



## RESEARCH ARTICLE

# Philosophy of Science Association: L<sup>A</sup>T<sub>E</sub>X Guidelines for authors

First Author<sup>1,2</sup>, Second Author<sup>3</sup> and Third Author<sup>4</sup>

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## Abstract

This guide is for authors who are preparing papers for the *Philosophy of Science Association* journal using the L<sup>A</sup>T<sub>E</sub>X document preparation system and the CUP PSA style file.

## 1. Introduction

The layout design for the *Philosophy of Science Association* journal has been implemented as a L<sup>A</sup>T<sub>E</sub>X style file.<sup>1</sup> The PSA style file is based on the ARTICLE style as discussed in the L<sup>A</sup>T<sub>E</sub>X manual. Commands which differ from the standard L<sup>A</sup>T<sub>E</sub>X interface, or which are provided in addition to the standard interface, are explained in this guide. This guide is not a substitute for the L<sup>A</sup>T<sub>E</sub>X manual itself.

### 1.1. Introduction to L<sup>A</sup>T<sub>E</sub>X

The L<sup>A</sup>T<sub>E</sub>X document preparation system is a special version of the TeX typesetting program. L<sup>A</sup>T<sub>E</sub>X adds to TeX a collection of commands which simplify typesetting by allowing the author to concentrate on the logical structure of the document rather than its visual layout.

L<sup>A</sup>T<sub>E</sub>X provides a consistent and comprehensive document preparation interface. There are simple-to-use commands for generating a table of contents, lists of figures and/or tables, and indexes. L<sup>A</sup>T<sub>E</sub>X can automatically number list entries, equations, figures, tables, and footnotes, as well as parts, chapters, sections and subsections. Using this numbering system, bibliographic citations, page references and cross references to any other numbered entity (*e.g.* chapter, section, equation, figure, list entry) are quite straightforward.

### 1.2. The PSA document class

The use of document class allows a simple change of style (or style option) to transform the appearance of your document. The CUP PSA class file preserves the standard L<sup>A</sup>T<sub>E</sub>X interface such that any document which can be produced using the standard L<sup>A</sup>T<sub>E</sub>X

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<sup>1</sup>To know more information about L<sup>A</sup>T<sub>E</sub>X and its packages, try <https://ctan.org/?lang=en>

ARTICLE style can also be produced with the PSA style. However, the fonts (sizes) and measure of text is slightly different from that for ARTICLE, therefore line breaks will change and it is possible that equations may need re-setting.

## 2. Additional facilities

In addition to all the standard L<sup>A</sup>T<sub>E</sub>X design elements, the PSA style includes the following feature:

- Extended commands for specifying a short version of the title and author(s) for the running headlines.

Once you have used this additional facility in your document, do not process it with a standard L<sup>A</sup>T<sub>E</sub>X style file.

### 2.1. Titles authors' names and affiliation

In the PSA style, the title of the article and the author's name (or authors' names) are used both at the beginning of the article for the main title and throughout the article as running headlines at the top of every page. The title is used on odd-numbered pages (rectos) and the author's name appears on even-numbered pages (versos). Although the main heading can run to several lines of text, the running head line must be a single line.

Moreover, the main heading can also incorporate new line commands (*e.g.* `\\`) but these are not acceptable in a running headline. To enable you to specify an alternative short title and author's name, the standard `\righttitle` and `\lefttitle` commands have been used to print the running headline. `\email` command should be used inside the affiliation as shown below.

```
\lefttitle{LaTeX\ Supplement}
\righttitle{Philosophy of Science Association}
  \title{The full title which can be as long
    as necessary}
\author{First Author$^{1,2}$, Second Author$^3$
    and Third Author$^4$}
\affil{$^{1}$First affiliation, $^{2}$Second
    affiliation, $^{3}$Third affiliation,
    $^{4}$Fourth affiliation\\
    $^{\ast}$Corresponding author: Author Name;
    \email{auname@org}}
```

### 2.2. Abstract

The PSA style provides for an abstract which is produced by the following commands

```
\begin{abstract} ... \end{abstract}
```

### 2.3. Keywords

The PSA style provides for an keywords which is produced by the following commands

```
\begin{keywords} ... \begin{keywords}
```

## 2.4. Lists

The PSA style provides the three standard list environments.

- Bulleted lists, created using the `itemize` environment.
- Numbered lists, created using the `enumerate` environment.
- Labelled lists, created using the `description` environment.

## 2.5. Footnotes

The PSA journal style uses superior numbers for footnote references.<sup>2</sup>

## 3. Some guidelines for using standard facilities

The following notes may help you achieve the best effects with the PSA style file.

### 3.1. Sections

LaTeX provides five levels of section headings and they are all defined in the PSA style file:

- `\section.`
- `\subsection.`
- `\subsubsection.`
- `\paragraph.`
- `\subparagraph.`

Section numbers are given for sections, subsection and subsubsection headings.

### 3.2. Running headlines

As described above, the title of the article and the author's name (or authors' names) are used as running headlines at the top of every page. The title is used on odd-numbered pages (rectos) and the author's name appears on even-numbered pages (versos).

The `\pagestyle` and `\thispagestyle` commands should *not* be used. Similarly, the commands `\markright` and `\markboth` should not be necessary.

### 3.3. Illustrations (or figures)

The PSA style will cope with most positioning of your illustrations and you should not normally use the optional positional qualifiers on the `figure` environment which would override these decisions. Figure captions should be below the figure itself, therefore the `\caption` command should appear after the figure or space left for an illustration.

Figure 1 shows an example onw working with LaTeX code to load art files. `\includegraphics` commnad is to load art files `scale` option used in `\includegraphics` is to reduce the art. EPS format will be compiled using LaTeX.

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<sup>2</sup>This shows how a footnote is typeset.

**Figure 1.** An example figure with space for artwork.

PNG, PDF and JPG format art files are loaded in the same command but the TeX file should be compiled using PDFLaTeX:

```
\begin{figure}
  \includegraphics[scale=.4]{sample.eps}
  \caption{An example figure with space for artwork.}
  \label{sample-figure}
\end{figure}
```

The vertical depth should correspond roughly to the artwork you will submit; it will be adjusted to fit the final artwork exactly.

### 3.4. Creating new theorem-like environments

You can create your own environments in LaTeX, and although you may already be familiar with `\newtheorem`, you will not have seen the other two commands explained below.

`\newtheorem` is a standard command used for creating new theorem-like environments, such as theorems, corollaries, lemmas, conjectures and propositions, with the body of the text (automatically) in italic.

## 4. List of packages used in the template

Below are the list of packages that are already used in template, so we don't need to copy these packages again in the TeX file.

- `\usepackage{etex}`
- `\usepackage{amsthm}`
- `\usepackage{amssymb}`
- `\usepackage{soul}`
- `\usepackage{calc}`
- `\usepackage{color}`
- `\usepackage{mathptmx}`
- `\usepackage{colortbl}`
- `\usepackage[boxed]{algorithm2e}`
- `\usepackage{epstopdf}`
- `\usepackage{arydshln}`

- `\usepackage{booktabs}`
- `\usepackage{natbib}`
- `\usepackage{hyperref}`
- `\usepackage{breakurl}`
- `\usepackage{bookmark}`
- `\usepackage{etoolbox}`
- `\usepackage{graphicx}`

## 5. Mathematics

The PSA class file will centre displayed mathematics, and will insert the correct space above and below if standard LaTeX commands are used; for example use `\[ ... \]` and *not* `$$ ... $$`. Do not leave blank lines above and below displayed equations unless a new paragraph is really intended.

`amsmath.sty` is common package to handle various type math equations was used in template. The `amsmath` descriptions are available in the document can be find in the web link <https://ctan.org/pkg/amsmath?lang=en>

### 5.1. Numbering of equations

The `subequations` and `subeqnarray` environments have been incorporated into the PSA class file (see Section 5.1.1 regarding the `subequations` environment). Using these two environments, you can number your equations (1a), (1b) etc. automatically. For example, you can typeset

$$a_1 \equiv (2\Omega M^2/x)^{\textstyle\frac{1}{4}} y^{\textstyle\frac{1}{2}} \quad (1a)$$

and

$$a_2 \equiv (x/2\Omega)^{\textstyle\frac{1}{2}} k_y/M. \quad (1b)$$

by using the `subequations` environment as follows:

```
\begin{subequations}
\begin{equation}
a_1 \equiv (2\Omega M^2/x)^{\textstyle\frac{1}{4}} y^{\textstyle\frac{1}{2}} \label{a1}
\end{equation}
and
\begin{equation}
a_2 \equiv (x/2\Omega)^{\textstyle\frac{1}{2}} k_y/M. \label{a2}
\end{equation}
\end{subequations}
```

#### 5.1.1. The `subequations` environment and the `AMSTEX` package

The `amstex` (and the `amsmath`) packages also define a `subequations` environment. The environment in `PSA.cls` is used by default, as the environments in the `AMS` packages don't produce the correct style of output.

Note that the `subequations` environment from the `amstex` package takes an argument – you should use an ‘a’ to give `\alph` style subequations. e.g.

```
\begin{subequations}{a} ... \end{subequations}
```

## 5.2. Bibliography

As with standard L<sup>A</sup>T<sub>E</sub>X, there are two ways of producing a bibliography; either by compiling a list of references by hand (using a `thebibliography` environment), or by using BibT<sub>E</sub>X with a suitable bibliographic database with the `bibliography` style provided with the `PSAguide.tex` like `\bibliographystyle{PSAl like}`. The `PSAl like.bst` will produce the bibliography which is similar to PSA style but not exactly. If any modification has to be made with `PSAl like.bst` can be adjusted during manuscript preparation but the updated `bst` file should be given with source files. However, contributors are encouraged to format their list of references style outlined in section 5.2.2 below.

### 5.2.1. References in the text

References in the text are given by author and date. Whichever method is used to produce the bibliography, the references in the text are done in the same way. Each bibliographical entry has a key, which is assigned by the author and used to refer to that entry in the text. There is one form of citation – `\cite{key}` – to produce the author and date. Thus, Arntzenius and Dorr (2012) is produced by

```
\cite{Arntzenius2012}.
```

In NWS, for references `natbib.sty` is used. `natbib.sty` is common package to handle various reference and its cross citations. There different type of cross citation such as `\citep`, `\citet`, `\citeyear` etc. of the `natbib` descriptions are available in the document can be find in the web link <https://ctan.org/pkg/natbib?lang=en>

*Examples:* Sample of basic cross citations examples from `natbib` (Arntzenius and Dorr, 2012) and Arntzenius and Dorr (2012). Similarly other command can be utilized from referring the description from <https://ctan.org/pkg/natbib?lang=en>

If citations have to sort then use the class option “`citesort`”.

### 5.2.2. List of references

The following listing shows some references prepared in the style of the journal.

```
\begin{thebibliography}{}
\bibitem[\protect\citeauthoryear{Aghion, Blundell, Griffith,
Howitt, and Prantl}{Aghion et~al.}{2009}]
{AghiBlunGrifHowiPran09}
Aghion, P., R.~Blundell, R.~Griffith, P.~Howitt, and S.~Prantl
(2009). The effects of entry on incumbent innovation and
productivity. {\em The Review of Economics and Statistics}
{\em 91}(1), 20--32.
\bibitem[\protect\citeauthoryear{Aghion and Howitt}{Aghion and
```

```

Howitt}{1998}}{Arntzenius2012}
Aghion, P. and P.~Howitt (1998). {\em Endogenous Growth Theory}.
MIT Press, Cambridge, MA.
\bibitem[\protect\citeauthoryear{Aghion and Saint-Paul}{Aghion and
Saint-Paul}{1998}]{AghiSain98}
Aghion, P. and G.~Saint-Paul (1998). On the virtue of bad times:
Interaction between productivity growth and economic fluctuations.
{\em Macroeconomic Dynamics}~{\em 2}{(3)}, 322--344.
\bibitem[\protect\citeauthoryear{Andrews and Cingano}{Andrews and
Cingano}{2014}]{AndrCing14}
Andrews, D. and F.~Cingano (2014). Public policy and
resource allocation: evidence from firms in {OECD} countries.
{\em Economic Policy}~{\em 29}{(78)}, 253--296.
\end{thebibliography}

```

This list typesets as shown at the end of this guide. Each entry takes the form

```

\bibitem[\protect\citename{Author(s), }Date]{tag}
  Bibliography entry

```

where Author(s) should be the author names as they are cited in the text, Date is the date to be cited in the text, and tag is the tag that is to be used as an argument for the `\cite{}` command. Bibliography entry should be the material that is to appear in the bibliography, suitably formatted. This rather unwieldy scheme makes up for the lack of an author-date system in LaTeX.

## 6. Notes for Editors

This appendix contains additional information which may be useful to those who are involved with the final production stages of an article. Authors, who are generally not typesetting the final pages in the journal's typeface (Monotype Times), do not need this information.

### 6.1. Catchline and date commands

To be placed in the preamble; for example:

- `\jnlDoiYr{2021}`
- `\doival{10.1017/xxxxx}`
- `\jnlPage{1}{7}`

### 6.2. Editing reference citations

There different type of cross citation such as `\citep`, `\citet`, `\citeyear` etc. of the natbib descriptions are available in the document can be find in the web link <https://ctan.org/pkg/natbib?lang=en>.

Please use the exact natbib command to display reference citations like (Arntzenius and Dorr, 2012) "(Author et al., 1990)" use `\citep{key}` to get the desired output.

## References

- Arntzenius, F. and Dorr, C. (2012) *Calculus as Geometry in Space, Time, and Stuff*. Oxford University Press. <https://doi.org/10.1093/9780199696604>.
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- Field, H. (1980b) *Second Science Without Numbers*. SPrinceton University Press. <https://doi.org/10.1007/s13194-011-0027-5>.
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- Mundy, B. (1987) The metaphysics of quantity. *Philosophical Studies*. 51(1), 29–54. <https://doi.org/10.1007/bf00353961>.
- Perry, Z. R. (2015) Properly Extensive Quantities. *Philosophy of Science*. 82, 833–844. <https://doi.org/10.1086/683323>.