

THE `sylllogism` PACKAGE

release 1.1

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1 Introduction

The `sylllogism` package provides a simple way for neatly typesetting syllogisms and syllogistic-like arguments, composed of two premisses and a conclusion. It is fully configurable, allowing the user to tweak the various distances, line widths, and other options.

2 How to use it

You must set `\usepackage[options]{sylllogism}` before `\begin{document}` command. The available options are described in section §3.

2.1 `\syllog`

The main command provided by the package is `\syllog`, whose syntax is:

```
\syllog[pre-text]{first premiss}{second premiss}{conclusion},
```

in which the optional parameter *pre-text* is the text typeset to the left of the syllogism; *first premiss*, *second premiss* and *conclusion* correspond respectively to the text of the first and second premisses and the conclusion.

For example, the following command

```
\syllog{Every man except Socrates is musician} %  
{Socrates is a man} %  
{Socrates is not a musician},
```

will produce this output:

$$\begin{array}{l} \text{Every man except Socrates is musician} \\ \text{Socrates is a man} \\ \hline \text{Socrates is not a musician} \quad \therefore \end{array}$$

If you choose to use the optional parameter, as in:

```
\syllog[(S1)]{Every man except Socrates is musician} %  
{Socrates is a man} %  
{Socrates is not a musician},
```

you should get the following result:

$$\begin{array}{l} \text{Every man except Socrates is musician} \\ (S1) \quad \text{Socrates is a man} \\ \hline \text{Socrates is not a musician} \quad \therefore \end{array}$$

2.2 `\syllogC`

The package also provides the command `\syllogC` which includes an automatic numeration feature. The syntax for this command is similar to the previous one, but does not take the optional parameter.¹

```
\syllogC{first premiss}{second premiss}{conclusion},
```

For example, the following code

¹The label for `\syllogC` is defined internally through the following instruction: `\newcommand{\syl}{(S\arabic{c:syl})\xspace}`. It may be thus redefined as usual in \LaTeX . For example, to remove the 'S' in the label, use the following: `\renewcommand{\syl}{(\arabic{c:syl})\xspace}`.

	SECOND PREMISS	CONCLUSION
ENGLISH	<i>but</i>	<i>Therefore</i>
SPANISH	<i>pero</i>	<i>Por lo tanto,</i>
LATIN1	<i>sed</i>	<i>Ergo</i>
LATIN1	<i>sed</i>	<i>Igitur</i>

Table 1: Language variants

```
\sylllogC{Every man except Socrates is musician} %
{Socrates is a man} %
{Socrates is not a musician},
```

will produce this output (provided that it has not been called elsewhere before):

$$(S_1) \frac{\begin{array}{l} \text{Every man except Socrates is musician} \\ \text{Socrates is a man} \end{array}}{\text{Socrates is not a musician} \quad \therefore}$$

The counter associated with `\sylllogC` is `\c:syl`, which may be reset or stepped with in the usual ways.

2.3 `\sylllogTA`

The command `\sylllogTA` works almost exactly as `\sylllog`, the only difference being that it adds some text to the second premiss and the conclusion. Its syntax is:

```
\sylllogTA[pre-text]{first premiss}{second premiss}{conclusion},
```

As for today, `sylllogism` supports three languages for this task: English, Spanish and Latin. The default language is English. (The language may be changed through a package option, see §3 below). The added text for each language is shown in Table §1.

For example, the following code:

```
\sylllogTA{Every man except Socrates is musician} %
\{Socrates is a man} %
\{Socrates is not a musician},
```

will be typeset thus:

$$\frac{\begin{array}{l} \text{Every man except Socrates is musician;} \\ \text{but Socrates is a man.} \end{array}}{\text{Therefore Socrates is not a musician.} \quad \therefore}$$

Please note that the text may be defined through several commands provided also by `sylllogism` (see below §4.2).

2.4 `\sylllogTAC`

The command `\sylllogTAC`, which adds an automatic counter to `\sylllogTA`.² Its syntax is:

```
\sylllogTAC{first premiss}{second premiss}{conclusion},
```

3 Package options

The package options for `sylllogism` are four, corresponding the language of the added text (used only with the commands `\sylllogTA` and `\sylllogTAC`):

`english`

`spanish`

`latin1`

`latin2`

The option `english` is the default one. As stated previously, the text content selected by these options may be changed by one or more of several commands provided in the package (see below §4.2).

4 Additional commands

4.1 Length-related commands

`\setpresyl` Command for changing the horizontal space to the right of the syllogism (def=2em).

`\setsylllabel` Command for changing the horizontal space between the label and the syllogism (def=1em).

`\setsylrh` Command for changing the ‘width’ of the rule (def=.5pt).

`\setsylsepa` Command for changing the vertical space before the syllogism (def=\baselineskip).

`\setsylsepb` Command for changing the vertical space after the syllogism (def=\baselineskip).

`\setsylsep` Command for changing the vertical space *both* before *and* after the syllogism to the same value.

²See note 1, above.

4.2 Text-related commands

These commands change the default text used with `\syllogTA` and `\syllogTAC`. The defaults are set by the package options (see above §3).

`\setsylsed` Command for changing the text that begins the second premiss.

`\setsylergo` Command for changing the text that begins the conclusion.

`\setsylpuncca` Command for changing the punctuation after the first premiss (def=;).

`\setsylpunccb` Command for changing the punctuation after the second premiss (def=;).

`\setsylpunccc` Command for changing the punctuation after the conclusion (def=;).

`\setsylergosign` Command for changing the sign that goes after the conclusion text (def=;).

5 Future features

Future features depend on user feedback and requests. However, support for more languages and automatic language selection (through `babel`) is envisaged.

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