

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

Maintainer: Alex Ball\*

Package v4.0 – 25 February 2021

## 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`.

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\*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{williams1997edd},
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 (Williams, 1997), 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 Change history

### 3.1 Version 1 to version 2

If you have previously used version 1 of this style, there are some changes you need to be aware of.

- 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.

- Since version 1 was released, there have been improvements made both to the Harvard (Bath) style itself and to `biblatex` internals. You may therefore notice some changes in how certain entries are styled, and if you have made your own adaptations to the style, these may no longer work with version 2.

There is now a companion BibTeX style available (`bathtx` in version 2+ of the `batht-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 2 to version 3

If you have previously used version 2 of this style, there are some changes you need to be aware of.

- 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.



## 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


#### 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.hbcpNetbase.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.hbcpNetbase.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.hbcpNetbase.com},  
  urldate = {2016-06-16}}
```

RX

 Hodds, J., 2016. *Referencing ebooks* [Kindle version 4.18]. Bath: University of Bath.

 Hodds, J., 2016. *Referencing ebooks* [Kindle version 4.18]. Bath: University of Bath.


```
@book{hodds2016re,  
  author = {Hodds, J.},  
  year = {2016},  
  title = {Referencing ebooks},  
  titleaddon = {Kindle version 4.18},  
  address = {Bath},  
  publisher = {University of Bath}}
```

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. *Asprin*. London: Pharmaceutical Press.

 British National Formulary, 2020b. 79th ed. *Asprin*. London: Pharmaceutical Press.

```
@inreference{asprin2020bnf,  
  title = {Asprin},  
  year = {2020},  
  booktitle = {{British National Formulary}},  
  edition = {79},  
  address = {London},  
  publisher = {Pharmaceutical Press}}
```

RX

 If you use the Bib<sub>T</sub><sub>E</sub><sub>X</sub> 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.

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

```
@inreference{asprin2019bnf,
  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

### One 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. *Brit. Med. J.*, 341(7765), pp.157–208.
- ⚙️ Newman, R., 2010. Malaria control beyond 2010. *Brit. Med. J.*, 341(7765), pp.157–208.

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

RX

## Electronic journal article

📄 Williams, F., 1997. Electronic document delivery: a trial in an academic library. *Ariadne* [Online], 10. Available from: <http://www.ariadne.ac.uk/issue10/edd/> [Accessed 5 December 1997].

⚙️ Williams, F., 1997. Electronic document delivery: a trial in an academic library. *Ariadne* [Online], 10. Available from: <http://www.ariadne.ac.uk/issue10/edd/> [Accessed 5 December 1997].

```
@article{williams1997edd,  
  author = {Williams, F.},  
  year = {1997},  
  title = {Electronic Document Delivery},  
  subtitle = {A Trial in an Academic Library},  
  journal = {Ariadne},  
  volume = {10},  
  url = {http://www.ariadne.ac.uk/issue10/edd/},  
  urldate = {1997-12-05}}
```

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'.

📄 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



## Preprint 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

💡 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

## 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


 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


## 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

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

⚙️ Phillipp 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


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


 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](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](https://commons.wikimedia.org/wiki/File:Royal_Crescent_in_Bath,_England_-_July_2006.jpg) [Accessed 7 January 2015].

```
@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 = {2015-01-07}}
```


RI

 Anon., 1946. *Prototype electric bicycle displayed at the ‘Britain Can Make It’ exhibition organised by the Council of Industrial Design and held at the Victoria and Albert Museum, London, 1946. Designed by B. G. Bowden* [Photograph]. At: London. Design Council Slide Collection.

 Anon., 1946. *Prototype electric bicycle displayed at the ‘Britain Can Make It’ exhibition organised by the Council of Industrial Design and held at the Victoria and Albert Museum, London, 1946. Designed by B. G. Bowden* [Photograph]. At: London. Design Council Slide Collection.


```
@image{anon1946peb,  
  author = {Anon\adddot},  
  year = {1946},  
  title = {Prototype electric bicycle displayed at the \enquote{Britain Can Make It} exhibition  
    organised by the {Council} of {Industrial} {Design} and held at the {Victoria} and {Albert}  
    {Museum}, {London}, 1946. {Designed} by {B.-G.} {Bowden}},  
  titleaddon = {Photograph},  
  address = {London},  
  library = {Design Council Slide Collection}}
```

RI

 Use the **library** field to record the archive and register number. 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.


## 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},
```



**i** You can also use `movie` as an alias for `video`.

### Streamed video (YouTube, TED Talks, etc.)

-  Moran, C., 2016. *Save our libraries* [Online]. Available from: <https://www.youtube.com/watch?v=gKTfCz4JtVE&feature=youtu.be> [Accessed 29 April 2016].
-  Moran, C., 2016. *Save our libraries* [Online]. Available from: <https://www.youtube.com/watch?v=gKTfCz4JtVE&feature=youtu.be> [Accessed 29 April 2016].

```
@video{moran2016sol,
  author = {Moran, C.},
  year = {2016},
  title = {Save Our Libraries},
  url = {https://www.youtube.com/watch?v=gKTfCz4JtVE&feature=youtu.be},
  urldate = {2016-04-29}}
```

RX

-  University of Bath, 2015. *What is engineering?* [Online]. Available from: <https://www.youtube.com/watch?v=NoyZarq-Zbo> [Accessed 12 January 2016].
-  University of Bath, 2015. *What is engineering?* [Online]. Available from: <https://www.youtube.com/watch?v=NoyZarq-Zbo> [Accessed 12 January 2016].

```
@video{uob2015wie,
  author = {{University of Bath}},
  year = {2015},
  title = {What is Engineering?},
  url = {https://www.youtube.com/watch?v=NoyZarq-Zbo},
  urldate = {2016-01-12}}
```



RI

-  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}}
```

RI

### Television or radio broadcast

-  *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

**!** Use `type` for the medium and `publisher` for the channel.



-  *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`.

## 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/webpage

-  Holland, M., 2002. *Guide to citing internet sources* [Online]. Poole: Bournemouth University. Available from: [http://www.bournemouth.ac.uk/library/using/guide\\_to\\_citing\\_internet\\_sourc.html](http://www.bournemouth.ac.uk/library/using/guide_to_citing_internet_sourc.html) [Accessed 4 November 2002].
-  Holland, M., 2002. *Guide to citing internet sources* [Online]. Poole: Bournemouth University. Available from: [http://www.bournemouth.ac.uk/library/using/guide\\_to\\_citing\\_internet\\_sourc.html](http://www.bournemouth.ac.uk/library/using/guide_to_citing_internet_sourc.html) [Accessed 4 November 2002].

```
@online{holland2002gci,
  author = {Holland, M.},
  year = {2002},
  title = {Guide to Citing Internet Sources},
  address = {Poole},
  organization = {Bournemouth University},
  url = {http://www.bournemouth.ac.uk/library/using/guide_to_citing_internet_sourc.html},
  urldate = {2002-11-04}}
```


RX

### Email discussion lists (jiscmail/listserv etc.)

-  Clark, T., 5 July 2004. A European UK Libraries Plus? *Lis-link* [Online]. Available from: [lis-link@jiscmail.ac.uk](mailto: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](mailto: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},  
  titleaddon = {computer program},  
  url = {https://screencast-o-matic.com/},  
  urldate = {2016-05-16}}
```

RX

## 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 \textup{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 Legal references: UK legislation and parliamentary reports

### 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


### 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


## Statutory instrument

 *The Human Medicines Regulations 2012* [Online], No.1916, United Kingdom: HMSO. Available from: [http://www.legislation.gov.uk/ukxi/2012/1916/pdfs/ukxi\\_20121916\\_en.pdf](http://www.legislation.gov.uk/ukxi/2012/1916/pdfs/ukxi_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/ukxi/2012/1916/pdfs/ukxi\\_20121916\\_en.pdf](http://www.legislation.gov.uk/ukxi/2012/1916/pdfs/ukxi_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/ukxi/2012/1916/pdfs/ukxi_20121916_en.pdf},
  urldate = {2016-04-17}}
```


RX

 Use the `entrysubtype` 'secondary' to put the number in the right place.

## 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


## 4.9 Legal references: EU legislation and reports

### 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.

### EU publication

-  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

## 4.10 Legal references: case reports

### Legal case study

 *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, 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 = {2012},  
note = {[2012]. UKSC 16}
```

### 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.

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

## 6 Licence

This work consists of the documented LaTeX file `biblatex-bath.dtx` and a Makefile.

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

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

## 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{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 \RequirePackage{etoolbox}
23 \ifcsdef{DeclareLanguageMappingSuffix}{%
24   \DeclareLanguageMappingSuffix{-bath}
25 }{%
26   \DeclareLanguageMapping{english}{english-bath}
27   \DeclareLanguageMapping{british}{british-bath}
28 }
```

We begin by loading the default author–year style.

```
30 \RequireBibliographyStyle{authoryear}
31 \ExecuteBibliographyOptions{%
32   maxcitenames=3,maxbibnames=9999,isbn=false,giveninits=true,dashed=false,
33   alldates=comp,labeldate=year,labelalpha=true}
34 \ExecuteBibliographyOptions[reference,audio,video,music,movie]{%
35   useeditor=false}
```

We provide some additional bibliography strings.

```
36 \NewBibliographyString{%
37   online, hours, at, unpublished, legalchapter,
38   director, performer, reader, conductor,
39   directors, performers, readers, conductors,
40   bydirector, byperformer, byreader, byconductor,
41 }
```

We allow the bibliography look more like the Bib<sub>T</sub><sub>E</sub>X default.

```
42 \setlength{\bibitemsep}{1em plus 0.2em minus 0.2em}
43 \renewcommand*{\bibfont}{\normalfont\normalsize}
```

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

```
44 \ifcsdef{letbibmacro}{}{%
45   \def\letbibmacro#1#2{%
46     \ifcsundef{abx@macro@#2}
47       {\blx@error
48        {Bibliography macro '#2' undefined}
49        {Use '\string\newbibmacro' to define this macro}}
50     {\csletcs{abx@macro@#1}{abx@macro@#2}}
51   }
52 \ifcsdef{iflabeldateisdate}{}{%
53   \def\iflabeldateisdate{%
54     \ifboolexpr{%
55       togl {blx@labeldateparts}
56       and not test {\iffieldundef{labeldatesource}}
57       and
```

```

58     (test {\iffieldequalstr{labeldatesource}{}}
59     or test {\iffieldequalstr{labeldatesource}{year}})}%
60 }

```

## 7.2 Name handling

Names are usually reversed. There are no spaces between initials.

```

62 \DeclareNameAlias{author}{family-given}
63 \DeclareNameAlias{editor}{family-given}
64 \DeclareNameAlias{bookeditor}{given-family}
65 \renewcommand*{\bibinitdelim}{-}

```

The handling of CJK names is based on code supplied to TeX.sx by user Moewe 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.

```

66 \newbibmacro*{name:cjk-given-family}[3]{%
67   \ifitemannotation{cjk}{%
68     \usebibmacro{name:delim}{#2#1#3}%
69     \usebibmacro{name:hook}{#2#1#3}%
70     \mkbibnamefamily{#1}\isdot
71     \ifdefvoid{#2}{-}{\bibnamedelimd\mkbibnamegiven{#2}}%
72     \ifdefvoid{#3}{-}{\bibnamedelimd\mkbibnamecjk{#3}}%
73   }{%
74     \usebibmacro{name:delim}{#2#1#3}%
75     \usebibmacro{name:hook}{#2#1#3}%
76     \ifdefvoid{#2}{-}{\mkbibnamegiven{#2}\isdot\bibnamedelimd}%
77     \mkbibnamefamily{#1}\isdot
78     \ifdefvoid{#3}{-}{\bibnamedelimd\mkbibnamecjk{#3}}%
79   }%
80 }
81 \newbibmacro*{name:cjk-family-given}[3]{%
82   \ifitemannotation{cjk}{%
83     \usebibmacro{name:delim}{#2#1#3}%
84     \usebibmacro{name:hook}{#2#1#3}%
85     \mkbibnamefamily{#1}\isdot
86     \ifdefvoid{#2}{-}{\bibnamedelimd\mkbibnamegiven{#2}}%
87     \ifdefvoid{#3}{-}{\bibnamedelimd\mkbibnamecjk{#3}}%
88   }{%
89     \usebibmacro{name:delim}{#1}%
90     \usebibmacro{name:hook}{#1}%
91     \mkbibnamefamily{#1}\isdot
92     \ifboolexpe{%
93       test {\ifdefvoid{#2}}
94       and
95       test {\ifdefvoid{#3}}
96     }{
97       {\revsdnamepunct}%
98       \ifdefvoid{#2}{-}{\bibnamedelimd\mkbibnamegiven{#2}\isdot}%
99       \ifdefvoid{#3}{-}{\bibnamedelimd\mkbibnamecjk{#3}}%
100    }%
101 }
102
103 \DeclareNameFormat{given-family}{%
104   \ifdefvoid{namepartcjk}{%
105     \ifgiveninits{%
106       \usebibmacro{name:given-family}
107       {\namepartfamily}
108       {\namepartgiveni}

```

```

109     {\namepartprefix}
110     {\namepartsuffix}%
111   }{%
112     \usebibmacro{name:given-family}
113     {\namepartfamily}
114     {\namepartgiven}
115     {\namepartprefix}
116     {\namepartsuffix}%
117   }%
118 }{%
119   \ifgiveninits{%
120     \usebibmacro{name:cjk-given-family}
121     {\namepartfamily}
122     {\namepartgiveni}
123     {\namepartcjk}%
124   }{%
125     \usebibmacro{name:cjk-given-family}
126     {\namepartfamily}
127     {\namepartgiven}
128     {\namepartcjk}%
129   }%
130 }%
131 \usebibmacro{name:andothers}%
132 }
133
134 \DeclareNameFormat{family-given}{%
135   \ifdefvoid{\namepartcjk}{%
136     \ifgiveninits{%
137       \usebibmacro{name:family-given}
138       {\namepartfamily}
139       {\namepartgiveni}
140       {\namepartprefix}
141       {\namepartsuffix}%
142     }{%
143       \usebibmacro{name:family-given}
144       {\namepartfamily}
145       {\namepartgiven}
146       {\namepartprefix}
147       {\namepartsuffix}%
148     }%
149   }{%
150     \ifgiveninits{%
151       \usebibmacro{name:cjk-family-given}
152       {\namepartfamily}
153       {\namepartgiveni}
154       {\namepartcjk}%
155     }{%
156       \usebibmacro{name:cjk-family-given}
157       {\namepartfamily}
158       {\namepartgiven}
159       {\namepartcjk}%
160     }%
161   }
162   \usebibmacro{name:andothers}%
163 }

```

With videos, names in credits are printed in full.

```

165 \DeclareNameFormat{given-family:full}{%
166   \usebibmacro{name:given-family}
167   {\namepartfamily}
168   {\namepartgiven}
169   {\namepartprefix}

```

```

170     {\namepartsuffix}%
171     \usebibmacro{name:andothers}}
172
173 \renewbibmacro*{byauthor}[1][byauthor]{%
174     \ifboolexpr{
175         test \ifuseauthor
176         or
177         test {\ifnameundef{author}}
178     }{
179     {\usebibmacro{bytypestrg}{author}{author}%
180     \setunit{\addspace}%
181     \printnames[#1]{author}}}
182
183 \renewbibmacro*{byeditor}[1][byeditor]{%
184     \ifnameundef{editor}
185     {}
186     {\usebibmacro{bytypestrg}{editor}{editor}%
187     \setunit{\addspace}%
188     \printnames[#1]{editor}%
189     \newunit}%
190     \ifstrequal{#1}{byeditor}{%
191     \usebibmacro{byeditora}%
192     \usebibmacro{byeditorb}%
193     \usebibmacro{byeditorc}
194     }{%
195     \usebibmacro{byeditora}[#1]%
196     \usebibmacro{byeditorb}[#1]%
197     \usebibmacro{byeditorc}[#1]}
198
199 \newbibmacro*{byeditora}[1][byeditora]{%
200     \ifnameundef{editora}
201     {}
202     {\usebibmacro{bytypestrg}{editora}{editor}%
203     \setunit{\addspace}%
204     \printnames[#1]{editora}%
205     \newunit}}
206 \newbibmacro*{byeditorb}[1][byeditorb]{%
207     \ifnameundef{editorb}
208     {}
209     {\usebibmacro{bytypestrg}{editorb}{editor}%
210     \setunit{\addspace}%
211     \printnames[#1]{editorb}%
212     \newunit}}
213 \newbibmacro*{byeditorc}[1][byeditorc]{%
214     \ifnameundef{editorc}
215     {}
216     {\usebibmacro{bytypestrg}{editorc}{editor}%
217     \setunit{\addspace}%
218     \printnames[#1]{editorc}%
219     \newunit}}
220
221 \renewbibmacro*{bytranslator}[1][bytranslator]{%
222     \ifnameundef{translator}
223     {}
224     {\setunit{\addspace}%
225     \printtext[parens]{%
226     \printnames[#1]{translator}%
227     \setunit{\addcomma\space}%
228     \bibcpstring{translator}%
229     \clearname{translator}}}}
230
231 \renewbibmacro*{byeditor+others}[1][byeditor]{%
232     \ifnameundef{editor}

```

```

233 {}
234 {\usebibmacro{byeditor+othersstrg}%
235   \setunit{\addspace}%
236   \printnames[#1]{editor}%
237   \clearname{editor}%
238   \newunit}%
239 \ifstrequal{#1}{byeditor}{%
240   \usebibmacro{byeditorx}%
241   \usebibmacro{bytranslator+others}%
242 }{%
243   \usebibmacro{byeditora}[#1]%
244   \usebibmacro{byeditorb}[#1]%
245   \usebibmacro{byeditorc}[#1]%
246   \usebibmacro{bytranslator+others}[#1]}
247
248 \renewbibmacro*{bytranslator+others}[1][bytranslator]{%
249   \ifnameundef{translator}
250   {\usebibmacro{withothers}}
251   {\setunit{\addspace}%
252     \printtext[parens]{%
253       \printnames[bytranslator]{translator}%
254       \setunit{\addcomma\space}%
255       \bibcpstring{translator}%
256       \clearname{translator}%
257       \newunit
258       \usebibmacro{withothers}}}}

```

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

```

260 \newbibmacro*{bookeditor}{%
261   \ifnameundef{editor}{}%
262   \printnames[bookeditor]{editor}%
263   \setunit*{\addcomma\space}%
264   \usebibmacro{editor+othersstrg}%
265   \clearname{editor}%
266   }}

```

### 7.3 Titles

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

```

268 \DeclareFieldFormat{sentencecase}{\MakeSentenceCase*{#1}}
269 \DeclareFieldFormat{midsentencecase}{\MakeSentenceCase*{#1}}
270 \DeclareFieldFormat{title}{\mkbibemph{#1}}
271 \DeclareFieldFormat
272   [article,inbook,incollection,inproceedings]%
273   {title}{#1}
274 \DeclareFieldFormat
275   [patent,thesis]%
276   {title}{\mkbibemph{#1}}
277 \DeclareFieldFormat
278   [reference,mvreference]%
279   {title}{\ifnameundef{author}{#1}{\mkbibemph{#1}}}
280 \DeclareFieldFormat
281   [inreference]%
282   {title}{\ifnameundef{author}{\mkbibemph{#1}}{#1}}
283 \DeclareFieldFormat
284   [inreference]%
285   {booktitle}{\ifnameundef{author}{#1}{\mkbibemph{#1}}}
286 \DeclareFieldFormat
287   [unpublished]%
288   {title}{\iffieldundef{booktitle}{\mkbibemph{#1}}{#1}}

```



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.

```

290 \newtoggle{bbx:onlineshown}
291 \newbibmacro*{isonline}{%
292   \ifboolexpr{(
293     test {\iffieldundef{doi}}
294     and
295     test {\iffieldundef{url}}
296     and
297     not test {\ifentrytype{online}}
298   ) or
299   togl {bbx:onlineshown}
300 }{}{%
301   \bibstring[\mkbibbrackets]{online}%
302   \toggletrue{bbx:onlineshown}}}
```

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.

```

304 \DeclareFieldFormat{titleaddon}{\mkbibbrackets{%
305   \IfBeginWith{#1}{[ ]}{%
306     \IfEndWith{#1}{ ] }{%
307       \StrBetween{#1}{[ ]}{ }%
308     }{#1}%
309   }{#1}%
310 }}
```

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.

```

312 \renewbibmacro*{title}{%
313   \ifboolexpr{
314     test {\iffieldundef{title}}
315     and
316     test {\iffieldundef{subtitle}}
317   }{}{%
318     \printtext[title]{%
319       \printfield[sentencecase]{title}%
320       \setunit{\subtitlepunct}%
321       \printfield[midsentencecase]{subtitle}%
322       \setunit{\addspace}%
323     }%
324     \printfield{version}%
325     \clearfield{version}%
326     \setunit*{\addspace}%
327     \printfield{titleaddon}%
328     \ifboolexpr{
329       test {\iffieldundef{journaltitle}}
330       and
331       test {\iffieldundef{booktitle}}
332       and
333       test {\iffieldundef{library}}
334       and
335       not test {\ifentrytype{software}}
336       and (
337         test {\iffieldundef{type}}
338         or
339         test {\nottoggle{bbx:labelistitle}}
340       ) or

```

```

341     not (
342         test {\ifentrytype{audio}}
343         or
344         test {\ifentrytype{video}}
345         or
346         test {\ifentrytype{music}}
347         or
348         test {\ifentrytype{movie}}
349     ))
350 }{%
351     \setunit*{\addspace}%
352     \usebibmacro{isonline}%
353 }{}%
354 }%
355 }

```

Similar changes are needed for the `booktitle` and `maintitle` macros.

```

357 \renewbibmacro*{booktitle}{%
358     \ifboolexpr{
359         test {\iffieldundef{booktitle}}
360         and
361         test {\iffieldundef{booksubtitle}}
362     }{}{%
363         \printtext[booktitle]{%
364             \printfield[sentencecase]{booktitle}%
365             \setunit{\subtitlepunct}%
366             \printfield[midsentencecase]{booksubtitle}%
367             \setunit{\addspace}%
368         }%
369         \printfield{booktitleaddon}
370         \setunit*{\addspace}%
371         \usebibmacro{isonline}%
372     }%
373 }
374
375 \renewbibmacro*{maintitle}{%
376     \ifboolexpr{
377         test {\iffieldundef{maintitle}}
378         and
379         test {\iffieldundef{mainsubtitle}}
380     }{}{
381         \printtext[maintitle]{%
382             \printfield[sentencecase]{maintitle}%
383             \setunit{\subtitlepunct}%
384             \printfield[midsentencecase]{mainsubtitle}%
385             \setunit{\addspace}%
386         }%
387         \printfield{maintitleaddon}%
388     }%
389 }

```

Subtitles are set off with a colon

```

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

```

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. We want to show the subtitle directly after the title, and show titleaddon after the `date+extradate` macro.

```

393 \DeclareLabeltitle[inreference]{%
394     \field{shorttitle}
395     \field{booktitle}

```

```

396 \field{title}
397 }
398 \providetoggle{bbx:labelistitle}
399 \renewbibmacro*{labeltitle}{%
400 \iffieldundef{label}{%
401 \ifboolexpr{
402 test {\ifentrytype{inreference}}
403 and
404 not test {\iffieldundef{booktitle}}
405 }{%
406 \printtext[booktitle]{%
407 \printfield[sentencecase]{booktitle}%
408 \setunit{\booksubtitlepunct}%
409 \printfield[midsentencecase]{booksubtitle}}%
410 \clearfield{booktitle}\clearfield{booksubtitle}%
411 }{%
412 \ifboolexpr{
413 test {\iffieldundef{title}}
414 and
415 test {\iffieldundef{subtitle}}
416 }{%}
417 \printtext[title]{%
418 \printfield[sentencecase]{title}%
419 \setunit{\subtitlepunct}%
420 \printfield[midsentencecase]{subtitle}}%
421 \clearfield{title}\clearfield{subtitle}%
422 \toggletrue{bbx:labelistitle}}%
423 }%
424 }{%
425 \printfield{label}%
426 }%
427 }
428 \DeclareDelimFormat{yearlabeltitleaddondelim}{\addspace}
429 \newbibmacro*{labeltitleaddon}{%
430 \iftoggle{bbx:labelistitle}{%
431 \setunit{\printdelim{yearlabeltitleaddondelim}}%
432 \printfield{version}%
433 \clearfield{version}%
434 \setunit*{\addspace}%
435 \printfield{titleaddon}%
436 \clearfield{titleaddon}%
437 \ifboolexpr{
438 test {\iffieldundef{journaltitle}}
439 and
440 test {\iffieldundef{booktitle}}
441 and (
442 test {\iffieldundef{library}}
443 or
444 test {\ifentrytype{image}}
445 ) and
446 not test {\ifentrytype{software}}
447 and (
448 test {\iffieldundef{type}}
449 or
450 not (
451 test {\ifentrytype{audio}}
452 or
453 test {\ifentrytype{video}}
454 or
455 test {\ifentrytype{music}}
456 or
457 test {\ifentrytype{movie}}
458 ))

```

```

459   }{%
460     \setunit*{\addspace}%
461     \usebibmacro{isonline}%
462   }{}%
463 }{}%
464 }
465 \xapptobibmacro{author}{\usebibmacro{labeltitleaddon}}{}{}
466 \xapptobibmacro{bbx:editor}{\usebibmacro{labeltitleaddon}}{}{}
467 \xapptobibmacro{bbx:translator}{\usebibmacro{labeltitleaddon}}{}{}

```

## 7.4 Dates

If the main publication date is missing, we fall back immediately to ‘n.d.’ rather than use URL date or anything like that. However, for some resources (ISO standards, Acts of Parliament), the date is part of the label and should not be repeated, so we declare an option for removing the ‘n.d.’ Unless already set, the option is inserted if `sortyear` is used.

```

469 \DeclareLabeldate{%
470   \field{date}
471   \field{year}
472   \literal{nodate}
473 }
474 \newtoggle{bbx:nonodate}
475 \DeclareBibliographyOption[boolean]{nonodate}[true]{%
476   \settoggle{bbx:nonodate}{#1}}
477 \DeclareTypeOption[boolean]{nonodate}[true]{%
478   \settoggle{bbx:nonodate}{#1}}
479 \DeclareEntryOption[boolean]{nonodate}[true]{%
480   \settoggle{bbx:nonodate}{#1}}

```

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.

```

481 \DeclareStyleSourcemap{
482   \maps[datatype=bibtex]{
483     \map[overwrite=true]{
484       \step[notmatch=\regexp{nonodate}, fieldsource=options, final]
485       \step[fieldsource=sortyear, final]
486       \step[fieldset=options, append, fieldvalue={,nonodate}]
487     }
488     \map[overwrite=true]{
489       \step[notfield=options, final]
490       \step[fieldsource=sortyear, final]
491       \step[fieldset=options, fieldvalue={nonodate}]
492     }
493   }
494 }

```

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

```

496 \DeclareDelimFormat{nameyeardelim}{\addcomma\space}
497 \DeclareDelimFormat[parencite,bib,biblist]{nameyeardelim}{\addcomma\space}
498 \newcommand{\dononameyeardelim}{%
499   \ifentrytype{legislation}{%
500     \addspace
501   }{%
502     \ifentrytype{jurisdiction}{%
503       \ifboolexpr{
504         togl {bbx:eu-oj}

```

```

505     or
506     test {\iffieldequalstr{journaltitle}{ECR}}
507     or
508     test {\iffieldequalstr{type}{ECR}}
509   }{%
510     \addspace
511   }{%
512     \ifboolexpr{
513       test {\ifkeyword{sc}}
514       or
515       togl {bbx:scotstyle}
516     }{%
517       \addcomma\space
518     }{%
519       \addperiod\space}}%
520   }{%
521     \addcomma\space}}
522 \DeclareDelimFormat{nonameyeardelim}{\dononameyeardelim}
523 \DeclareDelimFormat*[bib,biblist]{nonameyeardelim}{\dononameyeardelim}
524 \DeclareDelimFormat[parencite]{nonameyeardelim}{%
525   \ifboolexpr{
526     test {\ifentrytype{jurisdiction}}
527     or
528     test {\ifentrytype{legislation}}
529   }{\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.

```

531 \DeclareDelimFormat{nametitledelim}{%
532   \ifboolexpr{
533     (
534       test {\ifentrytype{jurisdiction}}
535       or
536       test {\ifentrytype{legislation}}
537     ) and
538     togl {bbx:labelistitle}
539   }{\addspace}{\addcomma\space}}
540 \DeclareDelimFormat[bib,biblist]{nametitledelim}{%
541   \ifboolexpr{
542     (
543       test {\ifentrytype{jurisdiction}}
544       or
545       test {\ifentrytype{legislation}}
546     ) and
547     togl {bbx:labelistitle}
548   }{\addspace}{\labelnamepunct}}

```

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

```

551 \renewbibmacro*{date}{%
552   \printdate
553   \setunit*{\bibdatetimesep}
554   \printtime
555 }
556 \DeclareFieldFormat{time}{#1-\bibstring{hours}}

```

We provide a new date merging option that moves the year but leaves the month and day in place, and set this as the default. Note that dates are preceded by a comma, and are given bare rather than in parentheses.

We start by patching the error message of the existing option code, then add a per-type version of the option.

```

558 \xpatchcmd{\KV@blx@opt@pre@mergedate}{%
559   'true' (=compact)%
560 }{%
561   'year', 'true' (=year)%
562 }-{\wlog{WARNING: biblatex-bath failed to patch KV@blx@opt@pre@datemerget}}
563 \ifdefined\KV@blx@opt@typ@mergedate
564   \xpatchcmd{\KV@blx@opt@typ@mergedate}{%
565     'true' (=compact)%
566   }{%
567     'year', 'true' (=year)%
568   }-{\wlog{WARNING: biblatex-bath failed to patch KV@blx@opt@typ@datemerget}}
569 \else
570   \DeclareTypeOption[boolean]{mergedate}[true]{%
571     \ifcsdef{bbx@opt@mergedate@#1}{%
572       \csuse{bbx@opt@mergedate@#1}%
573     }{%
574       \PackageError{biblatex}
575         {Invalid option 'mergedate=#1'}
576         {Valid values are 'maximum', 'compact', 'basic', 'minimum',\MessageBreak
577           'year', 'true' (=year), and 'false'.}}
578   \fi
579 \xpatchcmd{\KV@blx@opt@ent@mergedate}{%
580   'true' (=compact)%
581 }{%
582   'year', 'true' (=year)%
583 }-{\wlog{WARNING: biblatex-bath failed to patch KV@blx@opt@ent@datemerget}}

```

We define a configurable field format for date labels to replace the hard-coded parentheses in the options from the standard author–year style. We also amend the logic for printing the label date so the nonodate option is respected.

```

585 \DeclareFieldFormat{datelabel}{#1}
586 \xpatchcmd{\bbx@opt@mergedate@maximum}{%
587   \iffieldundef{labelyear}%
588 }{%
589   \ifboolexpr{
590     togl {bbx:nonodate}
591     and
592     not test {\iflabeldateisdate}}%
593 }-{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@maximum}}
594 \xpatchcmd{\bbx@opt@mergedate@maximum}{%
595   \printtext[parens]%
596 }{%
597   \printtext[datelabel]%
598 }-{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@maximum}}
599 \xpatchcmd{\bbx@opt@mergedate@compact}{%
600   \iffieldundef{labelyear}%
601 }{%
602   \ifboolexpr{
603     togl {bbx:nonodate}
604     and
605     not test {\iflabeldateisdate}}%
606 }-{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@compact}}
607 \xpatchcmd{\bbx@opt@mergedate@compact}{%
608   \printtext[parens]%
609 }{%
610   \printtext[datelabel]%
611 }-{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@compact}}
612 \xpatchcmd{\bbx@opt@mergedate@basic}{%
613   \iffieldundef{labelyear}%
614 }{%
615   \ifboolexpr{
616     togl {bbx:nonodate}

```

```

617     and
618     not test {\iflabeldateisdate}}%
619 }{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@basic}}
620 \xpatchcmd{\bbx@opt@mergedate@basic}{%
621   \printtext[parens]%
622 }{%
623   \printtext[datelabel]%
624 }{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@basic}}
625 \xpatchcmd{\bbx@opt@mergedate@minimum}{%
626   \iffieldundef{labelyear}%
627 }{%
628   \ifboolexpr{
629     togl {bbx:nonodate}
630     and
631     not test {\iflabeldateisdate}}%
632 }{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@minimum}}
633 \xpatchcmd{\bbx@opt@mergedate@minimum}{%
634   \printtext[parens]%
635 }{%
636   \printtext[datelabel]%
637 }{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@minimum}}
638 \xpatchcmd{\bbx@opt@mergedate@false}{%
639   \iffieldundef{labelyear}%
640 }{%
641   \ifboolexpr{
642     togl {bbx:nonodate}
643     and
644     not test {\iflabeldateisdate}}%
645 }{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@false}}
646 \xpatchcmd{\bbx@opt@mergedate@false}{%
647   \printtext[parens]%
648 }{%
649   \printtext[datelabel]%
650 }{\wlog{WARNING: biblatex-bath failed to patch bbx@opt@mergedate@false}}

```

If an older version of biblatex is used, we update the logic for `\bbx@opt@mergedate@maximum`, which is used by the `letter` driver.

```

651 \xpatchcmd{\bbx@opt@mergedate@maximum}{%
652   \iffieldsequal{year}{labelyear}
653   {\printlabeldateextra}%
654   {\printfield{labelyear}%
655   \printfield{extrayear}}%
656 }{%
657   \iflabeldateisdate
658   {\printfield{issue}%
659   \setunit*{\addspace}%
660   \printdateextra}
661   {\printlabeldateextra}%
662 }{}{}

```

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.

```

664 \def\bbx@opt@mergedate@year{%
665   \renewbibmacro*{date+extradate}{%
666     \iffieldundef{labelyear}{}%
667     \ifboolexpr{
668       togl {bbx:nonodate}
669       and
670       not test {\iflabeldateisdate}
671     }{}{}

```

```

672     \printtext[datelabel]{\printlabeldateextra}%
673   }%
674   \iflabeldateisdate{%
675     \clearfield{year}%
676   }{}}
677 \ifcsundef{abx@macro@date+extrayear}{-}{%
678   \renewbibmacro*{date+extrayear}{\usebibmacro{date+extradate}}%
679 }
680 \renewbibmacro*{issue+date}{%
681   \iffieldundef{issue}{-}{%
682     \ifboolexpr{(
683       test {\iffieldundef{volume}}
684       and
685       test {\iffieldundef{number}}
686     ) and
687     test {\iffieldundef{eid}}}
688   }{%
689     \newunit
690     \printfield{issue}%
691   }{%
692     \printtext[parens]{%
693       \printfield{issue}%
694     }%
695   }
696 }%
697 \setunit{\addcomma\space}%
698 \printdate
699 \newunit
700 }%
701 }%
702
703 \def\bbx@opt@mergedate@true{\bbx@opt@mergedate@year}
704 \ExecuteBibliographyOptions{mergedate}

```

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

```

706 \newrobustcmd*{\mknoyeardaterangefull}[2]{%
707   \iffieldundef{#2month}{-}{%
708     \datecircaprint
709     \printtext[#2date]{%
710       \iffieldundef{#2season}{%
711         \csuse{mkbibdate#1}{-}{#2month}{#2day}%
712         \blx@printtime{#2}{-}%
713       }{%
714         \csuse{mkbibseasondate#1}{-}{#2season}}%
715     \dateuncertainprint
716     \iffieldundef{#2endmonth}{-}{%
717       \iffieldequalstr{#2endmonth}{-}{%
718         \mbox{\bibdaterangesep}%
719       }{%
720         \bibdaterangesep
721         \enddatecircaprint
722         \iffieldundef{#2season}{%
723           \csuse{mkbibdate#1}{-}{#2endmonth}{#2endday}%
724           \blx@printtime{#2}{end}%
725         }{%
726           \csuse{mkbibseasondate#1}{-}{#2endseason}}%
727       \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.

```

728 \newrobustcmd*{\mknoyeardaterangetrunc}[2]{%
729   \iffieldundef{#2month}{}{%
730     \datecircaprint
731     \printtext[#2date]{%
732       \iffieldundef{#2season}{%
733         \ifboolexpr{
734           test {\iffieldsequal{labelyear}{labelendyear}}
735           and
736           test {\iffieldsequal{#2month}{#2endmonth}}
737         }{%
738           \csuse{mkbibdate#1}{}{#2day}%
739         }{%
740           \csuse{mkbibdate#1}{}{#2month}{#2day}}%
741       }{%
742         \csuse{mkbibseasondate#1}{}{#2season}}%
743     \dateuncertainprint
744     \iffieldundef{#2endmonth}{}{%
745       \iffieldequalstr{#2endmonth}{}{%
746         \mbox{\bibdaterangesep}%
747       }{%
748         \bibdaterangesep
749         \enddatecircaprint
750         \iffieldundef{#2season}{%
751           \csuse{mkbibdate#1}{}{#2endmonth}{#2endday}%
752         }{%
753           \csuse{mkbibseasondate#1}{}{#2endseason}}%
754         \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.

```

755 \xpatchcmd{\mkdaterangefull}{%
756   \iffieldundef{#2year} {\blx@nounit}%
757 }{%
758   \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
759 }{\@tempswafalse}{\@tempswatruetrue}%
760 \if@tempswa
761   \xpatchcmd{\mkdaterangefull}{%
762     \iffieldundef{#2year} {}%
763   }{%
764     \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
765   }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefull}}%
766 \fi
767 \xpatchcmd{\mkdaterangetrunc@i}{%
768   \iffieldundef{#2year} {\blx@nounit}%
769 }{%
770   \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
771 }{\@tempswafalse}{\@tempswatruetrue}%
772 \if@tempswa
773   \xpatchcmd{\mkdaterangetrunc}{%
774     \iffieldundef{#2year} {}%
775   }{%
776     \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
777   }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetrunc@i}}%
778 \fi
779 \xpatchcmd{\mkdaterangefullexta}{%
780   \iffieldundef{#2year} {\blx@nounit}%
781 }{%

```

```

782 \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
783 }{\@tempswafalse}{\@tempswatrue}%
784 \if@tempswa
785 \xpatchcmd{\mkdaterangefullexta}{%
786 \iffieldundef{#2year} {}%
787 }{%
788 \iffieldundef{#2year} {\mknoyeardaterangefull{#1}{#2}}%
789 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta}}%
790 \fi
791 \xpatchcmd{\mkdaterangetruncextra@i}{%
792 \iffieldundef{#2year} {\blx@nounit}%
793 }{%
794 \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
795 }{\@tempswafalse}{\@tempswatrue}%
796 \if@tempswa
797 \xpatchcmd{\mkdaterangetruncextra}{%
798 \iffieldundef{#2year} {}%
799 }{%
800 \iffieldundef{#2year} {\mknoyeardaterangetrunc{#1}{#2}}%
801 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetruncextra@i}}%
802 \fi
803 %
804 % By default, Title--year combinations are not disambiguated, so we fix that
805 % too.
806 \DeclareFieldFormat{extraalpha}{%
807 \iffieldnums{labelyear}
808 {\mknumalph{#1}}
809 {\mkbibparens{\mknumalph{#1}}}}
810 \DeclareLabelalphaTemplate{
811 \labelelement{
812 \field{label}
813 \field{labelname}
814 \field{labeltitle}
815 }
816 \labelelement{
817 \field{labelyear}
818 }
819 }
820 \xpatchcmd{\mkdaterangefullexta}{%
821 \printfield{extradate}%
822 }{%
823 \printfield{extraalpha}%
824 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta once}}%
825 \xpatchcmd{\mkdaterangefullexta}{%
826 \printfield{extradate}%
827 }{%
828 \printfield{extraalpha}%
829 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta twice}}%
830 \xpatchcmd{\mkdaterangefullexta}{%
831 \printfield{extradate}%
832 }{%
833 \printfield{extraalpha}%
834 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangefullexta thrice}}%
835 \xpatchcmd{\mkdaterangetruncextra@i}{%
836 \printfield{extradate}%
837 }{%
838 \printfield{extraalpha}%
839 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetruncextra@i once}}%
840 \xpatchcmd{\mkdaterangetruncextra@i}{%
841 \printfield{extradate}%
842 }{%
843 \printfield{extraalpha}%
844 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetruncextra@i twice}}%

```

```

845 \xpatchcmd{\mkdaterangetrunceextra@i}{%
846   \printfield{extradate}%
847 }{%
848   \printfield{extraalpha}%
849 }{\wlog{WARNING: biblatex-bath failed to patch mkdaterangetrunceextra@i thrice}}%

```

## 7.5 Versions

Versions are printed with ‘v.’ in parentheses.

```

851 \DeclareFieldFormat{version}{\mkbibparens{\biblcsstring{version}#1}}

```

## 7.6 Types

Types are always printed longhand.

```

852 \DeclareFieldFormat{type}{\ifbibstring{#1}{\biblstring{#1}}{#1}}

```

## 7.7 Events

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

```

853 \renewbibmacro*{event+venue+date}{%
854   \printfield{eventtitle}%
855   \setunit*{\addspace}%
856   \printfield{eventtitleaddon}%
857   \ifboolexpr{
858     test {\iffieldundef{venue}}
859     and
860     test {\iffieldundef{eventyear}}
861   }
862   {}
863   {\setunit{\addcomma\space}%
864     \printeventdate
865     \setunit*{\addcomma\space}%
866     \printfield{venue}%
867     \newunit}}

```

## 7.8 Publishers

We patch the secondary publication macros so they will use the publisher list instead, if provided.

```

869 \letbibmacro{plain:institution+location+date}{institution+location+date}
870 \renewbibmacro*{institution+location+date}{%
871   \iflistundef{publisher}{%
872     \usebibmacro{plain:institution+location+date}%
873   }{%
874     \printlist{institution}%
875     \newunit
876     \usebibmacro{publisher+location+date}}}}
877 \letbibmacro{plain:organization+location+date}{organization+location+date}
878 \renewbibmacro*{organization+location+date}{%
879   \iflistundef{publisher}{%
880     \usebibmacro{plain:organization+location+date}%
881   }{%
882     \printlist{organization}%
883     \newunit
884     \usebibmacro{publisher+location+date}}}}

```

We use the library field for databases and preprint repositories.

```

886 \DeclareFieldFormat{library}{\mkbibemph{#1}}
887 \newbibmacro*{library}{%
888   \iffieldundef{library}{}%
889   \printfield{library}%
890   \setunit*{\addspace}%
891   \usebibmacro{isonline}%
892 }%
893 }

```

## 7.9 Page numbers

```

895 \renewcommand*{\ppspace}{}
896 \DeclareNumChars{ab}

```

## 7.10 URLs

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

```

897 \DeclareFieldFormat{url}{\bibsentence\bibstring{urlfrom}\addcolon\space\url{#1}}
898 \DeclareFieldFormat{doi}{\bibsentence\bibstring{urlfrom}\addcolon\space\url{https://doi.org/#1}}
899 \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.

```

900 \renewbibmacro*{url}{%
901   \iffieldundef{doi}%
902   {\printfield{url}}%
903   {\printfield{doi}}%
904 }
905 \renewbibmacro*{doi+eprint+url}{%
906   \iftoggle{bbx:eprint}
907   {\usebibmacro{eprint}}
908   {}%
909   \newunit\newblock
910   \iftoggle{bbx:url}
911   {\usebibmacro{url+urldate}}
912   {}

```

This backports changes to the `online` driver in biblatex v3.15 to earlier versions, so the above works as intended.

```

913 \xpatchbibdriver{online}{%
914   \iftoggle{bbx:doi}
915   {\printfield{doi}}
916   {}%
917   \newunit\newblock
918   \iftoggle{bbx:eprint}
919   {\usebibmacro{eprint}}
920   {}%
921   \newunit\newblock
922   \usebibmacro{url+urldate}%
923 }{%
924   \toggletrue{bbx:url}%
925   \usebibmacro{doi+eprint+url}%
926 }{}

```

## 7.11 Articles

Compared with the standard styles, the main differences in the driver are the omission of ‘in’ and the position of the publication state.

```

928 \xpatchbibdriver{article}{%
929   \usebibmacro{in:}\usebibmacro{journal+issuetitle}%
930 }{%
931   \usebibmacro{journal+issuetitle}%
932 }-{\wlog{WARNING: biblatex-bath failed to patch article driver}}
933 \xpatchbibdriver{article}{%
934   \usebibmacro{addendum+pubstate}%
935 }{%
936   \printfield{addendum}%
937 }-{\wlog{WARNING: biblatex-bath failed to patch article driver}}

```

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

```

938 \xpatchbibmacro{journal}{%
939   \printfield[titlecase]{journaltitle}%
940 }{%
941   \printfield[sentencecase]{journaltitle}%
942 }-{\wlog{WARNING: biblatex-bath failed to patch journal macro}}
943 \xpatchbibmacro{journal}{%
944   \printfield[titlecase]{journalsubtitle}%
945 }{%
946   \printfield[sentencecase]{journalsubtitle}%
947 }-{\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.

```

948 \renewbibmacro*{journal+issuetitle}{%
949   \usebibmacro{journal}%
950   \setunit*{\addspace}%
951   \usebibmacro{isonline}%
952   \setunit*{\addcomma\space}%
953   \iffieldundef{series}
954     {}
955     {\newunit
956       \printfield{series}%
957       \setunit{\addcomma\space}}%
958   \usebibmacro{volume+number+eid}%
959   \setunit{\addspace}%
960   \usebibmacro{issue+date}%
961   \setunit{\addcolon\space}%
962   \usebibmacro{issue}%
963   \setunit{\addcomma\space}%
964   \printfield{pubstate}%
965   \newunit}
966 \renewbibmacro*{volume+number+eid}{%
967   \printfield{volume}%
968   \printfield[parens]{number}%
969   \setunit{\addcomma\space}%
970   \printfield{eid}}

```

## 7.12 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.

```

972 \xpatchbibdriver{book}{%
973   \newunit\newblock
974   \usebibmacro{series+number}%
975 }{%
976   \setunit{\addcomma\space}%
977   \usebibmacro{series+number}%

```

```

978 }{}{\wlog{WARNING: biblatex-bath failed to patch book driver (series+number)}}
979
980 \xpatchbibdriver{collection}{%
981   \newunit\newblock
982   \usebibmacro{series+number}%
983 }{%
984   \setunit{\addcomma\space}%
985   \usebibmacro{series+number}%
986 }{}{\wlog{WARNING: biblatex-bath failed to patch collection driver (series+number)}}
987
988 \xpatchbibdriver{inbook}{%
989   \newunit\newblock
990   \usebibmacro{series+number}%
991 }{%
992   \setunit{\addcomma\space}%
993   \usebibmacro{series+number}%
994 }{}{\wlog{WARNING: biblatex-bath failed to patch inbook driver (series+number)}}
995
996 \xpatchbibdriver{incollection}{%
997   \newunit\newblock
998   \usebibmacro{series+number}%
999 }{%
1000   \setunit{\addcomma\space}%
1001   \usebibmacro{series+number}%
1002 }{}{\wlog{WARNING: biblatex-bath failed to patch incollection driver (series+number)}}
1003
1004 \xpatchbibdriver{inproceedings}{%
1005   \newunit\newblock
1006   \usebibmacro{series+number}%
1007 }{%
1008   \setunit{\addcomma\space}%
1009   \usebibmacro{series+number}%
1010 }{}{\wlog{WARNING: biblatex-bath failed to patch inproceedings driver (series+number)}}
1011
1012 \xpatchbibdriver{proceedings}{%
1013   \newunit\newblock
1014   \usebibmacro{series+number}%
1015 }{%
1016   \setunit{\addcomma\space}%
1017   \usebibmacro{series+number}%
1018 }{}{\wlog{WARNING: biblatex-bath failed to patch proceedings driver (series+number)}}

```

### 7.13 Works in collections

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

```

1020 \xpatchbibdriver{incollection}{%
1021   \usebibmacro{in:}%
1022   \usebibmacro{maintitle+booktitle}%
1023   \newunit\newblock
1024   \usebibmacro{byeditor+others}%
1025 }{%
1026   \ifnameundef{editor}{}{\usebibmacro{in:}}%
1027   \usebibmacro{bookeditor}%
1028   \newunit\newblock
1029   \usebibmacro{maintitle+booktitle}%
1030   \usebibmacro{byeditor+others}%
1031 }{}{\wlog{WARNING: biblatex-bath failed to patch incollection driver (bookeditor)}}
1032
1033 \xpatchbibdriver{inproceedings}{%
1034   \usebibmacro{in:}%
1035   \usebibmacro{maintitle+booktitle}%

```

```

1036 \newunit\newblock
1037 \usebibmacro{event+venue+date}%
1038 \newunit\newblock
1039 \usebibmacro{byeditor+others}%
1040 }{%
1041 \ifnameundef{editor}{}\usebibmacro{in:}}%
1042 \usebibmacro{bookeditor}%
1043 \newunit\newblock
1044 \usebibmacro{maintitle+booktitle}%
1045 \usebibmacro{byeditor+others}%
1046 \newunit
1047 \usebibmacro{event+venue+date}%
1048 }{}{\wlog{WARNING: biblatex-bath failed to patch inproceedings driver (bookeditor)}}

```

## 7.14 Works in books known by their title

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

```

1050 \DeclareBibliographyDriver{inreference}{%
1051 \usebibmacro{bibindex}%
1052 \usebibmacro{begentry}%
1053 \usebibmacro{author/translator+others}%
1054 \setunit{\printdelim{nametitledelim}}\newblock
1055 \ifnameundef{author}{}\usebibmacro{title}%
1056 \newunit}%
1057 \printlist{language}%
1058 \newunit\newblock
1059 \usebibmacro{byauthor}%
1060 \newunit\newblock
1061 \ifboolexpr{
1062 test {\iffieldundef{maintitle}}
1063 and
1064 test {\iffieldundef{booktitle}}
1065 }{}{%
1066 \ifnameundef{editor}{}\usebibmacro{in:}}%
1067 \usebibmacro{bookeditor}%
1068 \newunit\newblock
1069 \usebibmacro{maintitle+booktitle}}%
1070 \usebibmacro{byeditor+others}%
1071 \newunit\newblock
1072 \printfield{edition}%
1073 \newunit
1074 \iffieldundef{maintitle}
1075 {\printfield{volume}%
1076 \printfield{part}}
1077 {}%
1078 \newunit
1079 \ifnameundef{author}{\usebibmacro{title}%
1080 \newunit}{}%
1081 \printfield{volumes}%
1082 \newunit\newblock
1083 \usebibmacro{series+number}%
1084 \newunit\newblock
1085 \printfield{note}%
1086 \newunit\newblock
1087 \usebibmacro{publisher+location+date}%
1088 \newunit\newblock
1089 \usebibmacro{chapter+pages}%
1090 \newunit\newblock
1091 \iftoggle{bbx:isbn}
1092 {\printfield{isbn}}
1093 {}%

```

```

1094 \newunit\newblock
1095 \usebibmacro{doi+eprint+url}%
1096 \newunit\newblock
1097 \usebibmacro{addendum+pubstate}%
1098 \setunit{\bibpagerefpunct}\newblock
1099 \usebibmacro{pageref}%
1100 \newunit\newblock
1101 \iftoggle{bbx:related}
1102   {\usebibmacro{related:init}%
1103   \usebibmacro{related}}
1104   {}%
1105 \usebibmacro{finentry}}

```

## 7.15 Datasets

We patch the new datasets driver from biblatex v3.13 so it can emulate what we had previously done with the online driver.

```

1107 \xpatchbibdriver{dataset}{%
1108   \printlist{organization}%
1109   \newunit
1110   \usebibmacro{publisher+location+date}%
1111 }{%
1112   \usebibmacro{library}%
1113   \newunit\newblock
1114   \usebibmacro{organization+location+date}%
1115 }{\wlog{WARNING: biblatex-bath failed to patch dataset driver (publisher)}}

```

## 7.16 Online works

Compared with the standard styles, the main difference is that the organization's address is printed.

```

1117 \xpatchbibdriver{online}{%
1118   \printlist{organization}%
1119   \newunit\newblock
1120   \usebibmacro{date}%
1121 }{%
1122   \usebibmacro{library}%
1123   \newunit\newblock
1124   \usebibmacro{organization+location+date}%
1125 }{\wlog{WARNING: biblatex-bath failed to patch online driver (publisher)}}

```

## 7.17 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.

```

1127 \DeclareFieldFormat{forceparens}{( #1 )}
1128 \newbibmacro{series+type+number}{%
1129   \ifboolexpr{
1130     test {\iffieldundef{series}}
1131     and
1132     test {\iffieldundef{type}}
1133     and
1134     test {\iffieldundef{number}}
1135   }{%
1136     \printtext [parens]{%
1137       \printfield{series}%
1138       \IfStrEqCase{\thefield{series}}{%
1139         {C}{\printunit*\addot\space}%
1140         {Cd}{\printunit*\addot\space}}%

```



```

1141     {Cmd}{\printunit*{\adddot\space}}%
1142     {Cmd}{\printunit*{\adddot\space}}%
1143     {Cm}{\printunit*{\adddot\space}}%
1144   }-%
1145     \setunit*{\addcomma\space}}%
1146     \printfield{type}%
1147     \setunit*{\addspace}%
1148     \IfBeginWith{\thefield{series}}{HL}{%
1149       \printfield[forceparens]{number}%
1150     }-%
1151     \printfield{number}%
1152   }}}
1153
1154 \DeclareBibliographyDriver{report}{%
1155   \usebibmacro{bibindex}%
1156   \usebibmacro{begentry}%
1157   \usebibmacro{author}%
1158   \setunit{\printdelim{nametitledelim}}\newblock
1159   \usebibmacro{title}%
1160   \newunit
1161   \printlist{language}%
1162   \newunit\newblock
1163   \usebibmacro{byauthor}%
1164   \newunit\newblock
1165   \usebibmacro{series+type+number}%
1166   \newunit\newblock
1167   \printfield{note}%
1168   \newunit\newblock
1169   \usebibmacro{institution+location+date}%
1170   \newunit\newblock
1171   \usebibmacro{chapter+pages}%
1172   \newunit
1173   \printfield{pagetotal}%
1174   \newunit\newblock
1175   \iftoggle{bbx:isbn}
1176     {\printfield{isrn}}
1177     {}%
1178   \newunit\newblock
1179   \usebibmacro{library}%
1180   \newunit\newblock
1181   \usebibmacro{doi+eprint+url}%
1182   \newunit\newblock
1183   \usebibmacro{addendum+pubstate}%
1184   \setunit{\bibpagerefpunct}\newblock
1185   \usebibmacro{pageref}%
1186   \newunit\newblock
1187   \iftoggle{bbx:related}
1188     {\usebibmacro{related:init}}%
1189     {\usebibmacro{related}}
1190   {}%
1191   \usebibmacro{finentry}}

```

## 7.18 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.)

```

1193 \newbibmacro{manual:series+type+number}{%
1194   \iffieldundef{series}{%
1195     \newunit\newblock
1196     \printfield{type}%

```

```

1197   \setunit{\addspace}%
1198   \printfield{number}%
1199 }{%
1200   \setunit{\addcomma\space}%
1201   \usebibmacro{series+number}%
1202   \newunit\newblock
1203   \printfield{type}%
1204 }%
1205 }
1206 \xpatchbibdriver{manual}{%
1207   \newunit\newblock
1208   \usebibmacro{series+number}%
1209   \newunit\newblock
1210   \printfield{type}%
1211 }{%
1212   \usebibmacro{manual:series+type+number}%
1213 }{}{\wlog{WARNING: biblatex-bath failed to patch manual driver}}
1214 \xpatchbibdriver{manual}{%
1215   \printlist{organization}%
1216   \newunit
1217   \usebibmacro{publisher+location+date}%
1218 }{%
1219   \usebibmacro{organization+location+date}%
1220 }{}{\wlog{WARNING: biblatex-bath failed to patch manual driver}}

```

## 7.19 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.

```

1222 \DeclareStyleSourcemap{%
1223   \maps[datatype=bibtex]{%
1224     \map[overwrite=false]{
1225       \pertype{standard}
1226       \step[notfield=author,
1227         fieldsource=number,
1228         final]
1229       \step[fieldset=sortkey,
1230         origfieldval]
1231     }
1232     \map[overwrite=false]{
1233       \pertype{standard}
1234       \step[notfield=author,
1235         fieldsource=number,
1236         fieldtarget=label]
1237     }
1238   }}
1239 \ExecuteBibliographyOptions[standard]{useeditor=false}

```

## 7.20 Audiovisual materials

The audio and video drivers are based on `misc`.

```

1241 \newbibmacro*{type+online}{%
1242   \printfield{type}%
1243   \ifboolexpr{
1244     test {\iffieldundef{type}}
1245     or
1246     test {\nottoggle{bbx:labelistitle}}

```

```

1247 }{}{%
1248   \setunit{\addspace}%
1249   \usebibmacro{isonline}}}}
1250 \DeclareBibliographyDriver{audio}{%
1251   \usebibmacro{bibindex}%
1252   \usebibmacro{begentry}%
1253   \usebibmacro{author/editor+others/translator+others}%
1254   \setunit{\printdelim{nametitledelim}}\newblock
1255   \usebibmacro{title}%
1256   \newunit
1257   \printlist{language}%
1258   \newunit\newblock
1259   \usebibmacro{type+online}%
1260   \newunit\newblock
1261   \usebibmacro{byauthor}[given-family:full]%
1262   \newunit\newblock
1263   \usebibmacro{byeditor+others}[given-family:full]%
1264   \newunit\newblock
1265   \printfield{howpublished}%
1266   \newunit\newblock
1267   \printfield{note}%
1268   \newunit\newblock
1269   \usebibmacro{publisher+location+date}%
1270   \newunit\newblock
1271   \usebibmacro{doi+eprint+url}%
1272   \newunit\newblock
1273   \usebibmacro{addendum+pubstate}%
1274   \setunit{\bibpagerefpunct}\newblock
1275   \usebibmacro{pageref}%
1276   \newunit\newblock
1277   \iftoggle{bbx:related}
1278     {\usebibmacro{related:init}%
1279     \usebibmacro{related}}
1280   {}%
1281   \usebibmacro{finentry}}
1282 \DeclareBibliographyAlias{movie}{audio}
1283 \DeclareBibliographyAlias{music}{audio}
1284 \DeclareBibliographyAlias{video}{audio}

```

## 7.21 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).

```

1285 \newtoggle{bbx:eu-oj}
1286 \newbibmacro*{eucheck}{%
1287   \IfBeginWith{\thefield{journaltitle}}{OJ}{%
1288     \toggletrue{bbx:eu-oj}%
1289   }}
1290 \DeclareFieldFormat[jurisdiction,legislation]{title}{%
1291   \ifboolexpr{
1292     togl{bbx:eu-oj}
1293     and
1294     not test {\iffieldequalstr{type}{Commission Decision}}
1295   }{#1}{\mkbibemph{#1}}}

```

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.

```

1297 \newtoggle{bbx:scotstyle}
1298 \DeclareEntryOption[boolean]{scottish-style}[true]{%
1299   \settoggle{bbx:scotstyle}{#1}}
1300 \newtoggle{bbx:year-essential}
1301 \DeclareEntryOption[boolean]{year-essential}[true]{%
1302   \settoggle{bbx:year-essential}{#1}}
1303 \DeclareFieldFormat[jurisdiction]{datelabel}{%
1304   \ifboolexpr{
1305     test {\iffieldundef{volume}}
1306     or
1307     togl {bbx:year-essential}
1308     or
1309     togl {bbx:eu-oj}
1310     or
1311     test {\iffieldequalstr{journaltitle}{ECR}}
1312   }{%
1313     \ifboolexpr{
1314       test {\ifkeyword{sc}}
1315       or
1316       togl {bbx:scotstyle}
1317     }{%
1318       #1%
1319     }{%
1320       \mkbibbrackets{#1}}%
1321   }{%
1322     \mkbibparens{#1}}}}

```

A case number should normally go after the title and before the year, but Version 1 of this style used `number` with `type` at the end of the reference. (It relied on the case number being given in the `issue` field.) To maintain backwards compatibility, we rely on a ‘trick’ that case numbers are usually only present in EU cases where a page number is always provided. (And 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.

```

1324 \DeclareFieldFormat[jurisdiction]{issue}{\mkbibparens{#1}}
1325 \newbibmacro*{casenumber}{%
1326   \iffieldundef{issue}{%
1327     \ifboolexpr{
1328       test {\iffieldundef{pages}}
1329       or
1330       test {\iffieldundef{number}}
1331     }{}{%
1332       \iffieldundef{userb}{%
1333         \printfield[parens]{number}%
1334         \clearfield{number}%
1335       }{%
1336         \printfield[parens]{userb}%
1337         \setunit{\addspace}%
1338         \printfield{type}%
1339         \setunit*{\addspace}%
1340         \printfield{number}%
1341         \clearfield{type}\clearfield{number}}}%
1342   }{%
1343     \printfield{issue}}}}

```

For ease, if ‘Commission’ is given as the `institution`, this is deleted but the `type` is set to ‘Commission Decision’.

```

1344 \DeclareStyleSourceMap{
1345   \maps[datatype=bibtex]{
1346     \map[overwrite=false]{
1347       \step[match=\regex{Commission}, fieldsource=institution, final]

```

```

1348     \step[fieldset=type, fieldvalue={Commission Decision}]
1349     \step[fieldset=institution, null]
1350   }
1351   \map[overwrite=false]{
1352     \step[fieldsource=casenumber, final]
1353     \step[notfield=number, fieldsource=casenumber, fieldtarget=number]
1354     \step[fieldsource=casenumber, fieldtarget=userb]
1355   }
1356 }
1357 }

```

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 three proper ones using `journaltitle`, for UK journals, ECR and OJ respectively. The `reporter` macro chooses between them (again, this is a little messy for backwards compatibility).

```

1359 \newbibmacro{jurisdiction:type+number}{%
1360   \usebibmacro{journal}%
1361   \setunit*{\addspace}%
1362   \ifboolexpr{
1363     test {\iffieldundef{type}}
1364     and
1365     test {\iffieldundef{number}}
1366   }{}{%
1367     \printfield{volume}%
1368     \setunit*{\addperiod\space}%
1369     \printfield{type}%
1370     \setunit*{\addspace}%
1371     \printfield{number}}%
1372   \DeclareFieldFormat[jurisdiction]{journaltitle}{%
1373     \iftoggle{bbx:eu-oj}{\mkbibemph{#1}}{#1}}
1374   \DeclareFieldFormat[jurisdiction,legislation]{volume}{#1}
1375   \DeclareFieldFormat[jurisdiction,legislation]{pages}{#1}
1376   \newbibmacro{journal+volume+pages}{%
1377     \printfield{volume}%
1378     \setunit{\addperiod\space}%
1379     \printfield{journaltitle}%
1380     \setunit*{\addspace}%
1381     \printfield{pages}%
1382   }
1383   \newbibmacro{eu:journal+volume+pages}{%
1384     \printfield{journaltitle}%
1385     \setunit*{\addspace}%
1386     \printfield{volume}%
1387     \setunit*{\printtext{--\allowbreak}}%
1388     \printfield{pages}%
1389   }
1390   \newbibmacro{eu:journal+series+volume+pages}{%
1391     \printfield{journaltitle}%
1392     \setunit*{\addspace}%
1393     \printfield{series}%
1394     \clearfield{series}%
1395     \printfield{volume}%
1396     \setunit*{\printtext{/}}%
1397     \printfield{pages}%
1398   }
1399   \newbibmacro{reporter}{%
1400     \iffieldundef{journaltitle}{%
1401       \usebibmacro{jurisdiction:type+number}%
1402     }{%
1403       \iffieldequalstr{journaltitle}{ECR}{%
1404         \usebibmacro{eu:journal+volume+pages}%
1405       }%

```

```

1406     \iffieldequalstr{journaltitle}{OJ}{%
1407         \iffieldundef{series}{%
1408             \usebibmacro{jurisdiction:type+number}%
1409         }{%
1410             \usebibmacro{eu:journal+series+volume+pages}%
1411         }%
1412     }{%
1413         \usebibmacro{journal+volume+pages}%
1414     }}}}

```

It's not a feature of Harvard (Bath), but OSCOLA puts the institution in parentheses at the end.

```

1416 \DeclareFieldFormat{jurisdiction}{institution}{\mkbibparens{#1}}
1417
1418 \DeclareBibliographyDriver{jurisdiction}{%
1419     \savebibmacro{title}%
1420     \xapptobibmacro{labeltitle}{%
1421         \setunit*{\addspace}%
1422         \usebibmacro{casenumber}%
1423     }{}{}%
1424     \usebibmacro{bibindex}%
1425     \usebibmacro{begentry}%
1426     \usebibmacro{eucheck}%
1427     \usebibmacro{author}%
1428     \setunit{\printdelim{nametitledelim}}\newblock
1429     \usebibmacro{title}%
1430     \newunit
1431     \printlist{language}%
1432     \newunit\newblock
1433     \usebibmacro{byauthor}%
1434     \newunit\newblock
1435     \printfield{note}%
1436     \setunit{\addspace}%
1437     \usebibmacro{reporter}%
1438     \newunit
1439     \printfield{pagetotal}%
1440     \newunit\newblock
1441     \printfield{institution}%
1442     \newunit\newblock
1443     \iftoggle{bbx:isbn}
1444         {\printfield{isrn}}
1445         {}%
1446     \newunit\newblock
1447     \usebibmacro{doi+eprint+url}%
1448     \newunit\newblock
1449     \usebibmacro{addendum+pubstate}%
1450     \setunit{\bibpagerefpunct}\newblock
1451     \usebibmacro{pageref}%
1452     \newunit\newblock
1453     \iftoggle{bbx:related}
1454         {\usebibmacro{related:init}%
1455          \usebibmacro{related}}
1456         {}%
1457     \usebibmacro{finentry}%
1458     \restorebibmacro{title}}

```

## 7.22 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.

```

1460 \DeclareFieldFormat[legislation]{datelabel}{%
1461   \iftoggle{bbx:eu-oj}{%
1462     \mkbibbrackets{#1}%
1463   }{#1}}
1464 \DeclareFieldFormat[legislation]{labeldate}{%
1465   \iftoggle{bbx:labelistitle}{\printtext [title]{#1}}{#1}}
1466 \DeclareFieldFormat[legislation]{chapter}{\biblcsstring{legalchapter}#1}
1467 \newbibmacro*{journal+series+volume+number+chapter+pages}{%
1468   \iftoggle{bbx:eu-oj}{%
1469     \setunit{\addspace}%
1470     \usebibmacro{eu:journal+series+volume+pages}%
1471   }{%
1472     \iffieldequalstr{entrysubtype}{secondary}{%
1473       \setunit{\addcomma\space}%
1474       \printfield{number}%
1475       \clearfield{number}%
1476       \printunit{\addcomma\space}%
1477     }{%
1478       \ifboolexpr{
1479         test {\iffieldundef{series}}
1480         and
1481         test {\iffieldundef{type}}
1482       }{%
1483         \iffieldundef{number}{%
1484           \setunit{\addcomma\space}%
1485           \printfield{chapter}%
1486         }{%
1487           \setunit{\addspace}%
1488           \printtext [parens]{%
1489             \printfield{number}%
1490             \setunit*{\addcomma\space}%
1491             \printfield{chapter}}}%
1492         }{%
1493           \iffieldundef{chapter}{}\setunit{\addspace}}%
1494         \printtext [parens]{%
1495           \printfield{series}%
1496           \setunit{\addcomma\space}%
1497           \printfield{type}%
1498           \setunit*{\addspace}%
1499           \printfield{number}%
1500           \setunit*{\addcomma\space}%
1501           \printfield{chapter}}}}}}%
1502
1503 \DeclareBibliographyDriver{legislation}{%
1504   \usebibmacro{bibindex}%
1505   \usebibmacro{begentry}%
1506   \usebibmacro{eucheck}%
1507   \usebibmacro{author}%
1508   \setunit{\printdelim{nametitledelim}}\newblock
1509   \usebibmacro{title}%
1510   \newunit
1511   \printlist{language}%
1512   \newunit\newblock
1513   \usebibmacro{byauthor}%
1514   \newunit\newblock
1515   \usebibmacro{journal+series+volume+number+chapter+pages}
1516   \newunit\newblock
1517   \printfield{note}%
1518   \newunit\newblock
1519   \usebibmacro{institution+location+date}%
1520   \newunit\newblock
1521   \printfield{pagetotal}%
1522   \newunit\newblock

```

```

1523 \iftoggle{bbx:isbn}
1524   {\printfield{isrn}}
1525   {}%
1526 \newunit\newblock
1527 \usebibmacro{doi+eprint+url}%
1528 \newunit\newblock
1529 \usebibmacro{addendum+pubstate}%
1530 \setunit{\bibpagerefpunct}\newblock
1531 \usebibmacro{pageref}%
1532 \newunit\newblock
1533 \iftoggle{bbx:related}
1534   {\usebibmacro{related:init}%
1535   \usebibmacro{related}}
1536   {}%
1537 \usebibmacro{finentry}}

```

## 7.23 Letters

This 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.

```

1539 \DeclareFieldFormat[letter]{title}{\iffielddundef{journaltitle}{\emph{#1}}{#1}}
1540 \ExecuteBibliographyOptions[letter]{mergedate=maximum}
1541 \DeclareBibliographyDriver{letter}{%
1542   \usebibmacro{bibindex}%
1543   \usebibmacro{begentry}%
1544   \usebibmacro{author/translator+others}%
1545   \setunit{\printdelim{nametitledelim}}\newblock
1546   \usebibmacro{title}%
1547   \newunit
1548   \printlist{language}%
1549   \newunit\newblock
1550   \usebibmacro{byauthor}%
1551   \newunit\newblock
1552   \usebibmacro{bytranslator+others}%
1553   \newunit\newblock
1554   \usebibmacro{journal+issuetitle}%
1555   \newunit\newblock
1556   \printfield{howpublished}%
1557   \newunit
1558   \printfield{note}%
1559   \newunit\newblock
1560   \usebibmacro{doi+eprint+url}%
1561   \newunit\newblock
1562   \usebibmacro{addendum+pubstate}%
1563   \setunit{\bibpagerefpunct}\newblock
1564   \usebibmacro{pageref}%
1565   \newunit\newblock
1566   \iftoggle{bbx:related}
1567     {\usebibmacro{related:init}%
1568     \usebibmacro{related}}
1569     {}%
1570   \usebibmacro{finentry}%
1571 }

```

## 7.24 Software

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

```

1573 \DeclareFieldFormat[software]{type}{\mkbibbrackets{#1}}
1574 \DeclareBibliographyDriver{software}{%
1575   \usebibmacro{bibindex}%

```



```

1576 \usebibmacro{begentry}%
1577 \usebibmacro{author/editor+others/translator+others}%
1578 \setunit{\printdelim{nametitledelim}}\newblock
1579 \usebibmacro{title}%
1580 \setunit{\addspace}
1581 \printfield{type}%
1582 \newunit
1583 \printlist{language}%
1584 \newunit\newblock
1585 \usebibmacro{byauthor}%
1586 \newunit\newblock
1587 \usebibmacro{byeditor+others}%
1588 \newunit\newblock
1589 \printfield{howpublished}%
1590 \newunit\newblock
1591 \printfield{note}%
1592 \newunit\newblock
1593 \usebibmacro{organization+location+date}%
1594 \newunit\newblock
1595 \usebibmacro{doi+eprint+url}%
1596 \newunit\newblock
1597 \usebibmacro{addendum+pubstate}%
1598 \setunit{\bibpagerefpunct}\newblock
1599 \usebibmacro{pageref}%
1600 \newunit\newblock
1601 \iftoggle{bbx:related}
1602   {\usebibmacro{related:init}%
1603    \usebibmacro{related}}
1604   {}%
1605 \usebibmacro{finentry}}

```

## 7.25 Images

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

```

1607 \DeclareFieldFormat[image]{library}{#1}
1608 \DeclareBibliographyDriver{image}{%
1609   \usebibmacro{bibindex}%
1610   \usebibmacro{begentry}%
1611   \usebibmacro{author/editor+others/translator+others}%
1612   \setunit{\printdelim{nametitledelim}}\newblock
1613   \usebibmacro{title}%
1614   \newunit
1615   \printlist{language}%
1616   \newunit\newblock
1617   \usebibmacro{byauthor}%
1618   \newunit\newblock
1619   \usebibmacro{byeditor+others}%
1620   \newunit\newblock
1621   \printfield{howpublished}%
1622   \newunit\newblock
1623   \printfield{type}%
1624   \newunit
1625   \printfield{note}%
1626   \newunit\newblock
1627   \usebibmacro{organization+location+date+library}%
1628   \newunit\newblock
1629   \usebibmacro{doi+eprint+url}%
1630   \newunit\newblock
1631   \usebibmacro{addendum+pubstate}%
1632   \setunit{\bibpagerefpunct}\newblock
1633   \usebibmacro{pageref}%

```

```

1634 \newunit\newblock
1635 \iftoggle{bbx:related}
1636   {\usebibmacro{related:init}}%
1637   \usebibmacro{related}}
1638   {}%
1639 \usebibmacro{finentry}}

```

The following code works slightly differently

```

1640 \newbibmacro*{organization+location+date+library}{%
1641   \ifboolexpr{
1642     test {\iffieldundef{library}}
1643     or
1644     not test {\iflistundef{publisher}}
1645   }{%
1646     \printlist{location}%
1647     \setunit*{\addcolon\space}%
1648     \clearfield{location}%
1649   }{}%
1650   \iflistundef{publisher}{%
1651     \printlist{organization}%
1652   }{%
1653     \printlist{publisher}%
1654   }%
1655   \setunit{\addcomma\space}%
1656   \usebibmacro{date}%
1657   \newunit
1658   \iffieldundef{library}{%
1659     \iffieldundef{institution}{}%
1660     \bibsentence
1661     \bibstring{at}%
1662     \setunit{\addcolon\space}%
1663     \printlist{location}%
1664     \setunit*{\addperiod\space}%
1665     \printfield{institution}%
1666   }%
1667   }{%
1668     \bibsentence
1669     \bibstring{at}%
1670     \setunit{\addcolon\space}%
1671     \printlist{location}%
1672     \setunit*{\addperiod\space}%
1673     \printfield{library}%
1674   }%
1675 }

```

## 7.26 Unpublished

This 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.

```

1677 \newbibmacro*{isunpublished}{%
1678   \bibstring{unpublished}%
1679 }
1680 \DeclareBibliographyDriver{unpublished}{%
1681   \usebibmacro{bibindex}%
1682   \usebibmacro{begentry}%
1683   \usebibmacro{author}%
1684   \setunit{\printdelim{nametitledelim}}\newblock
1685   \usebibmacro{title}%

```

```

1686 \newunit
1687 \printlist{language}%
1688 \newunit\newblock
1689 \usebibmacro{byauthor}%
1690 \newunit\newblock
1691 \ifnameundef{editor}{\usebibmacro{in:}}%
1692 \usebibmacro{bookeditor}%
1693 \newunit\newblock
1694 \usebibmacro{maintitle+booktitle}%
1695 \usebibmacro{byeditor+others}%
1696 \newunit\newblock
1697 \printfield{howpublished}%
1698 \newunit\newblock
1699 \printfield{type}%
1700 \newunit\newblock
1701 \usebibmacro{event+venue+date}%
1702 \newunit\newblock
1703 \printfield{note}%
1704 \newunit\newblock
1705 \usebibmacro{location+date}%
1706 \newunit\newblock
1707 \usebibmacro{isunpublished}%
1708 \newunit\newblock
1709 \iftoggle{bbx:url}
1710   {\usebibmacro{url+urldate}}
1711   {}%
1712 \newunit\newblock
1713 \usebibmacro{addendum+pubstate}%
1714 \setunit{\bibpagerefpunct}\newblock
1715 \usebibmacro{pageref}%
1716 \newunit\newblock
1717 \iftoggle{bbx:related}
1718   {\usebibmacro{related:init}}%
1719   {\usebibmacro{related}}%
1720   {}%
1721 \usebibmacro{finentry}}

```

## 7.27 Aliases

We define some handy semantic aliases.

```

1723 \DeclareBibliographyAlias{standard}{manual}

```

## 7.28 Sorting

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

```

1725 \DeclareStyleSourcemap{%
1726   \maps[datatype=bibtex]{%
1727     \map{%
1728       \pertype{inreference}
1729       \step[notfield=author, final]
1730       \step[fieldsource=booktitle]
1731       \step[fieldset=sorttitle, origfieldval]
1732     }%
1733   }%
1734 }%

```

## 8 Implementation: data model

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

## 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\adddot}}
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\adddot\ appl\adddot}}
41 ,patreqde       = {{German patent application}{German pat\adddot\ appl\adddot}}
42 ,patreqeu       = {{European patent application}{European pat\adddot\ appl\adddot}}
43 ,patreqfr       = {{French patent application}{French pat\adddot\ appl\adddot}}
44 ,patrequk       = {{British patent application}{British pat\adddot\ appl\adddot}}
45 ,patrequs       = {{U.S\addotsspace patent application}{U.S\addotsspace pat\adddot\
  appl\adddot}}
```

These are the new strings we define in this style.

```
46 ,online         = {{Online}{Online}}
47 ,hours          = {{hours}{hrs\adddot}}
48 ,at             = {{at}{at}}
49 ,unpublished    = {{unpublished}{unpublished}}
50 ,legalchapter   = {{chapter}{c\adddot}}
51 ,director       = {{director}{dir\adddot}}
52 ,directors      = {{directors}{dir\adddot}}
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\adddot}}
61 ,conductors     = {{conductors}{cond\adddot}}
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   {\dateeraprintpre{#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   \printtext[bibhyperref]{\printfield[citetitle]{labeltitle}}%
```

```
36 \toggletrue{bbx:labelistitle}%  
37 }{}{\wlog{WARNING: biblatex-bath failed to patch cite:label}}
```