

# Digital Research Toolkit for Linguists

## Week 12: Big projects and bibliographies with L<sup>A</sup>T<sub>E</sub>X

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June 24, 2024

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# Homework: L<sup>A</sup>T<sub>E</sub>X errors

Most frequent error causes: typos and missing packages.

Assignment_7.tex	Error	line 101	! Undefined control sequence. \includegraphics
Assignment_7.tex	Error	line 101	! Missing \$ inserted.<inserted text>\$ \includegraphics[scale=1]{bar_
Assignment_7.tex	Error	line 101	! Extra }, or forgotten \$. ...graphics[scale=1]{bar_esquisse-plot.jpeg}
Assignment_7.tex	Error	line 104	! Missing \$ inserted.<inserted text>\$ \end{document}

! Undefined control sequence. \includegraphics

→ package **graphicx** loaded? Solves *all* errors, causes new one 😊

! Unable to load picture or PDF file 'bar\_esquisse-plot.jpeg'.

→ file name is **bar\_esquisseplot.jpeg**

# Homework: $\text{\LaTeX}$ errors

## $\text{\TeX}$ capacity exceeded (Overleaf)

- Could be a number of things, but hard to debug on Overleaf
- Steps to take to debug:
  1. Remove all files except .TEX file = “Recompile from scratch” on Overleaf (solves 75% of errors)
  2. Very large image files (shouldn’t be a problem on most computers and Overleaf)
  3. Too many images (shouldn’t be a problem on most computers and Overleaf)
  4. Insufficient resources/ $\text{\TeX}$  capacity (shouldn’t be a problem on most computers and Overleaf)
  5. Nested floats (if you have a table within a table or a figure within a figure; need special packages for that → **subcaption**)
  6. Comment out sections of your document to see what still works

# Homework: L<sup>A</sup>T<sub>E</sub>X warnings

Warnings can be ignored (but stuff might not work properly).

Assignment_7.tex	Badbox	line 15	Underfull \hbox (badness 5847) in paragraph at lines 15--15
Assignment_7.tex	Badbox	line 25	Overfull \hbox (1.61201pt too wide) in paragraph at lines 25--29
Assignment_7.tex	Warning	line 1	No positions in optional float specifier.
Assignment_7.tex	Warning	line 98	Float too large for page by 364.99904pt
Assignment_7.tex	Warning	line 99	Reference `tab: correct answers' on page 2 undefined
Assignment_7.tex	Warning	line 104	Reference `fig:actual answers' on page 2 undefined
Assignment_7.tex	Badbox	line 30	Overfull \hbox (650.96358pt too wide) in paragraph at lines 30--106
Assignment_7.tex	Warning	line 1	There were undefined references.

Underfull/Overfull → too little/too much text in line.

Float too large for page → pic extends over margin, adjust size

\includegraphics[SIZE]{NAME} (e.g. width=\textwidth)

Reference 'key' on page XY undefined. and There were undefined references  
→ do you have a figure/table?

\begin{figure} \caption{} \label{} \end{figure}

Use **label** for naming *within* an environment, **ref** for referencing *outside* of environment.

# Homework: Glosses

This is a gloss.

- (1) ഓരോ തരത്തിലുള്ള എത്ര മുഗങ്ങളെ മോഹ പെടക്കത്തിൽ  
oro tharathilulla ethra mrgangale mosha pettakathil  
each kind.of how many the.animals Moses in.the.ark  
കയറ്റി?  
kayatti  
loaded

How many animals of each kind did Moses take on the Ark?

## Quotation marks

```
\usepackage{csquotes}
```

"don't know"

"don't know"

“don’t know”

``don't know''

, „don't know”

, , don't know''

“don't know”

\enquote{don't know}

'don't know'

\enquote\*{don't know}

## Floats: Position

$\text{\LaTeX}$  positions floats (tables and figures) where they should go → decided by professional nerds.

Usually: top/bottom of page or end of document, but can be specified as an optional parameter.

Center horizontally

`\centering`

```
\begin{figure}[placement specifier]
\centering
\includegraphics[size]{file}
\caption{}
\label{}
\end{figure}
```

# FLOATS: Position specifiers

<b>h</b>	here	Place <i>approximately</i> here
<b>t</b>	top	Place at the top of the page.
<b>b</b>	bottom	Place at the bottom of the page.
<b>p</b>	page	Put on a separate float page.
<b>!</b>	override	Override L <sup>A</sup> T <sub>E</sub> X and place it <b>RIGHT HERE</b> . Requires the <b>float</b> package.

## Floats: Size

Image too big

Scale it down to page width ...

```
\includegraphics[width=\textwidth]{figure.png}
```

or rotate

```
\usepackage{rotating}
\begin{sidewaysfigure}
  \centering
  \includegraphics[width=\textwidth]{figure.png}
  \caption{}
  \label{}
\end{sidewaysfigure}
```

# FLOATS: SIZE

## Table too big

Make it span multiple pages

`longtable`

Resize the table

`adjustbox`

Rotate the table sideways

`pdflscape`

Manually set the column width

`tabularx`

Split the table to smaller parts, adjust spacing, change font size,  
merge rows or columns, ...

Questions?



R & RStudio,  
packages, data  
types, formats,  
encoding

import from  
workspace,  
assign values,  
operations,  
clean, filter,  
arrange,  
select,  
merge, group,  
summarize,  
export,  
visualize

document,  
create clean  
and beautiful  
reports

connect,  
collaborate,  
backup

# Table of contents

1. Big projects
2. Including code
3. Bibliographies
4. Homework assignment

## Big projects

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# Big projects

Writing everything in one file gets messy *fast*.

**Solution:** Split document into smaller files (e.g. chapters) via the package `import`

`\input{FILENAME}`

treat the file contents as part of main file

`\include{FILENAME}`

same but good on slow computers, inserts empty pages

No preamble, just text!

# File structure

Name	Size	Modified
chapters	4 items	12:53
images	1 item	13:12
book.bib	204 bytes	13:01
main.tex	597 bytes	13:28
mypreamble.sty	216 bytes	13:11
title.tex	260 bytes	13:28

Main file main.tex

Preamble mypreamble.sty

Title page title.tex

Bibliography file book.bib

Folders for multiple files of same kind chapters, images

# File structure: Preamble

Make your own style  
`mypreamble.sty` and  
keep it next to the main file.  
`\usepackage{mypreamble}`



(not its final form)

```
\usepackage{fontspec}           % Fonts
\defaultfontfeatures{Mapping=tex-text}
\usepackage{xunicode}
\usepackage{amsmath}
\usepackage{amsthm}             % Theorems
\usepackage{longtable}          % Long tables
\usepackage{multirow}           % Cell and row manipulation in tables
\usepackage{paralist}            % In-line lists
\usepackage{acronym}             % List of acronyms
\usepackage{xltxtra}
\usepackage{amsymb}              % Mathematical symbols
\usepackage{bm}                  % For that one bold letter in mathmode
\usepackage{cquotes}             % Fancy quotes
\usepackage{pifont}               % Matching checkmarks
\usepackage{stmaryrd}            % Semantic brackets
\usepackage{drs}                  % DRS boxes
\usepackage{polyglossia}          % Language settings
\setdefaultlanguage{english}      % Images
\usepackage{graphicx}             % Color
\usepackage{xcolor}
\usepackage{tikz, tikz-qtree}      % Graphs and trees
\usetikzlibrary{arrows, backgrounds, calc, decorations.text,
decorations.pathreplacing, fit, intersections, positioning, shapes, trees}
\usepackage{fontawesome}           % For cool symbols
\usepackage[super]{nth}             % First, second etc. formatting
\usepackage{doi}                  % DOI link
\usepackage[backend=biber,
sorting=nyt,
sortcites=true,
indexing=cite,
useprefix=false,
maxcitenames=2,
style=authoryear-comp]{biblatex}
\addbibrresource{thesis.bib}

\usepackage{subfiles}              % Subfiles
\usepackage{subcaption}             % Subcaptions for figures
\usepackage{landscape}              % Landscape pages
\graphicspath{(./images/)}        % Path for images
\usepackage{gb4e}                  % Glosses
\usepackage{emptypage}              % Removes headers and footers from empty pages
\usepackage{fancyhdr}                % Fancy headers and footers
\usepackage{titlesec}                 % Fancy titles
\usepackage{hyperref}                % Hyperlinks and references
\usepackage{imakeidx}                 % Index
```

## File structure: Chapters

Are imported/included in your `main.tex` file.

```
\import{PATH}{FILENAME}  
\include{PATH/AND/FILENAME}
```

```
\documentclass[a4paper,11pt]{book}  
\usepackage{import}  
\begin{document}  
  
\chapter{First chapter}  
\import{chapters/}{}{chapter1.tex}  
\chapter{Second chapter}  
\include{chapters/chapter2.tex}  
  
\end{document}
```

# File structure: Title page

```
\import{./}{title.tex}
```

```
< > title.tex
1 \begin{titlepage}
2   \begin{center}
3     {\Huge \textbf{Bielefeld conspiracy}}\\
4     {\Huge Anna Pryslopska}\\
5     {\Huge \today}
6     \vfill
7     \includegraphics[width=\textwidth]{Bielefeld}
8     \vfill
9
10    Supervised by: Nobody
11
12    Special collaborator: \LaTeX
13
14  \end{center}
15
16 \end{titlepage}
```

**Bielefeld conspiracy**  
Anna Pryslopska  
June 24, 2022

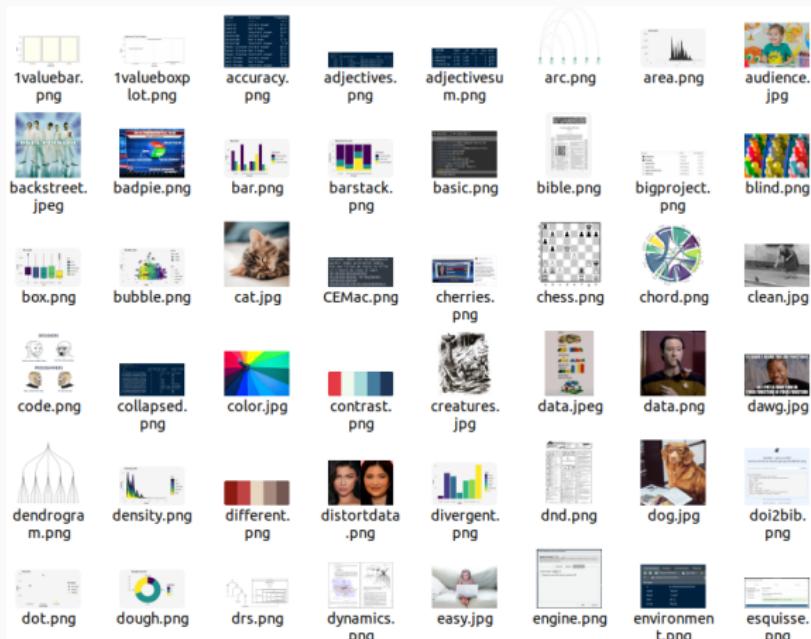


Supervised by: Nobody  
Special collaborator: \LaTeX

# File structure: Images

Requires **graphicx** and folder for images (defined in **preamble**).

```
\graphicspath{{./images/}}
```



# Parts of a book (optional but fancy)

## \frontmatter

*title page, abstract, toc, preface, list of figures, list of tables, special symbols or abbreviations, etc.*

pages are numbered with lowercase roman numbers

## \mainmatter

*the main part of your book (chapters, sections, etc.)*

resets the numbering and makes it arabic

## \backmatter

*indices, bibliography, glossary, notes, etc.*

leaves the page numbering, but does not number chapters

## Including code

---

## Verbatim, pdfpages, and listings

```
\begin{verbatim}
```

This text does not get evaluated but is printed as is. Could be useful for code snippets.

I can use # \$ % & \* ! \ and even

```
\documentclass[10pt]{article} wherever I want.
```

```
\end{verbatim}
```

To include a whole PDF document (e.g. analysis code in the appendix) use the package `pdfpages`:

```
\includepdf{myanalysis.pdf}
```

For longer code, use the package `listings`.

## Bibliographies

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# Bib basics: Not this



# Bib basics

$\text{\LaTeX}$  has a special feature for creating and referencing bibliographies.

Create bibliography → reference in text → generate references

You can manually list all references within the main .tex file by using \bibitem:

```
\begin{thebibliography}{99}
\bibitem{grice1989}
Paul Grice (1989). \textit{Studies in the Way
of Words}. Cambridge: Harvard University Press
\end{thebibliography}
```

Paul Grice (1989). *Studies in the Way of Words*. Cambridge: Harvard University Press



**FORMAT  
EACH \BIBITEM  
BASED ON  
REFERENCE STYLE**



**CREATE  
BIBLIOGRAPHY  
DATABASE FILE**

# BibLaTeX

Bib(La)TeX allows for using a separate `.bib` file with a list of references.

In the preamble:

```
\usepackage[OPTIONS]{biblatex}  
\addbibresource[OPTIONS]{FILE NAME}
```

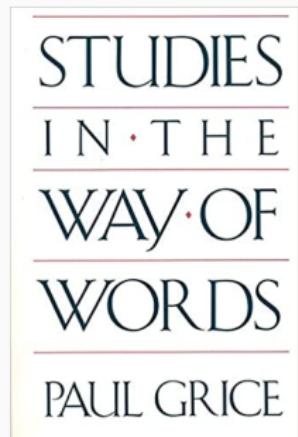
In the document body:

```
\printbibliography[OPTIONS]
```

## .bib file structure

List of references, written manually or imported (e.g. from a reference manager).

```
@book{grice1989,  
    title={Studies in the Way of Words},  
    author={Grice, Paul},  
    year={1989},  
    publisher={Harvard University Press},  
    address={Cambridge}  
}
```



Paul Grice (1989). *Studies in the Way of Words*. Cambridge: Harvard University Press

## Multiple authors

```
@book{wickham2023,  
  title={R for data science: import, tidy, transform,  
  visualize, and model data},  
  author={Wickham, Hadley and Çetinkaya-Rundel,  
  Mine and Grolemund, Garrett},  
  edition={2},  
  year={2023},  
  publisher={O'Reilly Media, Inc.},  
  url={https://r4ds.had.co.nz/}  
}  
  
author={Hadley Wickham and Mine Çetinkaya-Rundel  
and Garrett Grolemund}
```

Hadley Wickham, Mine Çetinkaya-Rundel, and Garrett Grolemund (2023). *R for data science: import, tidy, transform, visualize, and model data*. 2nd ed. O'Reilly Media, Inc. URL: <https://r4ds.hadley.nz/>

I want it THAT way



# Don't question me why

CoSMAS I/II ≠ I/II, CoSMAS

World Health Organisation ≠ Organisation, World Health



Sometimes capitalization matters → style-dependent

```
@misc{cosmas2008,  
  Year={2008},  
  Author={{CoSMAS I/II}},  
  Title={{C}orpus {S}earch, {M}anagement and  
  {A}nalysis {S}ystem (Version 3.9)},  
  Url={http://www.ids-mannheim.de/cosmas2},  
  Urldate={2021-08-13}  
}
```

CoSMAS I/II (2008). *Corpus Search, Management and Analysis System (Version 3.9)*. URL: <http://www.ids-mannheim.de/cosmas2> (visited on 08/13/2021)

# Referencing

Command	Type	Example
<code>\cite{}</code>	bare	Grice 1989
<code>\parencite{}</code>	parenthetical	(Grice 1989)
<code>\textcite{}</code>	textual	Grice (1989)
<code>\footcite{}</code>	footnote	<sup>1</sup>
<code>\smartcite{}</code>	context-dependent	<sup>2</sup>
<code>\citeauthor{}</code>	author list	Grice
<code>\citetitle{}</code>	(short) title	<i>Studies in the Way of Words</i>
<code>\citeyear{}</code>	year	1989
<code>\fullcite{}</code>	full reference	Paul Grice (1989). <i>Studies in the Way of Words</i> . Cambridge: Harvard University Press
<code>\nocite{}</code>	include in bibliography w/o citation	

<sup>1</sup>Grice 1989.

<sup>2</sup>Grice 1989.

# Write or import

## Create from scratch

slow, tedious, but good for complicated misc. entries

[http://tug.ctan.org/info/biblatex-cheatsheet/  
biblatex-cheatsheet.pdf](http://tug.ctan.org/info/biblatex-cheatsheet/biblatex-cheatsheet.pdf)

## Semi-automatic entry from template

(e.g. Bibliography → Biblatex → Article in journal)

many optional fields (e.g. translator, annotator, series) and others  
you still need to fill in manually

## Import online

fast, convenient, but **always** contain mistakes

Life's too short to write bibliography from scratch.

## How Speakers Refer: The Role of Accessibility

Jennifer E. Arnold

First published: 31 March 2010 | <https://doi.org/10.1111/j.1749-818X.2010.00193.x> | Citations: 123

[Read the full text >](#)



PDF



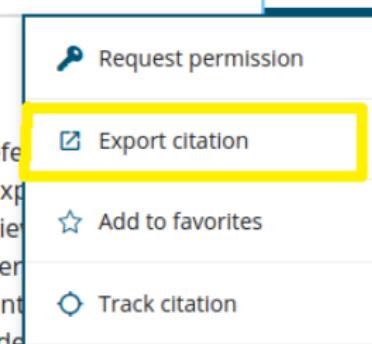
TONS



SHARE

### Abstract

One of the core components of language is referentiality. Speakers have the ability to choose between expressions that are highly explicit (e.g., *Peter*) and reduced lexical forms (e.g., *he*). This paper reviews research on how speakers choose between these forms, and shows that this choice is driven by the *accessibility* or *salience* of the referent. Accessibility constraints on referentiality underlie these effects. Two classes of constraints are identified: (1) linguistic processing constraints that increase the use of implicit forms, and (2) non-linguistic processing constraints that increase the use of explicit forms. These effects together support a modified version of the traditional claim that speakers choose referential explicitness so that the listener can identify the referent, and underscore the need for accessibility to be mediated by a non-linguistic representation.



# Doi-to-bib

DOI = (persistent) Digital Object Identifier

<https://www.doi2bib.org/>



doi2bib – give us a DOI  
and we will do our best to get you the BibTeX entry

[get BibTeX](#)

```
@article{Arnold2010,
  doi = {10.1111/j.1749-818X.2010.00193.x},
  url = {https://doi.org/10.1111/j.1749-818X.2010.00193.x},
  year = {2010},
  month = mar,
  publisher = {Wiley},
  volume = {4},
  number = {4},
  pages = {187--203},
  author = {Jennifer E. Arnold},
  title = {How Speakers Refer: The Role of Accessibility},
  journal = {Language and Linguistics Compass}
}
```

<https://doi.org/10.1111/j.1749-818X.2010.00193.x>

[Copy Bib to Clipboard](#) [Copy URL to Clipboard](#)

# Google Scholar

scholar.google.com

≡ Google Scholar

Arnold 2010 How Speakers Refer

Artikel

Beliebige Zeit

How speakers refer: The role of accessibility [PDF] wiley.com

JE Arnold - Language and Linguistics Compass

One of the core components of language is referentiality, which is the ability to point to entities in the world. This paper reviews claims about how speakers refer to entities in the world, focusing on the role of accessibility or salience of the referent, and the potential effects. Two classes of constraint are examined: (a) constraints on what can be referred to, and (b) constraints on how referents are identified. These have been identified as the determinant of referential choice.

Nach Relevanz sortieren

Nach Datum sortieren

Nach beliebige Sprache Seiten auf Deutsch

Alle Typen Übersichtsarbeiten

Speichern Zitieren Zitiert von: 280 Ähnliche Artikel

[ZITATION] How speakers refer: The role of accessibility. *Language and Linguistics Compass*, 4 (4), 187–203

JE Arnold - 2010

Speichern Zitieren Zitiert von: 16 Ähnliche Artikel

Beste Ergebnisse für diese Suche Alle Ergebnisse

X Zitieren

MLA Arnold, Jennifer E. "How speakers refer: The role of accessibility." *Language and Linguistics Compass* 4.4 (2010): 187-203.

APA Arnold, J. E. (2010). How speakers refer: The role of accessibility. *Language and Linguistics Compass*, 4(4), 187-203.

ISO 690 ARNOLD, Jennifer E. How speakers refer: The role of accessibility. *Language and Linguistics Compass*, 2010, 4. Jg., Nr. 4, S. 187-203.

BibTeX EndNote RefMan RefWorks

## Bibliography in style

Depends on journal, advisor, personal preference, day, mood, etc.

Formats references in text and in bibliography (cf. [examples on Overleaf](#)).

```
\usepackage[style=authoryear]{biblatex}
```

Style	Output
numeric	[1] Paul Grice. <i>Studies in the Way of Words</i> . Cambridge: Harvard University Press, 1989.
alphabetic	[Gri89] Paul Grice. <i>Studies in the Way of Words</i> . Cambridge: Harvard University Press, 1989.
reading	<b>Grice: Studies in the Way of Words</b> grice1989 Paul Grice. <i>Studies in the Way of Words</i> . Cambridge: Harvard University Press, 1989.
authoryear	Grice, Paul (1989). <i>Studies in the Way of Words</i> . Cambridge: Harvard University Press.

# Get yourself sorted

Depends on journal, advisor, personal preference, day, mood, etc.

Sort the bibliography entries.

```
\usepackage[sorting=nyt, style=authoryear]{biblatex}
```

Sorting	Output
nty	name, title, year
nyt	name, year, title
ynt	year, name, title
ydnt	year (descending order), name, title
none	no sorting

# Compilation



1.  $\text{\LaTeX}$  basic file info
2.  $\text{\LaTeX}$  labels, references, citations, indices, toc, etc.
3. BibTeX input citations, bibliography
4.  $\text{\LaTeX}$  adjust based on BibTeX



2. and 3. can be swapped.

If you skip 3. or don't have a reference in the **bib** file, then the reference will show up as **arnold2011** or **??**, be omitted in the bibliography, and  $\text{\TeX}$  will complain “There were undefined references.”

## Print bibliography

In document body using the command \printbibliography

# References

---

-  Arnold, Jennifer E (2010). "How speakers refer: The role of accessibility." In: *Language and Linguistics Compass* 4.4, pp. 187–203.
-  CoSMAS I/II (2008). *Corpus Search, Management and Analysis System (Version 3.9)*. URL:  
<http://www.ids-mannheim.de/cosmas2> (visited on 08/13/2021).
-  Grice, Paul (1989). *Studies in the Way of Words*. Cambridge: Harvard University Press.
-  Wickham, Hadley, Mine Çetinkaya-Rundel, and Garrett Grolemund (2023). *R for data science: import, tidy, transform, visualize, and model data*. 2nd ed. O'Reilly Media, Inc. URL:  
<https://r4ds.hadley.nz/>.

# Summary

- ✓ large project management
- ✓ including custom styles
- ✓ including PDF files
- ✓ basic Bib(La)TeX
- ✓ citation types
- ✓ bibliography styles
- reference managers, looking up literature, text editors

Questions?

## Homework assignment

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## Homework assignment due June 28th at 15:30

- ❸ Complete assignment 10 ( $\rightarrow$  ILIAS)