

L^AT_EX introduction

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Getting started

Installing L^AT_EX

Resources

Editing

Really basic

Document structure

Formatting

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<http://bibdesk.sourceforge.net/>
- ▶ I uses aquamacs (an OS X version of GNU emacs), takes some more work to customize: <http://aquamacs.org/>,
<http://www.gnu.org/software/auctex/>

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<http://www.winedt.com/> (not free). Also:
<http://www.texniccenter.org/>.
- ▶ Emacs is also an option.

Linux

- ▶ If you're using linux, you probably don't need my help.

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 - ▶ L^AT_EX for linguists
<http://www.essex.ac.uk/linguistics/clmt/latex4ling/>
 - ▶ UCSC edition
<http://people.ucsc.edu/~kirchner/resources/latex/latex.html>
 - ▶ LingTeX mailing list <http://heim.ifi.uio.no/~dag/ling-tex.html>

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- ▶ A good general purpose reference (esp. for formulae):
<http://www.giss.nasa.gov/tools/latex/>

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- ▶ Environments are bracketed with a begin and end command:

```
\begin{itemize}
\item Most text is just text.
\end{itemize}
```

Preamble

- ▶ Setup stuff goes here.

```
\documentclass[article,11pt]{memoir}

\usepackage{mathptmx}

\usepackage{natbib}
\bibpunct{(}{)}{;}{a}{}{,}

% etc.
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 - ▶ Other setup, document formatting etc. This one sets up some citation styles.

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Body

- ▶ Content of document goes here.

```
\begin{document}  
Hello world  
\end{document}
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- ▶ One big environment.

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Paragraphs

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- ▶ *italic*: `\textit{italic}`
- ▶ **bold**: `\textbf{bold}`
- ▶ small caps: `\textsc{small caps}`
- ▶ With `ulem.sty`:
 - ▶ underlined: `\uline{underlined}`
 - ▶ ~~struck out~~: `\sout{struck out}`

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command.
\end{itemize}
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Document divisions

- ▶ Automatic section numbering and cross-referencing.
- ▶ Commands: `\chapter` (memoir), `\section`, `\subsection`, etc.
- ▶ Labeling command: `\label{name}`
- ▶ Reference with `\ref{name}`, or `\pageref{name}` for the page number.

```
\chapter{My first chapter}
\section{The .1 section of this chapter}
\subsection{The .1.1 section}
\label{mylabel}

...

\S \ref{mylabel} is on p. \pageref{mylabel}
```

- ▶ This last line will produce something like “§1.1.1 is on p. 1”.
(except, automatically determined.)

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@article{Chomsky59,  
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- ▶ BibTeX – a program called after L^AT_EX that figures out citations from an .aux file (produced as a side-effect of compilation).

Formulas

- ▶ Formulas are entered in math mode. The main way to switch to math mode is using \$ symbols.

$$\llbracket \mathbf{must} \rrbracket = \lambda p_{\langle st \rangle} . \lambda w_s . \forall w' : wRw' \rightarrow p(w')$$

```
$\left\llbracket \text{\textbf{must}} \right\rrbracket =  
\lambda p_{\langle \left\langle st \right\rangle \rangle} \backslash: .\backslash: \lambda w_s \backslash: .\backslash: \forall w' : wRw' \rightarrow p(w')$
```

More complicated formulas

(Chosen at random from *The Harmonic Mind*)

$$[\mathbb{I} \otimes \mathbb{M}]_{(d)}^{(d')} = \begin{cases} [\mathbf{1}^{\otimes k} \otimes \mathbb{M}]_{(d)}^{(d')} & \text{if } \exists k \text{ s.t. } m + k = d \text{ and } m' + k = d' \\ \mathbf{0} & \text{otherwise} \end{cases}$$

```
$\left[\mathbb{I} \varotimes \mathbb{M}\right]_{(d)}^{(d')} =
```

```
\left\{\begin{array}{l}
```

```
\left[\mathbf{1}^{\otimes k} \varotimes \mathbb{M}\right]_{(d)}^{(d')} \ \&
```

```
\text{if } \exists k \text{ s.t. } m+k=d
```

```
\text{ and } m'+k=d' \\
```

```
\mathbf{0} \ \& \ \text{otherwise}
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```
\end{array}\right.
```

Example numbering

- ▶ Various packages – I use `gb4e`.
 - ▶ Copy on website adapted to not conflict with memoir.
 - ▶ Another popular one is `linguex`.
 - ▶ Easy to do automatic cross-references: (2)
- (1) Alfonso is a lawyer.
 - (2) * Alfonso seems a lawyer.
 - (3)
 - a. Who is Alfonso talking to?
 - b. Who on earth is Alfonso talking to?

Including figures

- ▶ I usually use the `graphicx` package.

Including figures

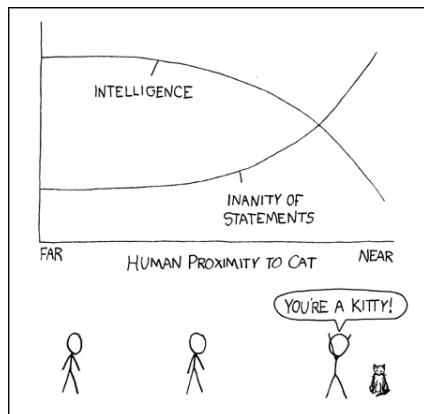
- ▶ I usually use the `graphicx` package.

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\includegraphics[scale=0.3]{cat_proximity}
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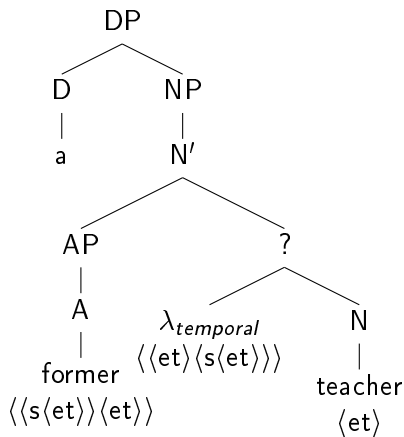
Tree diagrams

- ▶ Many popular packages:
 - ▶ `pst-jtree`. reportedly the best modern one, but requires `pstricks`, and consequently, does not work with `pdflatex`.
 - ▶ `qtree`. Pretty easy to use, no dependencies.
 - ▶ `parsetree`. Actually designed for programming language theory, but works well for linguistics.
 - ▶ `TikZ`. General purpose drawing package, really really nice. But does less tree formatting automatically.
- ▶ Examples: (download source to see details)

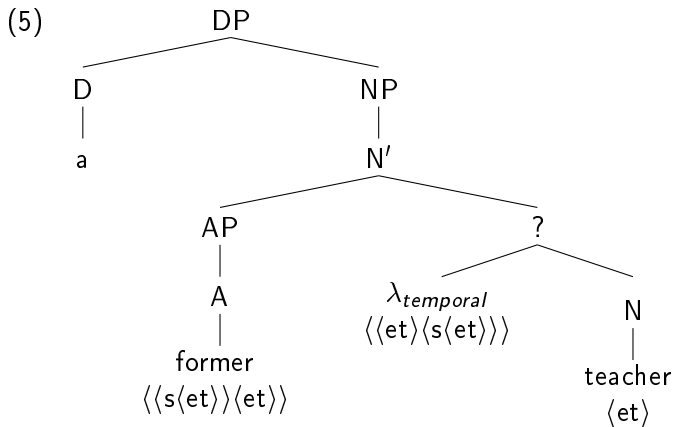
qtree

- Note: I pulled this out of a homework from about 7 years ago, so I have no idea why you'd use this constituent structure.

(4)

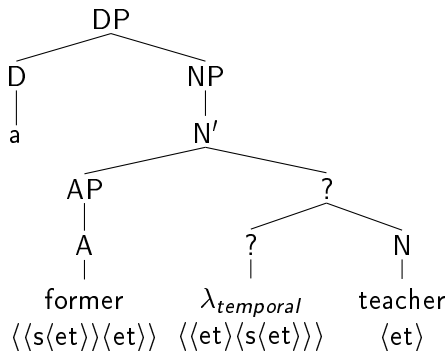


parsetree



Trees in TikZ

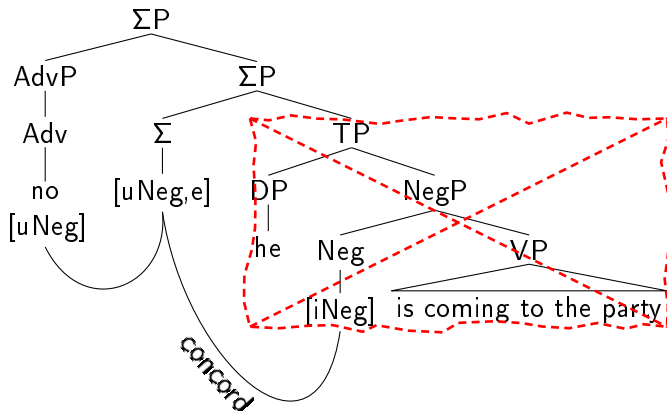
(6)



More trees in TikZ

(7) **Negative question, negative answer**

Is Alfonso not coming to the party?



Tableaux

- ▶ Can do many tableaux with simple `tabular` environments.
- ▶ This example is also using the `tipa` package for IPA fonts, and the `arydshln` package for the dashed line.
- ▶ Actually, this uses my own custom tableau environment based on `tabular`, there is probably something better around. (Colin?)
- ▶ Major drawback: it is a pain to add columns, especially in large tableau. It is a huge pain to re-order columns.

	/k-haratat-s/	FtBin	FtHdR	Dep _μ
☞	a. [kha.(rá).tats]			*
	b. [kha.(rá).tats]	*!		
	c. [(khá.ra).tats]		*!	

Tableau 1: Lengthening of stressed vowels

Presentations

- ▶ This presentation is made with the `beamer` package. Seems like the best option by far.
- ▶ Pretty easy to use, well-documented. (Same author as PGF/TikZ.)
- ▶ Source for this file available.
- ▶ I've also put up a `beamer` “template” (which is really just the example from the `beamer` site).
- ▶ To see what can be done, I will now switch to a different file.

Posters

- ▶ I use the `a0poster` class along with `textpos`.
- ▶ Produces A0-sized PDF files. (European size.)
- ▶ Pretty easy to get to work with the poster printer upstairs.