The Joys of LATEX

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Our Path Today

Short title

Adam
Goodkind

Overview of
LATEX
Why LATEX?
Why Not LATEX?
A Few LATEX
Features

Bibliography/
Reference
Management
BibTeX and
Biber
Mendeley,
Zotero and Biber

Presentations
and Posters
Beamer/Tikz

LATEX for
Linguists
Trees
Symbols
Glosses

Extensive
Online
Support

1. Overview of LATEX
   - Why LATEX?
   - Why Not LATEX?
   - A Few LATEX Features
2. Bibliography/ Reference Management
   - BibTeX and Biber
   - Mendeley, Zotero and Biber
3. Presentations and Posters
   - Beamer/Tikz
4. LATEX for Linguists
   - Trees
   - Symbols
   - Glosses
5. Extensive Online Support

Why LaTeX

Portability of Code

- Overleaf.com has made real-time / collaboration simple

Logistics

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- Easy to transfer between templates, layouts and operating systems
  - **What You See Is What You Get...Everywhere!**

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- Dynamic section, figure, item numbering etc.

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- Dynamic section, figure, item numbering etc.
- Citations are automatically added to bibliographies

Why Not LᴬTEX

Learning Curve

Tables

Aesthetics

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Aesthetics

- Picture placement/sizing can be tricky

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Aesthetics
- Picture placement/sizing can be tricky
- LaTeX has its fair share of quirks

A Few LATEX Features

- Very easy to change formats (slide template demo)
  - Columns / Format
  - Line Numbers
  - Journal Template (https://www.overleaf.com/7657746tdydxffysqjg#/26800114/)

A Few LaTeX Features

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- Dynamic numbering!!
- Equations and symbols (+Blocks +Verbatim)

Example of Denotation Function

```
\usepackage{stmaryrd}
% or
\newcommand{\sem}[2][M\!,g]{\mbox{ $[\![ #2 ]\!]^{#1}$}}
\sem[M',g]{walks}
```

becomes $[\![walks]\!]^{M',g}$

Tables

Tables can be tricky

```
\begin{table}[]
\caption{My caption}
\label{my-label}
\begin{tabular}{ll}
Name    & Date   \\
Adam    & 1/1/17 \\
Bob     & 1/2/16 \\
Charlie & 1/3/15 \\
\end{tabular}
\end{table}
```

Table: My caption

Name	Date
Adam	1/1/17
Bob	1/2/16
Charlie	1/3/15

- Lots of tables at http://www.tablesgenerator.com/
- Tables can be made from Python and R adataframes

From PDF to citation

Adding an article from Google Scholar is simple

- Copy the BibTeX key
- Paste the key into JabRef
- Download the PDF and rename it with the citation key
- Add the BibTeX key to the BibTeX file

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Easy Citations

Typing the `\cite` command within LATEX:
```
This statement requires citation \cite{p1}.
```
Automatically produces

- This statement requires citation [Smith, 2012].

- And adds it to the bibliography

📄 John Smith (2012)
   Title of the publication
   Journal Name 12(3), 45 − 678.

Mendeley, Zotero and Biber

- Mendeley, Zotero, EndNote etc. all support BibTeX
- Changing reference styles can be done with a single line
- Supposed to use `biber` instead now
  - Offers more stability
  - Supports more character types
  - Doesn't work with all bibliography packages, such as `natbib`

Posters and Presentations

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- Going between presentations and posters is easy
- Can use tikz and beamer packages
- A slide is a block
- Useful if including lots of technical details
- Not always useful for more straightforward presentations
- But often less headaches than Microsoft

LATEX For Linguists

Lots of resources for linguists
`\includegraphics[scale=0.2]{LatexForLinguists.png}`

Easy Tree Diagrams

This code:

```
\usepackage{qtree}
\Tree [.S
        [.NP LaTeX ]
            [.VP [.V is ] [.NP fun ] ] ]
```

Produces:

Lots of Pretty Math

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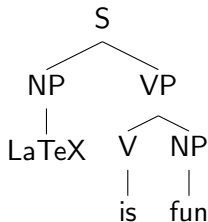Trees
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Sets

`\setof{a,b,c}`	which produces	$\{a, b, c\}$
`\setof{x : walk'(x)}`	which produces	$\{x : walk'(x)\}$
`\tuple{a,b,c}`	which produces	$\langle a, b, c \rangle$

Symbols

¬	`\neg`	≡	`\equiv`
&	`\&`	⇒	`\Rightarrow`
→	`\rightarrow`	∧	`\wedge`
∨	`\vee`	∀	`\forall`
∃	`\exists`	⊨	`\models`
⊢	`\vdash`	×	`\times`
∈	`\in`	∩	`\cap`
∪	`\cup`	⊆	`\subseteq`
⊂	`\subset`	⊇	`\supseteq`
⊃	`\supset`		

Greek Letters

α	`\alpha`	β	`\beta`
γ	`\gamma`	ϵ	`\epsilon`
λ	`\lambda`	π	`\pi`
ρ	`\rho`	σ	`\sigma`
τ	`\tau`	ψ	`\psi`
ϕ	`\phi`	ω	`\omega`

Glosses and Numbering Are Super Easy

- Example numbers can be continued throughout a document, and modified on-the-fly
- Aligning glosses is easy

```
\usepackage{gb4e}
\begin{exe}
\ex
\gll Stolz ist er auf seine Kinder gewesen. \\
proud is he of his children been\\
\trans 'He was proud of his children.'
\end{exe}
```

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

Support is Everywhere!

- Ask Anything (General Support)
  - tex.stackexchange.com
  - reddit.com/r/LaTeX
  - en.wikibooks.org/wiki/LaTeX
- For Linguists
  - http://www.essex.ac.uk/linguistics/external/clmt/latex4ling/
  - https://en.wikibooks.org/wiki/LaTeX/Linguistics
- Symbols Galore (Complete Lists)
  - http://tug.ctan.org/info/symbols/comprehensive/symbols-a4.pdf
  - Draw! http://detexify.kirelabs.org/classify.html
  - Pretty http://zelmanov.ptep-online.com/ctan/symbols.pdf
- Table Generator http://www.tablesgenerator.com/
- Task Management with todonotes

The End

Slides available at ?????