
1882   {title}{\iffieldundef{journaltitle}{\emph{#1}}{#1}}

```

Versions are printed with ‘v.’ in parentheses.

```

1884 \DeclareFieldFormat{version}{\mkbibparens{\bibcsstring{version}#1}}

```

The `titleaddon` field follows the title after a space and wrapped in brackets. Version 1 of this style encouraged people to supply the brackets manually, so we strip them off if they have been supplied.

```

1886 \DeclareFieldFormat{titleaddon}{\mkbibbrackets{%
1887   \IfBeginWith{#1}{[ ]{%
1888     \IfEndWith{#1}{ ] }{%
1889       \StrBetween{#1}{[ ]{ ] }%
1890     }{#1}%
1891   }{#1}%
1892 }}

```

Subtitles are set off with a colon

```

1894 \renewcommand*{\subtitlepunct}{\addcolon\space}

```

The `maintitle+title` and `title+issuetitle` are intended to be unchanged from the standard definitions.

```

1896 \newbibmacro*{maintitle+title}{%
1897   \iffieldequal{maintitle}{title}
1898   {\clearfield{maintitle}%
1899     \clearfield{mainsubtitle}%
1900     \clearfield{maintitleaddon}}
1901   {\iffieldundef{maintitle}
1902     {}
1903     {\usebibmacro{maintitle}%
1904     \newunit\newblock
1905     \iffieldundef{volume}
1906     {}
1907     {\printfield{volume}%
1908     \printfield{part}%
1909     \setunit{\addcolon\space}}}}%
1910   \usebibmacro{title}%
1911   \newunit}
1912

```

```

1913 \newbibmacro*{title+issuetitle}{%
1914   \usebibmacro{periodical}%
1915   \setunit*{\addspace}%
1916   \iffieldundef{series}
1917     {}
1918     {\newunit
1919       \printfield{series}%
1920       \setunit{\addspace}}%
1921   \usebibmacro{volume+number+eid}%
1922   \setunit{\addspace}%
1923   \usebibmacro{issue+date}%
1924   \newunit}

```

We need to supply a new `title` macro. The standard version puts default unit punctuation between the `title` and `titleaddon` fields, but we need a space. We also need to add conditional code for printing the automatic ‘[Online]’ label.

```

1926 \renewbibmacro*{title}{%
1927   \ifboolexpr{
1928     test {\iffieldundef{title}}
1929     and
1930     test {\iffieldundef{subtitle}}
1931   }{%
1932     \ifboolexpr{
1933       test {\ifentrytype{legislation}}
1934       and
1935       test {\iffieldundef{journaltitle}}
1936     }{%
1937       \setunit*{\addspace}%
1938       \usebibmacro{isonline}%
1939     }{}%
1940   }{%
1941     \printtext[title]{%
1942       \printfield[sentencecase]{title}%
1943       \setunit{\subtitlepunct}%
1944       \printfield[midsentencecase]{subtitle}%
1945       \setunit{\addspace}}%
1946     \printfield{titleaddon}%
1947     \setunit*{\addspace}%
1948     \printfield{version}\clearfield{version}%
1949     \ifboolexpr{
1950       test {\iffieldundef{entrysubtype}}
1951       or
1952       test {\ifentrytype{legal}}
1953       or
1954       test {\ifentrytype{legislation}}
1955       or
1956       test {\ifentrytype{jurisdiction}}
1957     }{%
1958       \ifboolexpr{
1959         test {\iffieldundef{journaltitle}}
1960         and
1961         test {\iffieldundef{booktitle}}
1962         and (
1963           test {\iffieldundef{library}}
1964           or
1965           test {\ifentrytype{image}}
1966           or
1967           test {\ifentrytype{audio}}
1968           or
1969           test {\ifentrytype{video}}
1970           or
1971           test {\ifentrytype{music}}

```

```

1972     or
1973     test {\ifentrytype{movie}}
1974   )
1975   and (
1976     not (
1977       test {\iffieldequalstr{type}{TV}}
1978       or
1979       test {\iffieldequalstr{type}{Radio}}
1980     )
1981     or
1982     test {\iffieldundef{series}}
1983   )
1984 }{%
1985   \setunit*{\addspace}%
1986   \usebibmacro{isonline}%
1987 }{%
1988 }{%
1989   \setunit*{\addspace}%
1990   \printfield{entrysubtype}}
1991 }%
1992 }

```

Similar changes are needed for the booktitle and maintitle macros.

```

1994 \renewbibmacro*{booktitle}{%
1995   \ifboolexpr{
1996     test {\iffieldundef{booktitle}}
1997     and
1998     test {\iffieldundef{booksubtitle}}
1999   }{}{%
2000     \printtext[booktitle]{%
2001       \printfield[sentencecase]{booktitle}%
2002       \setunit{\subtitlepunct}%
2003       \printfield[midsentencecase]{booksubtitle}%
2004       \setunit{\addspace}%
2005     }%
2006     \printfield{booktitleaddon}
2007     \setunit*{\addspace}%
2008     \usebibmacro{isonline}%
2009   }%
2010 }
2011
2012 \renewbibmacro*{maintitle}{%
2013   \ifboolexpr{
2014     test {\iffieldundef{maintitle}}
2015     and
2016     test {\iffieldundef{mainsubtitle}}
2017   }{}{
2018     \printtext[maintitle]{%
2019       \printfield[sentencecase]{maintitle}%
2020       \setunit{\subtitlepunct}%
2021       \printfield[midsentencecase]{mainsubtitle}%
2022       \setunit{\addspace}%
2023     }%
2024     \printfield{maintitleaddon}%
2025   }%
2026 }

```

In the standard author–year styles, if a title is promoted to the head of a reference (due to missing authors/editors), the subtitle and titleaddon fields are discarded. In Harvard (Bath), the whole block is moved (with some cosmetic differences).

```

2028 \DeclareLabeltitle[inreference]{%
2029   \field{shorttitle}
2030   \field{booktitle}
2031   \field{title}
2032 }
2033 \DeclareFieldFormat{entrysubtype}{\mkbibbrackets{#1}}
2034 \providetoggle{bbx:labelistitle}
2035 \newbibmacro*{labeltitle}{%
2036   \iffieldundef{label}{%
2037     \ifboolexpr{
2038       test {\ifentrytype{inreference}}
2039       and
2040       not test {\iffieldundef{booktitle}}
2041     }{%
2042       \toggletrue{bbx:labelistitle}%
2043       \printtext[booktitle]{%
2044         \printfield[sentencecase]{booktitle}%
2045         \setunit{\booksubtitlepunct}%
2046         \printfield[midsentencecase]{booksubtitle}%
2047         \clearfield{booktitle}\clearfield{booksubtitle}%
2048       }{%
2049         \ifboolexpr{
2050           test {\iffieldundef{title}}
2051           and
2052           test {\iffieldundef{subtitle}}
2053         }-{%
2054           \toggletrue{bbx:labelistitle}%
2055           \printtext[title]{%
2056             \printfield[sentencecase]{title}%
2057             \setunit{\subtitlepunct}%
2058             \printfield[midsentencecase]{subtitle}%
2059             \setunit{\addspace}%
2060             \clearfield{title}\clearfield{subtitle}}%
2061           \printfield{titleaddon}%
2062         \ifboolexpr{
2063           test {\ifentrytype{legislation}}
2064           or
2065           test {\ifentrytype{jurisdiction}}
2066         }-{%
2067           \setunit*{\addspace}%
2068           \printfield{version}\clearfield{version}%
2069           \iffieldundef{entrysubtype}{%
2070             \ifboolexpr{
2071               test {\iffieldundef{journaltitle}}
2072               and
2073               test {\iffieldundef{booktitle}}
2074               and (
2075                 test {\iffieldundef{library}}
2076                 or
2077                 test {\ifentrytype{image}}
2078                 or
2079                 test {\ifentrytype{audio}}
2080                 or
2081                 test {\ifentrytype{video}}
2082                 or
2083                 test {\ifentrytype{music}}
2084                 or
2085                 test {\ifentrytype{movie}}
2086               )
2087             and (
2088               not (
2089                 test {\iffieldequalstr{type}{TV}}
2090                 or

```

```

2091         test {\iffieldequalstr{type}{Radio}}
2092     )
2093     or
2094     test {\iffieldundef{series}}
2095 )
2096 }{%
2097     \setunit*{\addspace}%
2098     \usebibmacro{isonline}%
2099 }{%
2100 }{%
2101     \setunit*{\addspace}%
2102     \printfield{entrysubtype}}}%
2103 }{%
2104     \printfield{label}%
2105 }

```

Online resources are clearly tarred and feathered with an ‘[Online]’ label. The `isonline` macro prints this label if the resource has a URL and does nothing otherwise. We add a safeguard to stop it being used repeatedly.

```

2107 \newtoggle{bbx:onlineshown}
2108 \newbibmacro*{isonline}{%
2109     \ifboolexpr{(
2110         test {\iffieldundef{doi}}
2111         and
2112         test {\iffieldundef{url}}
2113         and
2114         test {\iffieldundef{urlyear}}
2115         and
2116         not test {\ifentrytype{online}}
2117     ) or
2118     togl {bbx:onlineshown}
2119 }{%
2120     \bibstring[\mkbibbrackets]{online}%
2121     \toggletrue{bbx:onlineshown}}

```

7.8 Events

Events are printed as date then venue with no intermediate punctuation.

```

2123 \newbibmacro*{event+venue+date}{%
2124     \printfield{eventtitle}%
2125     \setunit*{\addspace}%
2126     \printfield{eventtitleaddon}%
2127     \ifboolexpr{
2128         test {\iffieldundef{venue}}
2129         and
2130         test {\iffieldundef{eventyear}}
2131     }
2132     {}
2133     {\setunit{\addcomma\space}%
2134         \printeventdate
2135         \setunit*{\addcomma\space}%
2136         \printfield{venue}%
2137     \newunit}}

```

7.9 Journals

The journal title is in sentence case rather than title case.

```

2139 \xpatchbibmacro{journal}{%
2140     \printfield[titlecase]{journaltitle}%

```



```

2141 }{%
2142   \printfield[sentencecase]{journaltitle}%
2143 }{}{\wlog{WARNING: biblatex-bath failed to patch journal macro}}
2144 \xpatchbibmacro{journal}{%
2145   \printfield[titlecase]{journalsubtitle}%
2146 }{%
2147   \printfield[sentencecase]{journalsubtitle}%
2148 }{}{\wlog{WARNING: biblatex-bath failed to patch journal macro}}

```

The journal title is followed by a comma. The issue number is separated from the volume by parentheses rather than a dot. The pubstate is in the volume position.

```

2150 \newbibmacro*{journal+issuetitle}{%
2151   \usebibmacro{journal}%
2152   \setunit*{\addspace}%
2153   \usebibmacro{isonline}%
2154   \setunit*{\addcomma\space}%
2155   \iffieldundef{series}
2156     {}
2157     {\newunit
2158       \printfield{series}%
2159       \setunit{\addcomma\space}}}%
2160 \usebibmacro{volume+number+eid}%
2161 \setunit{\addspace}%
2162 \usebibmacro{issue+date}%
2163 \setunit{\addcomma\space}%
2164 \printfield{pubstate}%
2165 \newunit}
2166
2167 \newbibmacro*{volume+number+eid}{%
2168   \printfield{volume}%
2169   \printfield[parens]{number}%
2170   \setunit{\addcomma\space}%
2171   \printfield{eid}}

```

7.10 Monograph containers and entry titles

```

2173 \newbibmacro*{maintitle+booktitle}{%
2174   \iffieldundef{maintitle}
2175     {}
2176     {\usebibmacro{maintitle}%
2177       \newunit\newblock
2178       \iffieldundef{volume}
2179         {}
2180         {\printfield{volume}%
2181           \printfield{part}%
2182           \setunit{\addcolon\space}}}%
2183   \usebibmacro{booktitle}%
2184   \newunit}

```

7.11 Series, types and numbering

Types are always printed longhand.

```

2186 \DeclareFieldFormat{type}{\ifbibstring{#1}{\bibstring{#1}}{#1}}
2187 \DeclareFieldFormat[software]{type}{\mkbibbrackets{#1}}
2188 \DeclareFieldFormat{series}{\MakeSentenceCase*{#1}}
2189 \DeclareFieldFormat
2190   [audio,video,music,video]%
2191   {series}{\ifboolexpr{
2192     test {\iffieldequalstr{type}{TV}}
2193     or

```

```

2194     test {\iffieldequalstr{type}{Radio}}
2195   }{\mkbibemph{\MakeSentenceCase*{#1}}{\MakeSentenceCase*{#1}}}
2196 \DeclareFieldFormat
2197   [audio,video,music,video]%
2198   {number}{\ifboolexpr{
2199     test {\iffieldequalstr{type}{TV}}
2200     or
2201     test {\iffieldequalstr{type}{Radio}}
2202   }{\mkbibemph{#1}}{#1}}
2203 \DeclareFieldFormat[legislation,jurisdiction]{series}{#1}

```

The forceparens format ensures the punctuation tracker doesn't override semantically important parentheses.

```

2204 \DeclareFieldFormat{forceparens}{( #1 )}

```

Unlike the standard styles, we print a comma between series and number.

```

2206 \newbibmacro*{series+number}{%
2207   \printfield{series}%
2208   \setunit*{\addcomma\space}%
2209   \printfield{number}%
2210   \newunit}

```

We also supply a version that incorporates the type field. The format for when all three elements are provided is for compatibility with previous versions and may change in future.

```

2212 \newbibmacro{manual:series+type+number}{%
2213   \iffieldef{series}{%
2214     \newunit\newblock
2215     \printfield{type}%
2216     \setunit{\addspace}%
2217     \printfield{number}%
2218   }{%
2219     \setunit{\addcomma\space}%
2220     \usebibmacro{series+number}%
2221     \newunit\newblock
2222     \printfield{type}%
2223   }%
2224 }

```

We provide a wrapper macro for printing archival collections and locators.

```

2226 \newbibmacro*{collection+shelfmark}{%
2227   \ifboolexpr{
2228     test {\iffieldef{library}}
2229     or (
2230       test {\iffieldef{collection}}
2231       and
2232       test {\iffieldef{shelfmark}}
2233     )
2234   }{
2235     \usebibmacro{series+number}%
2236   }{
2237     \printfield{collection}%
2238     \setunit*{\addcomma\space}%
2239     \printfield{shelfmark}%
2240     \newunit}}

```

Reports use a special macro for printing the type, series and number in parentheses.

```

2242 \newbibmacro{series+type+number}{%
2243   \ifboolexpr{

```

```

2244     test {\iffieldundef{series}}
2245     and
2246     test {\iffieldundef{type}}
2247     and
2248     test {\iffieldundef{number}}
2249   }-}{%
2250     \printtext [parens]{%
2251       \printfield{series}%
2252       \IfStrEqCase{\thefield{series}}{%
2253         {C}{\printunit*\addot\space}%
2254         {Cd}{\printunit*\addot\space}%
2255         {Cmd}{\printunit*\addot\space}%
2256         {Cmnd}{\printunit*\addot\space}%
2257         {Cm}{\printunit*\addot\space}%
2258       }-%
2259       \setunit*\addcomma\space}%
2260     \printfield{type}%
2261     \setunit*\addspace}%
2262     \IfBeginWith{\thefield{series}}{HL}{-%
2263       \printfield[forceparens]{number}%
2264     }-%
2265     \printfield{number}%
2266   }}}

```

7.12 Publication block

The standard publisher macro is fine.

```

2268 \newbibmacro*{publisher+location+date}{%
2269   \printlist{location}%
2270   \iflistundef{publisher}
2271     {\setunit*\addcomma\space}
2272     {\setunit*\addcolon\space}}%
2273 \printlist{publisher}%
2274 \setunit*\addcomma\space}%
2275 \usebibmacro{date}%
2276 \newunit}

```

We put a wrapper around the standard institution macro so that it prints the publisher field instead if present, and prepends the institution.

```

2278 \newbibmacro*{plain:institution+location+date}{%
2279   \printlist{location}%
2280   \iflistundef{institution}
2281     {\setunit*\addcomma\space}
2282     {\setunit*\addcolon\space}}%
2283 \printlist{institution}%
2284 \setunit*\addcomma\space}%
2285 \usebibmacro{date}%
2286 \newunit}
2287 \newbibmacro*{institution+location+date}{%
2288   \iflistundef{publisher}{-%
2289     \usebibmacro{plain:institution+location+date}%
2290   }-%
2291   \printlist{institution}%
2292   \newunit
2293   \usebibmacro{publisher+location+date}}%

```

As an additional hack for social media entries where the date is preceded by a comma, we tweak the punctuation logic for organization+location+date.

```

2295 \newbibmacro*{organization+location+date}{%
2296   \iflistundef{publisher}{%
2297     \printlist{location}%
2298     \iflistundef{organization}
2299       {\setunit*{\addcomma\space}}
2300       {\setunit*{\addcolon\space}}%
2301     \printlist{organization}%
2302     \iflistundef{location}
2303       {\setunit{\addcomma\space}}%
2304       {\setunit*{\addcomma\space}}%
2305     \usebibmacro{date}%
2306     \newunit
2307   }{%
2308     \printlist{organization}%
2309     \newunit
2310     \usebibmacro{publisher+location+date}}

```

We use the `library` field for databases and preprint repositories, as well as streaming services and physical archives for the visual arts.

```

2312 \DeclareFieldFormat{library}{\mkbibemph{#1}}
2313 \DeclareFieldFormat[image]{library}{#1}
2314 \newbibmacro*{library}{%
2315   \iffieldundef{library}{}{%
2316     \printfield{library}\clearfield{library}%
2317     \setunit*{\addspace}%
2318     \usebibmacro{isonline}}
2319 \newbibmacro*{location+library}{%
2320   \iffieldundef{library}{%
2321     \iffieldundef{institution}{}{%
2322       \printlist{institution}%
2323       \setunit{\addcomma\space}%
2324       \printlist{location}%
2325     }%
2326   }{%
2327     \printfield{library}\clearfield{library}%
2328     \setunit*{\addcomma\space}%
2329     \printlist{location}}

```

The following macro includes availability from a physical archive.

```

2332 \newbibmacro*{organization+location+date+library}{%
2333   \ifboolexpr{
2334     test {\iffieldundef{library}}
2335     or
2336     not test {\iflistundef{publisher}}
2337   }{%
2338     \printlist{location}\clearfield{location}%
2339     \setunit*{\addcolon\space}%
2340   }{%
2341     \iflistundef{publisher}{%
2342       \iflistundef{organization}{
2343         \printlist{location}%
2344       }{%
2345         \printlist{organization}}
2346     }{%
2347       \printlist{publisher}%
2348     }%
2349     \setunit{\addcomma\space}%
2350     \usebibmacro{date}%
2351     \newunit
2352     \usebibmacro{location+library}}

```

Here is the `isunpublished` macro used by the unpublished driver. It can be renewed if dis-

playing the string needs to be suppressed or made conditional.

```
2354 \newbibmacro*{isunpublished}{%
2355 \bibstring{unpublished}}
```

7.13 Pinpointing

We remove the space between ‘p.’ and the page numbers, and allow a couple of letters for representing newspaper columns.

```
2357 \renewcommand*{\ppspace}{%
2358 \DeclareNumChars{ab}
2359
2360 \newbibmacro*{chapter+pages}{%
2361 \printfield{chapter}%
2362 \setunit{\bibpagespunct}%
2363 \printfield{eid}%
2364 \setunit{\bibpagespunct}%
2365 \printfield{pages}%
2366 \newunit}
2367
2368 \newbibmacro*{note+pages}{%
2369 \printfield{note}%
2370 \setunit{\bibpagespunct}%
2371 \printfield{pages}%
2372 \newunit}
```

7.14 Access and URLs

URLs are prefaced by a ‘from’ statement, and the URL date is enclosed in brackets rather than parentheses.

```
2374 \DeclareFieldFormat{url}{\bibsentence\bibstring{urlfrom}\addcolon\space\url{#1}}
2375 \DeclareFieldFormat{doi}{\bibsentence\bibstring{urlfrom}\addcolon\space\url{https://doi.org/#1}}
2376 \DeclareFieldFormat{pseudourl}{\bibsentence\bibstring{urlfrom}\addcolon\space#1}
2377 \DeclareFieldFormat{urldate}{\mkbibbrackets{\bibstring{urlseen}\space#1}}
```

Since URLs and DOIs are presented in exactly the same way, we combine them such that the DOI overrides the URL. We also allow the library field to be used as a fallback URL.

```
2379 \renewbibmacro*{url}{%
2380 \iffieldundef{doi}{%
2381 \ifboolexpr{
2382 test {\iffieldundef{url}}
2383 and not
2384 test {\iffieldundef{urlyear}}
2385 }{\printfield[pseudourl]{library}}{\printfield{url}}%
2386 }{%
2387 \printfield{doi}%
2388 }}
2389 \newbibmacro*{doi+eprint+url}{%
2390 \iftoggle{bbx:eprint}
2391 {\usebibmacro{eprint}}
2392 {}%
2393 \newunit\newblock
2394 \iftoggle{bbx:url}
2395 {\usebibmacro{url+urldate}}
2396 {}}
```

7.15 Standards

A special quirk with standards is that they are often best known by their number, so it comes at the head of the reference if no authors are specified.

To achieve this cleanly with correct sorting, we copy the number into `sortkey` as a simple fix (providing neither `author` nor `sortkey` are already specified). We then move the number to `label` so that citations come out correctly and the date (if given) is put in the right place.

```
2398 \DeclareStyleSourcemap{%
2399   \maps[datatype=bibtex]{%
2400     \map[overwrite=false]{
2401       \pertype{standard}
2402       \step[notfield=author,
2403         fieldsource=number,
2404         final]
2405       \step[fieldset=sortkey,
2406         origfieldval]
2407     }
2408     \map[overwrite=false]{
2409       \pertype{standard}
2410       \step[notfield=author,
2411         fieldsource=number,
2412         fieldtarget=label]
2413     }
2414   }}
2415 \ExecuteBibliographyOptions[standard]{useeditor=false}
```

7.16 Case reports

We provide a test to see if a work was published in the Official Journal of the EU; if so, the title is not italic (unless reporting a decision of the European Commission).

```
2417 \newtoggle{bbx:eu-oj}
2418 \newbibmacro*{eucheck}{%
2419   \IfBeginWith{\thefield{journaltitle}}{OJ}{%
2420     \toggletrue{bbx:eu-oj}%
2421   }}
2422 \DeclareFieldFormat[jurisdiction,legislation]{title}{%
2423   \ifboolexpr{
2424     togl{bbx:eu-oj}
2425     and
2426     not test {\iffieldequalstr{type}{Commission Decision}}
2427   }{#1}{\mkbibemph{#1}}}
```

In the 2024 style, the year is printed as normal.

In the European and neutral citation style, the year is printed in square brackets, unless the case is Scottish, in which case the year is printed bare, or a volume number is present, in which case the year is printed in parentheses. With ECR and OJ cases, however, the year is always printed in square brackets despite the presence of a volume number. We provide a `year-essential` option for forcing the brackets/parentheses choice, and `scottish-style` for activating Scottish style.

```
2429 \newtoggle{bbx:scotstyle}
2430 \DeclareEntryOption[boolean]{scottish-style}[true]{%
2431   \settoggle{bbx:scotstyle}{#1}}
2432 \newtoggle{bbx:year-essential}
2433 \DeclareEntryOption[boolean]{year-essential}[true]{%
2434   \settoggle{bbx:year-essential}{#1}}
2435 \DeclareFieldFormat[jurisdiction]{datelabel}{%
2436   \ifboolexpr{
2437     test {\iflistundef{institution}}
2438     or
2439     test {\iffieldundef{number}}
```

```

2440 }{%
2441   \ifboolexpr{
2442     test {\iffieldundef{volume}}
2443     or
2444     togl {bbx:year-essential}
2445     or
2446     togl {bbx:eu-oj}
2447     or
2448     test {\iffieldequalstr{journaltitle}{ECR}}
2449   }{%
2450     \ifboolexpr{
2451       test {\ifkeyword{sc}}
2452       or
2453       togl {bbx:scotstyle}
2454     }{%
2455       #1%
2456     }{%
2457       \mkbibbrackets{#1}}%
2458   }{%
2459     \mkbibparens{#1}}%
2460 }{#1}%
2461 }

```

We define a `casenumber` macro for printing the case number just before the year. This is for use with EU cases specifically, since in other circumstances the case number goes after the court name (with or without punctuation).

This macro is triggered specifically by the use of `issue` for the case number (from Version 1 of the style, deprecated); or the use of `number` (case number) alongside `pages` (always used in EU case citations) but without `institution` (court).

For now, we support the `oscola` semantics for numbering European Commission cases. We have to be a bit careful to ensure the last print command prints something otherwise `(no)nameyeardelim` will not be triggered.

```

2462 \DeclareFieldFormat[jurisdiction]{issue}{\mkbibparens{#1}}
2463 \newbibmacro*{casenumber}{%
2464   \iffieldundef{issue}{%
2465     \ifboolexpr{
2466       test {\iffieldundef{pages}}
2467       or
2468       test {\iffieldundef{number}}
2469       or
2470       not test {\iflistundef{institution}}
2471     }{}{%
2472       \iffieldundef{userb}{%
2473         \printfield[parens]{number}%
2474         \clearfield{number}%
2475       }{%
2476         \printfield[parens]{userb}%
2477         \setunit{\addspace}%
2478         \printfield{type}%
2479         \setunit*{\addspace}%
2480         \printfield{number}%
2481         \clearfield{type}\clearfield{number}}}%
2482   }{%
2483     \printfield{issue}}

```

For ease, if ‘Commission’ is given as the `institution`, this is deleted but the `type` is set to ‘Commission Decision’. The `casenumber` is moved to `number` if this is empty, and to `userb` otherwise.

```

2484 \DeclareStyleSourcemap{
2485   \maps[datatype=bibtex]{
2486     \map[overwrite=false]{

```

```

2487 \step[match=\regexp{Commission}, fieldsource=institution, final]
2488 \step[fieldset=type, fieldvalue={Commission Decision}]
2489 \step[fieldset=institution, null]
2490 }
2491 \map[overwrite=false]{
2492 \step[fieldsource=casenumber, final]
2493 \step[notfield=number, fieldsource=casenumber, fieldtarget=number]
2494 \step[fieldsource=casenumber, fieldtarget=userb]
2495 }
2496 }
2497 }

```

Law reports have a special way of printing journals, volume and page numbers. Here are several macros implementing this: a deprecated one using `type/number` and proper ones using `journaltitle`, for UK journals, ECR and OJ. The `reporter` macro chooses between them (again, this is a little messy for backwards compatibility).

```

2499 \newbibmacro{jurisdiction:type+number}{%
2500 \usebibmacro{journal}%
2501 \setunit*{\addspace}%
2502 \ifboolexpr{
2503 test {\iffieldundef{type}}
2504 and
2505 test {\iffieldundef{number}}
2506 }-{}{%
2507 \printfield{volume}%
2508 \setunit*{\addperiod\space}%
2509 \printfield{type}%
2510 \setunit*{\addspace}%
2511 \printfield{number}}
2512 \DeclareFieldFormat[jurisdiction]{journaltitle}{%
2513 \ifboolexpr{
2514 test {\iflistundef{institution}}
2515 and
2516 not togl {bbx:eu-oj}
2517 }-#{1}{\mkbibemph{#1}}
2518 \DeclareFieldFormat[jurisdiction,legislation,legal]{volume}{#1}
2519 \DeclareFieldFormat[jurisdiction,legislation]{pages}{%
2520 \iflistundef{institution}-#{1}{\mkpageprefix[bookpagination]{#1}}
2521 \newbibmacro{institution+number+journal+issuetitle}{%
2522 \setunit{\addperiod\space}%
2523 \printlist{institution}%
2524 \setunit{\addcomma\space}%
2525 \printfield{number}%
2526 \newunit\newblock
2527 \usebibmacro{journal}%
2528 \setunit*{\addspace}%
2529 \usebibmacro{isonline}%
2530 \setunit*{\addcomma\space}%
2531 \iffieldundef{series}
2532 {}
2533 {\newunit
2534 \printfield{series}%
2535 \setunit{\addcomma\space}}
2536 \printfield{volume}%
2537 \setunit{\bibpagespunct}%
2538 \printfield{eid}%
2539 \setunit{\bibpagespunct}%
2540 \printfield{pages}%
2541 \setunit{\bibpagespunct}%
2542 \printfield{pubstate}%
2543 \newunit}
2544 \newbibmacro{journal+volume+pages}{%

```



```

2545 \printfield{volume}%
2546 \setunit{\addspace}%
2547 \printfield{journaltitle}%
2548 \setunit*{\addspace}%
2549 \printfield{pages}%
2550 }
2551 \newbibmacro{eu:journal+volume+pages}{%
2552 \printfield{journaltitle}%
2553 \setunit{\addspace}%
2554 \printfield{volume}%
2555 \setunit*{\printtext{--\allowbreak}}}%
2556 \printfield{pages}%
2557 }
2558 \newbibmacro{eu:journal+series+volume+pages}{%
2559 \printfield{journaltitle}%
2560 \setunit{\addspace}%
2561 \printfield{series}%
2562 \clearfield{series}%
2563 \printfield{volume}%
2564 \setunit*{\printtext{/}}}%
2565 \printfield{pages}%
2566 }
2567 \newbibmacro{reporter}{%
2568 \iflistundef{institution}{%
2569 \iffieldundef{journaltitle}{%
2570 \usebibmacro{jurisdiction:type+number}%
2571 }{%
2572 \iffieldequalstr{journaltitle}{ECR}{%
2573 \usebibmacro{eu:journal+volume+pages}%
2574 }{%
2575 \iffieldequalstr{journaltitle}{OJ}{%
2576 \iffieldundef{series}{%
2577 \usebibmacro{jurisdiction:type+number}%
2578 }{%
2579 \usebibmacro{eu:journal+series+volume+pages}%
2580 }%
2581 }{%
2582 \usebibmacro{journal+volume+pages}%
2583 }}}}%
2584 }{\usebibmacro{institution+number+journal+issuetitle}}

```

7.17 Legislation

Legislation is mostly formatted like a report, except there is no `nametitledelim` there is no `date+extradate`. There is also some variation in how the series/number/chapter information is punctuated.

```

2586 \DeclareFieldFormat[legislation]{datelabel}{%
2587 \iftoggle{bbx:eu-oj}{%
2588 \mkbibbrackets{#1}%
2589 }{#1}}
2590 \DeclareFieldFormat[legislation]{labeldate}{%
2591 \iftoggle{bbx:labelistitle}{\printtext [title] {#1}}{#1}}
2592 \DeclareFieldFormat[legislation]{chapter}{\biblcsstring{legalchapter}#1}
2593 \newbibmacro*{journal+series+volume+number+chapter+pages}{%
2594 \iftoggle{bbx:eu-oj}{%
2595 \setunit{\addspace}%
2596 \usebibmacro{eu:journal+series+volume+pages}%
2597 }{%
2598 \iffieldequalstr{entrysubtype}{secondary}{%
2599 \setunit{\addcomma\space}%
2600 \printfield{number}%

```

```

2601     \clearfield{number}%
2602     \printunit{\addcomma\space}%
2603   }{%
2604     \ifboolexpr{
2605       test {\iffieldundef{series}}
2606       and
2607       test {\iffieldundef{type}}
2608     }{%
2609       \iffieldundef{number}{%
2610         \setunit{\addcomma\space}%
2611         \printfield{chapter}%
2612       }{%
2613         \setunit{\addspace}%
2614         \printtext [parens]{%
2615           \printfield{number}%
2616           \setunit*{\addcomma\space}%
2617           \printfield{chapter}}}%
2618     }{%
2619       \iffieldundef{chapter}{\setunit{\addspace}}%
2620       \printtext [parens]{%
2621         \printfield{series}%
2622         \setunit{\addcomma\space}%
2623         \printfield{type}%
2624         \setunit*{\addspace}%
2625         \printfield{number}%
2626         \setunit*{\addcomma\space}%
2627         \printfield{chapter}}}}}}

```

7.18 Related items

This is intended to be unchanged from the standard (author–year) definition.

```

2629 \newcounter{bbx:relatedcount}
2630 \newcounter{bbx:relatedtotal}
2631
2632 \newbibmacro*{related:init}{%
2633   \csundef{bbx:relatedloop}}
2634
2635 \newbibmacro*{begrelated}{%
2636   \booltrue{bbx@inset}}
2637
2638 \newbibmacro*{endrelated}{%
2639   \usebibmacro*{bbx:savehash}}
2640
2641 \newbibmacro*{begrelatedloop}{}
2642 \newbibmacro*{endrelatedloop}{}
2643
2644 \def\ifrelatedloop{%
2645   \ifboolexpr{ test {\xifinlistcs{\strfield{entrykey}}{bbx:relatedloop}}
2646     or test {\xifinlistcs{\strfield{clonesourcekey}}{bbx:relatedloop}} }%
2647
2648 \newbibmacro*{related}{%
2649   \ifboolexpr{ test {\iffieldundef{related}} or test {\ifrelatedloop} }
2650   {}
2651   {\ifcsundef{begrelateddelim\strfield{relatedtype}}
2652     {\printunit{\begrelateddelim}}
2653     {\printunit{\csuse{begrelateddelim\strfield{relatedtype}}}}}%
2654   \usebibmacro{begrelated}%
2655   \def\bbx@tempa{}%
2656   \setcounter{bbx:relatedtotal}{0}%
2657   \def\do##1{%
2658     \entrydata{##1}{%

```

```

2659     \ifrelatedloop
2660     {}
2661     {\stepcounter{bbx:relatedtotal}%
2662     \gappto{\bbx@tempa}{##1,}}}%
2663 \docsvfield{related}%
2664 \restorefield{related}{\bbx@tempa}%
2665 \ifnumgreater{\value{bbx:relatedtotal}}{0}
2666   {\listcsxadd{bbx:relatedloop}{\strfield{entrykey}}%
2667   \iffieldundef{clonesourcekey}
2668   {}
2669   {\listcsxadd{bbx:relatedloop}{\strfield{clonesourcekey}}}%
2670 \setcounter{bbx:relatedcount}{0}%
2671 \def\do{%
2672   \stepcounter{bbx:relatedcount}%
2673   \ifnumgreater{\value{bbx:relatedcount}}{1}
2674     {\ifcsundef{relateddelim\strfield{relatedtype}}
2675     {\printunit{\relateddelim}}
2676     {\expandafter\expandafter\expandafter\expandafter\expandafter
2677     \expandafter\expandafter\printunit
2678     \expandafter\expandafter\expandafter\expandafter\expandafter
2679     \expandafter\expandafter{%
2680     \csuse{relateddelim\strfield{relatedtype}}}}}}
2681   {}}%
2682 \ifbibmacroundef{related:\strfield{relatedtype}}
2683   {\appto{\do}{\usebibmacro{related:default}}}
2684   {\appto{\do}{\usebibmacro*{related:\strfield{relatedtype}}}}%
2685 \iffieldformatundef{related:\strfield{relatedtype}}
2686   {\def\bbx@tempa{related}}
2687   {\def\bbx@tempa{related:\strfield{relatedtype}}}%
2688 \iffieldformatundef{relatedstring:\strfield{relatedtype}}
2689   {\def\bbx@tempb{relatedstring:default}}
2690   {\def\bbx@tempb{relatedstring:\strfield{relatedtype}}}%
2691 \printtext[\bbx@tempa]{%
2692 \usebibmacro{begrelatedloop}%
2693 \iffieldundef{relatedstring}
2694   {\ifboolexpr{
2695     test {\ifnumgreater{\value{bbx:relatedtotal}}{1}}
2696     and
2697     test {\ifbibxstring{\thefield{relatedtype}s}}
2698   }
2699   {\printtext[\bbx@tempb]{%
2700     \bibstring[\mkrelatedstringtext]{\thefield{relatedtype}s}}
2701   \iffieldbibstring{relatedtype}
2702   {\printtext[\bbx@tempb]{%
2703     \bibstring[\mkrelatedstringtext]{\thefield{relatedtype}}}}
2704   {}}}
2705   {\iffieldbibstring{relatedstring}
2706   {\printtext[\bbx@tempb]{%
2707     \bibstring[\mkrelatedstringtext]{\thefield{relatedstring}}}
2708   {\printfield[\bbx@tempb]{relatedstring}}}%
2709 \docsvfield{related}%
2710 \usebibmacro{endrelatedloop}}}%
2711 {}%
2712 \usebibmacro{endrelated}}}}

```

7.19 Bibliography formatting

We allow the bibliography look more like the Bib_TE_X default.

```

2714 \DeclareFieldFormat{shorthandwidth}{#1}
2715 \setlength{\bibhang}{0pt}
2716 \setlength{\bibitemsep}{1em plus 0.2em minus 0.2em}

```

```

2717 \renewcommand*{\bibfont}{\normalfont\normalsize}
2718
2719 \defbibenvironment{bibliography}
2720   {\list
2721     {}
2722     {\setlength{\leftmargin}{\bibhang}%
2723       \setlength{\itemindent}{-\leftmargin}%
2724       \setlength{\itemsep}{\bibitemsep}%
2725       \setlength{\parsep}{\bibparsep}}
2726   {\endlist}
2727   {\item}
2728
2729 \defbibenvironment{shorthand}
2730   {\list
2731     {\printfield[shorthandwidth]{shorthand}}
2732     {\setlength{\labelwidth}{\shorthandwidth}%
2733       \setlength{\leftmargin}{\labelwidth}%
2734       \setlength{\labelsep}{\biblabelsep}%
2735       \addtolength{\leftmargin}{\labelsep}%
2736       \setlength{\itemsep}{\bibitemsep}%
2737       \setlength{\parsep}{\bibparsep}%
2738       \renewcommand*{\makelabel}[1]{##1\hss}}
2739   {\endlist}
2740   {\item}
2741
2742 \InitializeBibliographyStyle{\global\undef\bbx@lasthash}

```

7.20 Sorting

This source map helps with correct sorting of anonymous `inreference` entries.

```

2744 \DeclareStyleSourcemap{%
2745   \maps[datatype=bibtex]{%
2746     \map{%
2747       \pertype{inreference}
2748       \step[notfield=author, final]
2749       \step[fieldsource=booktitle]
2750       \step[fieldset=sorttitle, origfieldval]
2751     }%
2752   }%
2753 }%

```

8 Implementation: data model

We add support for a CJK component of names.

```

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

```

We add some fields for compatibility with `biblatex-manuscripts-philology` and `biblatex-oxref`.

```

21 \DeclareDatamodelFields [type=field,datatype=literal]{collection,shelfmark}
22 \DeclareDatamodelEntryfields [booklet,image,map,unpublished]{collection,shelfmark}

```

9 Implementation: General English language localization

The strings are mostly the same except for the following changes. Note that month names are never abbreviated.

```

20 \InheritBibliographyExtras{english}
21 \DeclareBibliographyStrings

```

```

22 {inherit           = {english}
23 ,editors          = {{editors}{eds}}
24 ,version          = {{version-}{v\addot}}
25 ,inpreparation    = {{preprint}{preprint}}
26 ,submitted        = {{preprint}{preprint}}
27 ,urlseen          = {{Accessed}{Accessed}}
28 ,january           = {{January}{January}}
29 ,february          = {{February}{February}}
30 ,march             = {{March}{March}}
31 ,april             = {{April}{April}}
32 ,may               = {{May}{May}}
33 ,june              = {{June}{June}}
34 ,july              = {{July}{July}}
35 ,august            = {{August}{August}}
36 ,september        = {{September}{September}}
37 ,october           = {{October}{October}}
38 ,november          = {{November}{November}}
39 ,december          = {{December}{December}}
40 ,patreq            = {{patent application}{pat\addot\ appl\addot}}
41 ,patreqde          = {{German patent application}{German pat\addot\ appl\addot}}
42 ,patreqeu          = {{European patent application}{European pat\addot\ appl\addot}}
43 ,patreqfr          = {{French patent application}{French pat\addot\ appl\addot}}
44 ,patrequk          = {{British patent application}{British pat\addot\ appl\addot}}
45 ,patrequs          = {{U.S\addotsspace patent application}{U.S\addotsspace pat\addot\
    appl\addot}}

```

These are the new strings we define in this style.

```

46 ,online           = {{Online}{Online}}
47 ,hours            = {{hours}{hrs\addot}}
48 ,at                = {{at}{at}}
49 ,unpublished       = {{unpublished}{unpublished}}
50 ,legalchapter      = {{chapter}{c\addot}}
51 ,director          = {{director}{dir\addot}}
52 ,directors         = {{directors}{dir\addot}}
53 ,bydirector        = {{directed by}{directed by}}
54 ,performer         = {{}}{}
55 ,performers        = {{}}{}
56 ,byperformer       = {{}}{}
57 ,reader            = {{reader}{reader}}
58 ,readers           = {{readers}{readers}}
59 ,byreader          = {{read by}{read by}}
60 ,conductor         = {{conductor}{cond\addot}}
61 ,conductors        = {{conductors}{cond\addot}}
62 ,byconductor       = {{conducted by}{conducted by}}
63 }

```

10 Implementation: British English language localization

We use the standard version with a few changes. We display the day as a cardinal number instead of an ordinal. The date is separated from the time by a period, not just a space, and the time separator is a period instead of a colon.

```

20 \InheritBibliographyExtras{british}
21 \DeclareBibliographyExtras{%
22   \protected\def\mkbibdatelong#1#2#3{%
23     \iffieldundef{#3}
24     {}
25     {\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     {\dateeraprintpref{#1}\stripzeros{\thefield{#1}}}%
34     \renewrobustcmd*{\bibdatetimesep}{\addperiod\space}%
35     \renewrobustcmd*{\bibtimesep}{\addperiod}%
36     }
37
38 \DeclareBibliographyStrings
39 {inherit      = {english}
40 }

```

11 Implementation: citation style

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}

```

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

```

22 \renewcommand*{\compcitedelim}{\addsemicolon\space}

```

We need to suppress the display of ‘n.d.’ in citations if the `nonodate` toggle is true.

```

23 \xpatchbibmacro{cite:labeldate+extradate}{%
24   \iffieldundef{labelyear}%
25 }{%
26   \ifboolexpr{
27     togl {bbx:nonodate}
28     and
29     not test {\iflabeldateisdate}}%
30 }{\wlog{WARNING: biblatex-bath failed to patch cite:labeldate+extradate}}

```

We activate the `label-is-title` toggle if the `labeltitle` is printed.

```

31 \providetoggle{bbx:labelistitle}
32 \xpatchbibmacro{cite:label}{%
33   \printtext[bibhyperref]{\printfield[citetitle]{labeltitle}}%
34 }{%
35   \toggletrue{bbx:labelistitle}%
36   \printtext[bibhyperref]{\printfield[citetitle]{labeltitle}}%
37 }{\wlog{WARNING: biblatex-bath failed to patch cite:label}}

```