

# **Some useful things for using LaTeX as a linguist**

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## Some remarks on page layout

- To use Times/Helvetica as fonts, specify `\usepackage{times}` in preamble.
- To globally change font size, specify class option `11pt`, `12pt`, ...; i.e. specify `\documentclass[12pt]{article}`. Default generally is `10pt`.
- The common class option `draft` helps find layout problems (draws black bars on side).
- To eliminate page numbers (and headers/footers) use `\pagestyle{empty}` in preamble or `\thispagestyle{empty}` in text for single pages.
- It is advisable not to use `\newline`, `\linebreak`, `\newpage`, `\pagebreak` unless you absolutely have to, in the very final version — and even then, better use `\enlargethispage{\baselineskip}`. Instead use the `samepage` environment.

## More on page layout

- Very rarely, it can be necessary to fiddle with the space available for text (e.g., for submissions with page limits):

```
\addtolength{\textheight}{\baselineskip}
\addtolength{\headheight}{-.5\baselineskip}
\addtolength{\textwidth}{2em}
\addtolength{\evensidemargin}{-1em}
\addtolength{\oddsidemargin}{-1em}
```

- To use vertical space between paragraphs instead of indented paragraphs, add the following to the preamble:

```
\setlength{\parindent}{0cm}
\setlength{\parskip}{1ex}
```

## Use figures!

Use the figure environment for anything occupying more than a couple of lines of vertical space, i.e., almost always for trees or AVMs. This results in some floating of figures, but you avoid many layout problems, like half-empty pages.

Basic structure:

```
\begin{figure} [htbp!]  
  \begin{center}  
    Something\<\  
    big  
  \caption{Some useful caption}  
  \label{fig:a-label-for-this-figure}  
  \end{center}  
\end{figure}
```

## Other general remarks

- To fix hyphenation of one of the few words LaTeX gets wrong, insert `\-` in word (e.g., `wha\-`badoo) or specify hyphenation of such words in preamble:  
`\hyphenation{hy-po-cri-tical, wha-ba-ga-gy}`
- Most commands have effect local to the next environment!  
For example, “`{\small dubi dubi} duh`” results in: dubi dubi duh
- To set the page number number, e.g., to start the paper on p.237, you can use `\setcounter{page}{237}` in the preamble (or in the text, but why would you?)

## Example sentences

**Recommended package (if you use glosses):** `gb4e+.sty`

(by Hap Kolb and Craig Thiersch, plus some extras for better font support etc.)

**General documentation:**

`/opt/tex/texmf.local/tex/latex/gb4e/doc/gb4e-doc.ps`

### A simple example

(1) When shall we three meet again, in thunder, lightning or in rain?

and how it's created:

```
\begin{exe}  
  \ex\label{ex:some-label} When shall we three meet again,  
    in thunder, lightning or in rain?  
\end{exe}
```

## Glosses and judged examples

- (2) \* Stolz ist er auf seine Kinder gewesen.  
proud is he of his children been  
'He was proud of his children.'

```
\begin{exe}  
  \ex[*]{  
    \gll Stolz ist er auf seine Kinder gewesen. \\  
        proud is he of his children been\\  
    \mytrans{He was proud of his children.}}  
\end{exe}
```

## Multiple gloss lines and wider judgements

- (3) \*\*? Stolz ist er auf seine Kinder gewesen worden.  
proud is he of his children been being  
some other glosss for these words  
'He was proud of his children.'

```
\begin{exe}\judgewidth{**?}  
  \ex[**?]{\glll Stolz ist er auf seine Kinder gewesen worden. \\  
    proud is he of his children been being\\  
    some other glosss {} for these {} words\\  
  \mytrans{He was proud of his children.}}  
\end{exe}
```

- Illustrates `\glll` and uses `\judgewidth{**?}` to line up wider judgements correctly.
- Use `\exewidth{(000)}` to line up example numbers numbers wider than two digits.

## Examples in footnotes

Some text should explain each example (obligatory in good papers).<sup>1</sup>

Some text should explain each example (obligatory in good papers).\footnote{And here's an example in a footnote:

```
\begin{exe}
  \ex\gll [Vortragen] wird er es morgen.\\
  \hspaceThis{[]present will he it tomorrow\\
  \mytrans{He will present it tomorrow.}
\end{exe}}
```

---

<sup>1</sup>And here's an example in a footnote:

- (i) [Vortragen] wird er es morgen.  
present will he it tomorrow  
'He will present it tomorrow.'

## Examples with subexamples

- (4) a. Verkaufen will er das Pferd.  
sell wants to he the horse  
'He wants sell the horse.'
- b. Stolz ist er auf seine Kinder gewesen.  
proud is he of his children been  
'He was proud of his children.'

```
\begin{exe}  
  \ex\begin{xlist}  
    \ex\gll Verkaufen will er das Pferd.\\  
      sell {wants to} he the horse\\  
      \mytrans{He wants sell the horse.}  
    \ex\gll Stolz ist er auf seine Kinder gewesen. \\  
      proud is he of his children been\\  
      \mytrans{He was proud of his children.}  
    \end{xlist}  
  \end{exe}
```

# Attribute-Value Matrices

**Recommended package:** `avm+.sty`

(by Chris Manning, plus extras for better font support etc.)

**General documentation:**

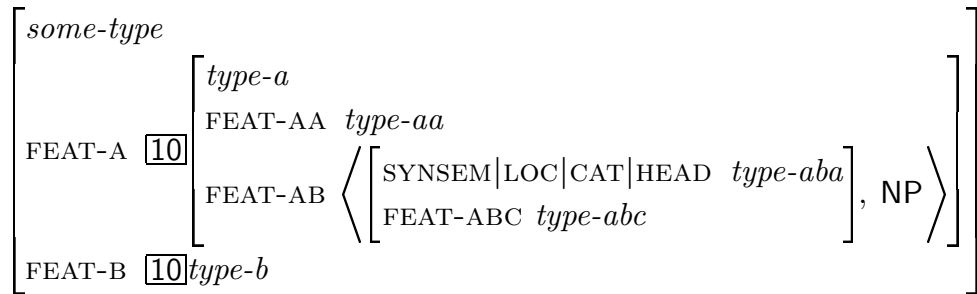
`/opt/tex/texmf.local/tex/latex/avm/avm-doc.ps`

**On the extras:**

- Left hand side (features) and right hand side (value) of an AVM are automatically typeset as small caps and italics, respectively.
- General commands for changing size of AVMs:  
`\HugeAvmFonts`, `\hugeAvmFonts`, `\LargeAvmFonts`, `\largeAvmFonts`,  
`\regAvmFonts`, `\smallAvmFonts`, `\tinyAvmFonts`
- Automatically changes size to `\smallAvmFonts` in footnotes.

## AVMs in active mode

Choosing the active option (default): `\avmoptions{active,center}`



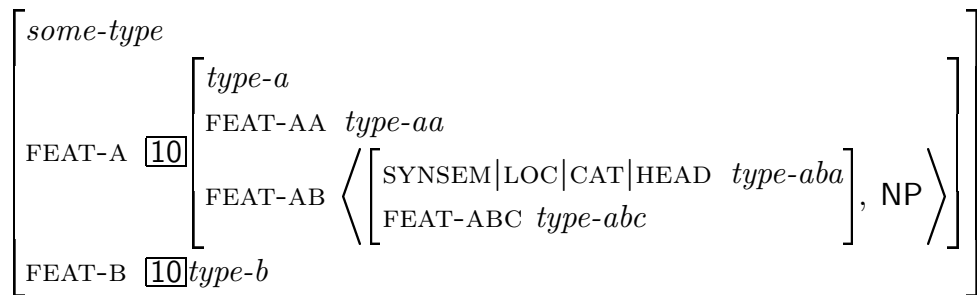
```

\begin{avm}
  [\tp{some-type}\
  feat-a & @{10}[\tp{type-a}\
            feat-aa & type-aa\
            feat-ab & <[synsem|loc|cat|head & type-aba\
                        feat-abc \tpv{type-abc}],
                        \textup{NP}>]\
  feat-b & @{10}type-b]
\end{avm}

```

## AVMs in arguments

The active mode cannot be used in (most) command arguments. Switch to inactive option with `\avmoptions{center}` and use `\[ \]` `\| \< \> \@` instead of `[ ] | < > @`



```

{\avmoptions{center}\begin{avm}
  \[ \tp{some-type} \\\
    feat-a & \@{10} \[ \tp{type-a} \\\
      feat-aa & type-aa \\\
      feat-ab & \< \[ synsem \\\ loc \\\ cat \\\ head & type-aba \\\
        feat-abc \tpv{type-abc} \], \\
        \textup{NP} \> \] \\\
    feat-b & \@{10} type-b \]
\end{avm}}

```

# Trees

**Recommended package:** `ecltree+.sty`

(by Hideki Isozaki, plus extras making linguistic trees easier)

**General documentation:**

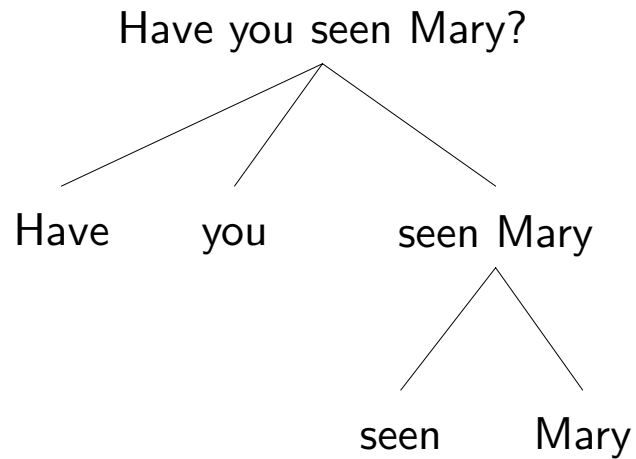
`/opt/tex/texmf.local/tex/latex/ecltree/doc/ecltreesample.tex`

The layout is automatic, but can be modified precisely with:

- add/subtract horizontal space to next node: `\setlength{\GapWidth}{1em}`
- add/subtract vertical space to next node: `\setlength{\GapDepth}{1ex}`
- compact way of specifying both (x-value in em, y-value in ex): `\XY{1}{1}`

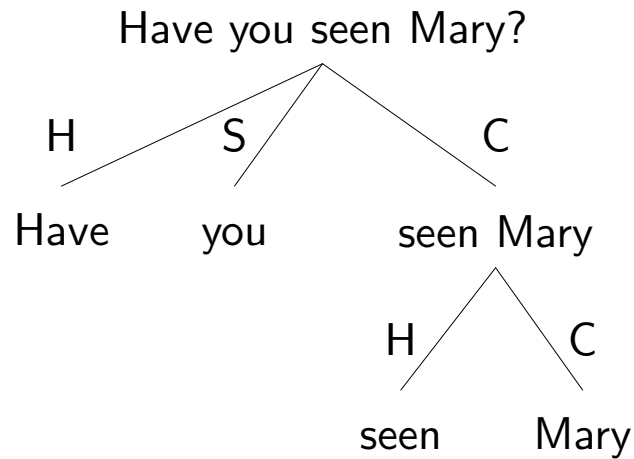
All changes take effect after the next node.

## A simple tree



```
\begin{center}
\begin{bundle}{Have you seen Mary?}\setlength{\GapDepth}{6ex}
  \chunk{Have}
  \chunk{you}
  \chunk{\begin{bundle}{seen Mary}
    \chunk{seen}
    \chunk{Mary}
  \end{bundle}}
\end{bundle}
\end{center}
```

## A simple tree with edge labels



```
\begin{center}
\begin{bundle}{Have you seen Mary?}\setlength{\GapDepth}{6ex}
  \chunk[H]{Have}
  \chunk[S]{you}
  \chunk[C]{\begin{bundle}{seen Mary}
    \chunk[H]{seen}
    \chunk[C]{Mary}
  \end{bundle}}
\end{bundle}
\end{center}
```

## Simplified syntax, using predefined edge labels

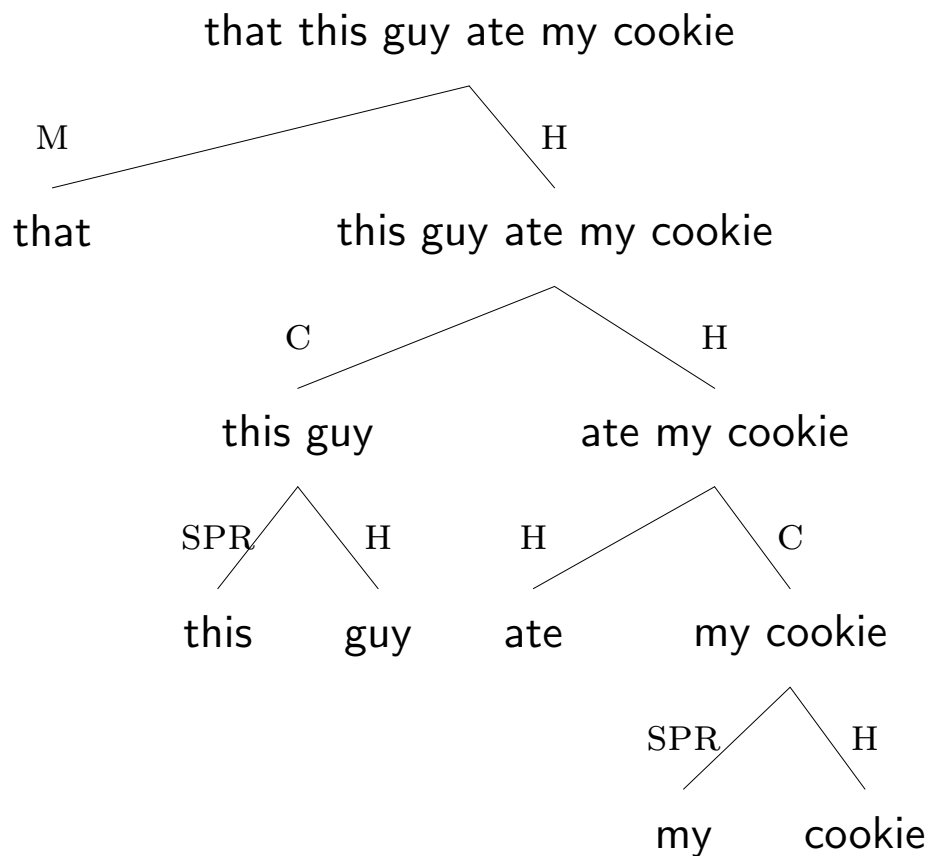
- Commands for terminal nodes:

`\head`, `\nonhead`, `\comp`, `\compopt`, `\compplus`, `\compstar`, `\subj`,  
`\spr`, `\adj`, `\marker`, `\filler`, `\governed`

- Commands for nonterminal nodes:

`\hbaum`, `\nbaum`, `\cbaum`, `\coptbaum`, `\cplusbaum`, `\cstarbaum`, `\sbaum`,  
`\sprbaum`, `\abaum`, `\mbaum`, `\fbaum`, `\gbaum`

## An example



```

\baum{that this guy ate my cookie}{
  \marker{that}
  \hbaum{this guy ate my cookie}{
    \cbaum{this guy}{
      \spr{this}
      \head{guy}}
    \hbaum{ate my cookie}{
      \head{ate}
      \cbaum{my cookie}{
        \spr{my}
        \head{cookie}}}}}}
  
```



## Trees with AVMs — latex source

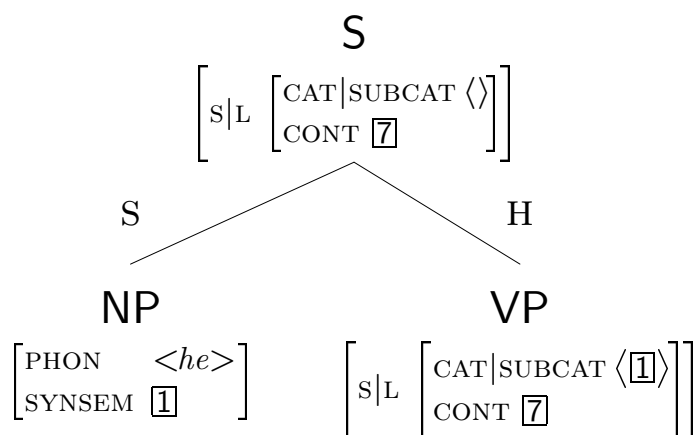
```

\begin{center}
\regAvmFonts\avmoptions{center}
\XY{-2}{4}\setlength{\EdgeLabelSep}{1.5ex}

\baum{\begin{avm}\[s\|1 & \[cat\|subcat \langle\rangle\|cont \@7\|\]\end{avm}}{
  \subj{\begin{avm}\[phon & \phonlist{he}\|synsem & \@1\|\]\end{avm}}
  \hbaum{\begin{avm}\[s\|1 & \[cat\|subcat \langle\@1\rangle\|cont \@7\|\]\end{avm}}{
    \hbaum{\begin{avm}\[s\|1 & \[cat\|subcat & \langle\@1,\@2\rangle\|cont \@7\|\]\end{avm}}{
      \setlength{\GapWidth}{2em}
      \head{\begin{avm}\[phon & \phonlist{gives}\|
        s\|1 & \[cat\|subcat \langle\@1\textsl{NP}_{\@4},
          \@2\textsl{NP}_{\@5},
          \@3\textsl{NP}_{\@6}\rangle\|
          cont \@7\|[\tp{give'}\|
            giver & \@4\|
            gift & \@5\|
            given & \@6\|\|\]\end{avm}}
      \comp{\begin{avm}\[phon & \phonlist{her}\|synsem & \@3\|\]\end{avm}}
      \comp{\begin{avm}\[phon & \phonlist{the book}\|synsem & \@2\|\]\end{avm}}}}
\end{center}

```

## Trees with abbreviations over the AVMs: Avm environment



```

{\regAvmFonts\avmoptions{center}
\baum{\begin{Avm}{S}
  \[s\|1 & \[cat\|subcat \<\>\|
        cont \@7\]\]
\end{Avm}}{
  \subj{\begin{Avm}{NP}
    \[phon & \phonlist{he}\|
        synsem & \@1\]
    \end{Avm}}
  \head{\begin{Avm}{VP}
    \[s\|1 & \[cat\|subcat \<\@1\>\|
        cont \@7\]\]
    \end{Avm}}}}

```

# Citations

**Recommended package:** `natbib.sty`

**General documentation:** `/opt/tex/texmf.local/tex/latex/natbib/natnotes.ps`  
and `natbib.ps`

The following slides are mostly copied from this file.

## Features:

- Compatible with the standard bibliographic style files: `plain`, `harvard`, `apalike`, `chicago`, `astron`, `authordate`, `natbib`.

Note: One can, as always, use `tex makebst` to create one's own `.bst` file for particular bibliography layout needs!

- Two basic citation commands: `\citet` and `\citep` for *textual* and *parenthetical* citations, respectively. Takes one or two optional arguments to add some text before and after the citation.

## Basic citations

<code>\citet{jon90}</code>	⇒	Jones et al. (1990)
<code>\citet[chap.~2]{jon90}</code>	⇒	Jones et al. (1990, chap. 2)
<code>\citep{jon90}</code>	⇒	(Jones et al., 1990)
<code>\citep[chap.~2]{jon90}</code>	⇒	(Jones et al., 1990, chap. 2)
<code>\citep[see] []{jon90}</code>	⇒	(see Jones et al., 1990)
<code>\citep[see][chap.~2]{jon90}</code>	⇒	(see Jones et al., 1990, chap. 2)
<code>\citet*{jon90}</code>	⇒	Jones, Baker, and Williams (1990)
<code>\citep*{jon90}</code>	⇒	(Jones, Baker, and Williams, 1990)

## Multiple citations

Multiple citations may be made by including more than one citation key in the `\cite` command argument.

<code>\citet{jon90,jam91}</code>	$\Rightarrow$	Jones et al. (1990); James et al. (1991)
<code>\citep{jon90,jam91}</code>	$\Rightarrow$	(Jones et al., 1990; James et al. 1991)
<code>\citep{jon90,jon91}</code>	$\Rightarrow$	(Jones et al., 1990, 1991)
<code>\citep{jon90a,jon90b}</code>	$\Rightarrow$	(Jones et al., 1990a,b)

## Suppressed parentheses

As an alternative form of citation, `\citealt` is the same as `\citet` but *without parentheses*. Similarly, `\citealp` is `\citep` without parentheses. Multiple references, notes, and the starred variants also exist.

<code>\citealt{jon90}</code>	<code>⇒</code>	Jones et al. 1990
<code>\citealt*{jon90}</code>	<code>⇒</code>	Jones, Baker, and Williams 1990
<code>\citealp{jon90}</code>	<code>⇒</code>	Jones et al., 1990
<code>\citealp*{jon90}</code>	<code>⇒</code>	Jones, Baker, and Williams, 1990
<code>\citealp{jon90,jam91}</code>	<code>⇒</code>	Jones et al., 1990; James et al., 1991
<code>\citealp[pg.~32]{jon90}</code>	<code>⇒</code>	Jones et al., 1990, pg. 32
<code>\citetext{priv.\ comm.}</code>	<code>⇒</code>	(priv. comm.)

The `\citetext` command allows arbitrary text to be placed in the current citation parentheses. This may be used in combination with `\citealp`.

## Partial citations

In author–year schemes, it is sometimes desirable to be able to refer to the authors without the year, or vice versa. This is provided with the extra commands

<code>\citeauthor{jon90}</code>	$\Rightarrow$	Jones et al.
<code>\citeauthor*{jon90}</code>	$\Rightarrow$	Jones, Baker, and Williams
<code>\citeyear{jon90}</code>	$\Rightarrow$	1990
<code>\citeyearpar{jon90}</code>	$\Rightarrow$	(1990)

## Forcing upper cased names

If the first author's name contains a *von* part, such as “della Robbia”, then `\citet{dRob98}` produces “della Robbia (1998)”, even at the beginning of a sentence. One can force the first letter to be in upper case with the command `\Citet` instead. Other upper case commands also exist.

when	<code>\citet{dRob98}</code>	⇒	della Robbia (1998)
then	<code>\Citet{dRob98}</code>	⇒	Della Robbia (1998)
	<code>\Citep{dRob98}</code>	⇒	(Della Robbia, 1998)
	<code>\Citealt{dRob98}</code>	⇒	Della Robbia 1998
	<code>\Citealp{dRob98}</code>	⇒	Della Robbia, 1998
	<code>\Citeauthor{dRob98}</code>	⇒	Della Robbia

These commands also exist in starred versions for full author names.

## Selecting citation style and punctuation

A `\bibpunct` declaration has six mandatory plus one optional argument:

1. opening bracket for citation "("
  2. closing bracket ")"
  3. citation separator (for multiple citations in one `\cite`) ";"
  4. n for numerical styles, s for superscripts, anything else for author-year "author-year"
  5. punctuation between authors and date
  6. punctuation between years (or numbers) when common authors missing ","
- opt. character coming before post-notes.

Example: `\bibpunct[:]{(}{)}{,}{a}{}{,}`

# Overheads

**Recommended document class:** foils.cls

(by Jim Hafner)

**General documentation:**

/opt/tex/texmf.local/tex/latex/foiltex/foiltex-doc.ps and sampfoil.ps

**Basic document structure:**

```
\documentclass[17pt,dvips]{foils}
\begin{document}
\foilhead{Overhead title 1}
    Contents of overhead 1
\foilhead{Overhead title 2}
    Contents of overhead 2
\rotatefoilhead{Overhead title 3}
    Contents of rotated overhead 3
\end{document}
```

## Some post-latex stuff

### Obtaining 2up or 4up output with: `psnup`

- 2-up version of file: `psnup -2 myfile.ps myfile-2up.ps`
- 4-up version of landscaped slides: `psnup -4 -l myfile.ps myfile-4up.ps`
- 4-up version of slides: `psnup -4 myfile.ps myfile-4up.ps`

### How to obtain a pdf file (for a file using ordinary fonts):

- Produce a dvi file as usual: `latex myfile.tex`
- Transform dvi to ps file (with type 1 fonts): `dvips -Pcmz myfile.dvi -o myfile.ps`
- Transform ps file to pdf file: `distill myfile.ps`

## Obtaining more information

Check out the documentation mentioned for the different style files.

Look for examples of what you want to do. For example, you're welcome to browse through my files:

- To find my overheads: `find ~dm -name slides.tex -print`
- To find particular constructs in my latex files, e.g., occurrences of `GapDepth`:  
`find ~dm -name "*.tex" -exec grep -H GapDepth \{\} \; | more`
- The file `~dm/.bibinputs/ling.bib` contains over 2500 bibtex, some of which may be useful. But always verify the information before using it!