# FNPCT

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footnote kerning

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## English documentation

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# 1 License and Requirements

FNPCT is placed under the terms of the LaTeX Project Public License, version 1.3 or later (http://www.latex-project.org/lppl.txt). It has the status "maintained".

FNPCT depends on the l3kernel<sup>1</sup> and xparse which is part of the l3packages<sup>2</sup> bundle.

<sup>&</sup>lt;sup>1</sup> CTAN: l3kernel <sup>2</sup> CTAN: l3packages

#### 2 What's it all about?

#### 2.1 Basics

The FNPCT package basically does two things to footnotes: if footnote marks are followed by a comma or a dot the order of footnote and punctuation mark is reversed and the kerning gets adjusted.

All examples in this documentation use

```
\renewcommand\thempfootnote{\arabic{mpfootnote}}
```

Now, let's see some action:

To ensure that the kerning is set the right way the footnote *must* be placed *before* the dot or the comma. The command can look ahead but not look back. This means if you place the \footnote command after a dot or a comma it is treated as if following a word, i.e. a thin space is inserted: effectively the opposite of the desired behaviour.

The order-switching can be prevented using a package option since not all countries and languages have the same typographic conventions.

▶ punct-after = <u>true</u>/false → when true the punctuation sign will be placed after the footnote.

which like all options can also be set using the setup command.

▶ \setfnpct{<options>} → set up options. Can be used anywhere in the document. Some options can only be set in the preamble, though.

```
\setfnpct{punct-after}
\begin{minipage}{.4\linewidth}
\noindent The three little pigs built their houses
out of straw\footnote{not to be confused with hay},
sticks\footnote{or lumber according to some sources}
and bricks\footnote{probably fired clay bricks}.
\end{minipage}

The three little pigs built their houses
out of straw\frac{1}{3}, sticks\frac{2}{3} and bricks\frac{3}{3}.

\[
\begin{array}{c}
\text{1 not to be confused with hay}
\text{2 or lumber according to some sources}
\end{array}
\]
\[
\text{3 probably fired clay bricks}
\end{array}
```

## 2.2 Temporarily disable switching

One maybe want to put some footnote marks *before* the punctuation and some after, for example because the first one describes a single word but the second one a whole sentence. For this purpose FNPCT adds a \* argument to \footnote and \footnotemark:

- ▶ \footnote\*[<num>]{<footnote text>}  $\rightarrow$  new \* argument added.
- ▶ \footnotemark\*[<num>]  $\rightarrow$  new \* argument added.

This argument temporarily turns off the punctuation/footnote switching.

```
| \begin{minipage}{.4\linewidth}
| \noindent The three little pigs built their houses
| out of straw\footnote*{not to be confused with hay},
| sticks\footnote{or lumber according to some sources}
| and bricks\footnote{probably fired clay bricks}.
| \end{minipage}
| The three little pigs built their houses
| out of straw¹, sticks² and bricks.³
| out to be confused with hay
| or lumber according to some sources
| probably fired clay bricks
```

Please be aware that this package is in an experimental state and there hasn't been extensive testing with other footnote behaviour changing packages!

## 3 Options

All package options are listed below. They all can be set as a package option or with the \setfnpct command. Most of them are for adjusting the kerning.

- ▶ after-dot-space = <dim> → space to be inserted after a dot and before the footnote mark.

  Default = -.06em
- ▶ after-comma-space = <dim> → space to be inserted after a comma and before the footnote mark. Default = -.06em
- $\blacktriangleright$  after-punct-space =  $\langle \text{dim} \rangle \longrightarrow \text{set both spaces}$ .
- ▶ punct-after = <u>true</u>/false → when true the punctuation sign will be placed after the footnote.
- ▶ before-dot-space = <dim> → space to be inserted before a dot and after the footnote mark, i.e. with punct-after = true. Default = -.15em
- ▶ before-comma-space = <dim> → space to be inserted before a comma and after the footnote mark, i.e. with punct-after = true. Default = -.15em
- ▶ before-punct-space =  $\langle dim \rangle \rightarrow set both spaces$ .
- ▶ before-footnote-space = <dim> → space to be inserted between a word and the following footnote mark. Default = .06em
- ▶ multiple = true/false → lets \footnote be equal to \multfootnote
- ▶ mult-fn-delim = <delimiter> → sets the delimiter for the \multfootnote command.
- ▶ mult-fn-sep = <separator> → sets the separator between multiple footnote marks.

Let's take a look at an example with some ridiculous settings:

```
% some ridiculous settings:

\[
\setfnpct\{\text{after-punct-space=2pt,before-footnote-space=2pt\}\)
\[
\text{begin\{minipage\}\{.4\\\linewidth\}\}
\]
\[
\text{noindent The three little pigs built their houses}\]
\[
\text{out of straw\{footnote\{not to be confused with hay\},}\]
\[
\text{sticks\{footnote\{or lumber according to some sources\}\}\]
\[
\text{and bricks\{footnote\{probably fired clay bricks\}.}\]
\[
\text{end\{minipage\}\]
\[
\text{The three little pigs built their houses}\]
\[
\text{out of straw,}^1 \text{ sticks}^2 \text{ and bricks.}^3\]
\[
\text{or lumber according to some sources}\]
\[
\text{probably fired clay bricks}}\]
```

And now the same with switched order:

```
% some ridiculous settings:

\setfnpct{punct-after, before-punct-space=2pt, before-footnote-space=2pt}

begin{minipage}{.4\linewidth}

\noindent The three little pigs built their houses

out of straw\footnote{not to be confused with hay},

sticks\footnote{or lumber according to some sources}

and bricks\footnote{probably fired clay bricks}.

\end{minipage}

The three little pigs built their houses

out of straw 1, sticks 2 and bricks 3.

\[
\begin{array}{l}

not to be confused with hay

or lumber according to some sources

probably fired clay bricks

\end{array}

or lumber according to some sources

probably fired clay bricks
```

Some of the options are explained in a bit more detail in the next sections.

## 4 Multiple footnotes

#### 4.1 Basics

Since multiple footnotes have to be treated differently,<sup>3,4</sup> FNPCT provides an extra command for that:

▶ \multfootnote\*{<list>;<of>;<footnotes>} → different footnotes are separated with a semicolon. The \* turns the footnote/punctuation switching temporarily off.

```
| \begin{minipage}{.4\linewidth}
| \noindent The three little pigs built their houses
| out of straw\footnote{not to be confused with hay},
| sticks\footnote{or lumber according to some sources}
| and bricks\multfootnote{probably fired clay bricks;or
| something else}.
| \end{minipage}

| The three little pigs built their houses
| out of straw, sticks and bricks. And bricks and bricks and bricks. And bricks are or lumber according to some sources
| probably fired clay bricks
| or something else
```

Every of the items of the list has an optional argument equivalent to the optional argument of \footnote:

<sup>&</sup>lt;sup>3</sup> see these footnotes <sup>4</sup> for an example

```
| \begin{minipage}{.4\linewidth}
| \noindent The three little pigs built their houses
| out of straw\footnote{not to be confused with hay},
| sticks\footnote{or lumber according to some sources}
| and bricks\multfootnote{probably fired clay bricks; [5] or
| something else}.
| \end{minipage}

| The three little pigs built their houses
| out of straw, 1 sticks 2 and bricks. 3,5
| inot to be confused with hay
| or lumber according to some sources
| probably fired clay bricks
| or something else
```

## 4.2 The delimiter and separator

Since the semicolon might be part of the footnote text you might have some trouble. But there are ways around. Maybe try enclosing it with braces:

```
| \begin{minipage}{.4\linewidth}
| \noindent The three little pigs built their houses
| out of straw\footnote{not to be confused with hay},
| sticks\footnote{or lumber according to some sources}
| and bricks\multfootnote{probably fired clay bricks{;}}
| or something else; what do I know}.
| \end{minipage}

The three little pigs built their houses
| out of straw,\frac{1}{2} sticks\frac{2}{2} and bricks.\frac{3}{4}
| or lumber according to some sources
| probably fired clay bricks; or something else
| what do I know
```

There are options which lets you choose the (input) delimiter and the (output) separator:

```
▶ mult-fn-delim = <delimiter> → choose delimiter for the \multfootnote. Default = ;
```

 $\blacktriangleright$  mult-fn-sep = <separator>  $\rightarrow$  choose the separator that is put between footnote marks. Default = ,

```
\setfnpct{mult-fn-delim=//,mult-fn-sep=;}
 \begin{minipage}[t]{.4\linewidth}
  \noindent The three little pigs built their houses
  out of straw\footnote{not to be confused with hay},
  sticks\footnote{or lumber according to some sources}
  and bricks\multfootnote{probably fired clay bricks;
  or something else//what do I know}.
 \end{minipage}\hfil
 \setfnpct{mult-fn-delim=;,mult-fn-sep=}
 \renewcommand*\thempfootnote{\fnsymbol{mpfootnote}}
 \begin{minipage}[t]{.4\linewidth}
  \noindent The three little pigs built their houses
  out of straw\footnote{not to be confused with hay},
  sticks\footnote{or lumber according to some sources}
  and bricks\multfootnote{probably fired clay bricks;
  or something else}.
 \end{minipage}
The three little pigs built their houses
                                             The three little pigs built their houses
out of straw,1 sticks2 and bricks.3;4
                                             out of straw,* sticks† and bricks.‡§
not to be confused with hay
                                               not to be confused with hay
<sup>2</sup> or lumber according to some sources
                                             ^{\dagger}\, or lumber according to some sources
<sup>3</sup> probably fired clay bricks; or something
                                             <sup>‡</sup> probably fired clay bricks
                                             § or something else
else
4 what do I know
```

#### 4.3 Automagic

If you want you can turn all footnotes into \multfootnotes.

▶ multiple =  $\underline{\text{true}}/\text{false} \rightarrow \text{let } \setminus \text{footnote}$  behave like \multfootnote. This option can only be set in the preamble. Default = false

```
% in preamble: \setfnpct{multiple}
% or \usepackage[multiple]{fnpct}
% begin{minipage}{.4\linewidth}
4  \noindent The three little pigs built their houses
5  out of straw\footnote{not to be confused with hay},
6  sticks\footnote{or lumber according to some sources}
7  and bricks\footnote{probably fired clay bricks;or
8  something else}.
9  \end{minipage}
```

```
The three little pigs built their houses out of straw,¹ sticks² and bricks.³,⁴

1 not to be confused with hay
2 or lumber according to some sources
3 probably fired clay bricks
4 or something else
```

#### 5 Footcites

Preliminary testing suggests that fnpct seems to be compatible with the \footcite and \footfullcite commands provided by the biblatex<sup>5</sup> package. However, the punctuation switching does not apply to them.

The kerning works ...

```
\setfnpct{before-footnote-space=2pt}
  \begin{minipage}{.5\linewidth}
  \noindent The three little pigs built their houses
  out of straw\footnote{not to be confused with hay},
   sticks\footnote{or lumber according to some sources}
   and bricks\footnote{probably fired clay bricks}. The
   companion\footfullcite{companion} has nothing on this
   topic.
 \end{minipage}
The three little pigs built their houses out of
straw,<sup>1</sup> sticks <sup>2</sup> and bricks.<sup>3</sup> The companion <sup>4</sup>
has nothing on this topic.
not to be confused with hay
<sup>2</sup> or lumber according to some sources
 probably fired clay bricks
<sup>4</sup> Michel Goossens, Frank Mittelbach, and Alexan-
der Samarin. The LaTeX Companion. 1st ed. Reading,
Mass.: Addison-Wesley, 1994. 528 pp.
```

... but the punctuation switching doesn't:

```
begin{minipage}{.5\linewidth}
noindent The three little pigs built their houses
out of straw\footnote{not to be confused with hay},
sticks\footnote{or lumber according to some sources}
and bricks\footnote{probably fired clay bricks}. The
companion has nothing on this topic\footfullcite{companion}.
end{minipage}
```

<sup>&</sup>lt;sup>5</sup> CTAN: biblatex

The three little pigs built their houses out of straw,<sup>1</sup> sticks<sup>2</sup> and bricks.<sup>3</sup> The companion has nothing on this topic<sup>4</sup>.

- not to be confused with hay
- $^{2}\,$  or lumber according to some sources
- <sup>3</sup> probably fired clay bricks
- <sup>4</sup> Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. 1st ed. Reading, Mass.: Addison-Wesley, 1994. 528 pp.

One can simulate that behaviour by actively setting one of these commands:

- $\blacktriangleright$  \kfc  $\rightarrow$  insert the after-comma-space or (if punct-after = true) the before-comma-space.

```
\setfnpct{after-punct-space=-.15em}
 \begin{minipage}{.5\linewidth}
  \noindent The three little pigs built their houses
  out of straw\footnote{not to be confused with hay},
  sticks\footnote{or lumber according to some sources}
  and bricks\footnote{probably fired clay bricks}. The
  companion has nothing on this topic.\kfp\footfullcite{companion}
 \end{minipage}
The three little pigs built their houses out of
straw, sticks and bricks. The companion has
nothing on this topic.4
 not to be confused with hay
<sup>2</sup> or lumber according to some sources
 probably fired clay bricks
 Michel Goossens, Frank Mittelbach, and Alexan-
der Samarin. The LaTeX Companion. 1st ed. Reading,
Mass.: Addison-Wesley, 1994. 528 pp.
```

#### In case of punct-after = true:

```
| \setfnpct{punct-after}
| \begin{minipage}{.5\linewidth}
| \noindent The three little pigs built their houses
| out of straw\footnote{not to be confused with hay},
| sticks\footnote{or lumber according to some sources}
| and bricks\footnote{probably fired clay bricks}. The
| companion has nothing on this topic\footfullcite{companion}\kfp.
| \end{minipage}
```

The three little pigs built their houses out of straw<sup>1</sup>, sticks<sup>2</sup> and bricks<sup>3</sup>. The companion has nothing on this topic<sup>4</sup>.

```
not to be confused with hay
```

## 6 Other packages

## 6.1 bigfoot

FNPCT is compatible with the bigfoot <sup>6</sup> [5] package. You need to a bit cautious, though. You'll need to

- load bigfoot first;
- declare footnotes with \DeclareNewFootnote after loading FNPCT but in the document preamble.

Also verbatim material won't work inside footnotes anymore. Since fnpct does not redefine any \footnotetext like command it will still work inside one of them.

For every footnote class defined with \DeclareNewFootnote the commands \footnote < class > and \footnotemark < class > are redefined with the starred variant and a \multfootnote < class > is defined. The multiple option will turn all \footnote < class > commands into the corresponding \multfootnote < class >.

FNPCT has an additional package option which *cannot* be set with \setfnpct and only has any effects if bigfoot has been loaded:

▶ bigfoot-default-top =  $\underline{\text{true}}/\text{false} \rightarrow \text{sets the default footnote class as top layer. Default}$ = false

Since this package cannot easily combine every footnote package for demonstration purposes the following code is shown in figure 1:

```
| \documentclass{article}
| \usepackage[
| a paperwidth=.5\textwidth,
| d paperheight=12\baselineskip,
| d margin=5pt,
| d bottom=1.5cm]{geometry}
| a \usepackage{bigfoot}
| b \usepackage[bigfoot-default-top]{fnpct}
| usepackage[bigfoot-default-top]{fnpct}
| usepackage[bigfoot-default-top] {fnpct}
| usepackage[bigfoot-default-top
```

 $<sup>^{2}\,</sup>$  or lumber according to some sources

<sup>&</sup>lt;sup>3</sup> probably fired clay bricks

<sup>&</sup>lt;sup>4</sup> Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. 1st ed. Reading, Mass.: Addison-Wesley, 1994. 528 pp.

<sup>&</sup>lt;sup>6</sup> CTAN: bigfoot

The three little pigs built their houses out of straw<sup>1</sup>, sticks<sup>2</sup> and bricks.<sup>3,4</sup>

1

Figure 1: bigfoot example

#### 6.2 endnotes

The endnotes<sup>7</sup> [1] package povides the commands \endnote and \endnotemark which can be used to output all notes at the end of a chapter, say.

If the package is loaded FNPCT extends its functionality to these commands in the same way it does with footnotes. For example an according \multendnote is defined. With the package option multiple all \endnotes are turned into \multendnotes.

<sup>&</sup>lt;sup>1</sup>not to be confused with hay <sup>a</sup>

<sup>&</sup>lt;sup>2</sup>or lumber according to some sources

<sup>&</sup>lt;sup>3</sup>probably fired clay bricks

<sup>&</sup>lt;sup>4</sup>or something

<sup>&</sup>lt;sup>a</sup>let alone grass

<sup>&</sup>lt;sup>7</sup> CTAN: endnotes

```
begin{minipage}[t]{.4\linewidth}

noindent The three little pigs built their houses
out of straw\endnote{not to be confused with hay},
sticks\endnote{or lumber according to some sources}
and bricks\endnote{probably fired clay bricks}.

theendnotes
end{minipage}\hfil
begin{minipage}[t]{.4\linewidth}
noindent The three little pigs built their houses
out of straw\endnote*{not to be confused with hay},
sticks\endnote{or lumber according to some sources}
and bricks\multendnote{probably fired clay bricks;or
something else}.

theendnotes
end{minipage}
```

The three little pigs built their houses out of straw,<sup>1</sup> sticks<sup>2</sup> and bricks.<sup>3</sup>

The three little pigs built their houses out of straw<sup>4</sup>, sticks<sup>5</sup> and bricks.<sup>6,7</sup>

#### **Notes**

#### <sup>1</sup>not to be confused with hay

## **Notes**

<sup>4</sup>not to be confused with hay

<sup>5</sup>or lumber according to some sources

<sup>6</sup>probably fired clay bricks

<sup>7</sup>or something else

#### 6.3 footmisc

Testing showed no incompatibilities with the footmisc<sup>8</sup> package [2]. The only thing is that you won't have to use its multiple option.

#### 6.4 manyfoot

The manyfoot <sup>9</sup> package [6] is not and will not be supported. It is loaded by bigfoot (see section 6.1), anyway.

### 6.5 parnotes

The parnotes <sup>10</sup> package [4] does something similar to the endnotes package. If parnotes is loaded **fnpct** extends its functionality analogous to the one of endnotes.

<sup>&</sup>lt;sup>2</sup>or lumber according to some sources

<sup>&</sup>lt;sup>3</sup>probably fired clay bricks

<sup>&</sup>lt;sup>8</sup> CTAN: footmisc <sup>9</sup> CTAN: manyfoot <sup>10</sup> CTAN: parnotes

Again the multiple option turns all \parnotes into \multparnotes.

```
\begin{minipage}[t]{.4\linewidth}
   \noindent The three little pigs built their houses
   out of straw\parnote{not to be confused with hay},
   sticks\parnote{or lumber according to some sources}
   and bricks\parnote{probably fired clay bricks}.
   \parnotes
  \end{minipage}\hfil
  \begin{minipage}[t]{.4\linewidth}
   \noindent The three little pigs built their houses
   out of straw\parnote*{not to be confused with hay},
   sticks\parnote{or lumber according to some sources}
   and bricks\multparnote{probably fired clay bricks;or
   something else}.
   \parnotes
  \end{minipage}
The three little pigs built their houses
                                               The three little pigs built their houses
out of straw,1 sticks2 and bricks.3
                                               out of straw<sup>4</sup>, sticks<sup>5</sup> and bricks.<sup>6,7</sup>
<sup>1</sup> not to be confused with hay <sup>2</sup> or
                                               <sup>4</sup> not to be confused with hay <sup>5</sup> or
lumber according to some sources
                                               lumber according to some sources
<sup>3</sup> probably fired clay bricks
                                               <sup>6</sup> probably fired clay bricks <sup>7</sup> or some-
                                               thing else
```

#### References

- [1] Robin Fairbairns. endnotes. URL: http://www.ctan.org/pkg/endnotes.
- [2] Robin Fairbairns. footmisc. Version 5.5b. URL: http://www.ctan.org/pkg/footmisc.
- [3] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. 1st ed. Reading, Mass.: Addison-Wesley, 1994. 528 pp.
- [4] Micheal Hughes. parnotes. Version 1. URL: http://www.ctan.org/pkg/parnotes.
- [5] David Kastrup. bigfoot. Version 1.25. URL: http://www.ctan.org/pkg/bigfoot.
- [6] Alexander I. Rozhenko. *manyfoot*. Version 1.10. URL: http://www.ctan.org/pkg/manyfoot.

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