Essential Research Toolkit for the Humanities

Week 12: Big projects and bibliographies with LaTeX

Anna Pryslopska

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Psycholinguistics and Cognitive Modeling Lab

Homework: LaTeX 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: LaTeX 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: Excellent work!

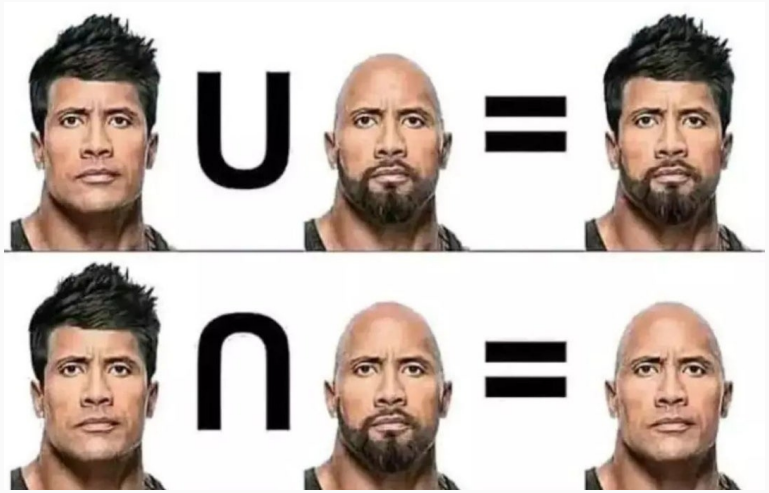


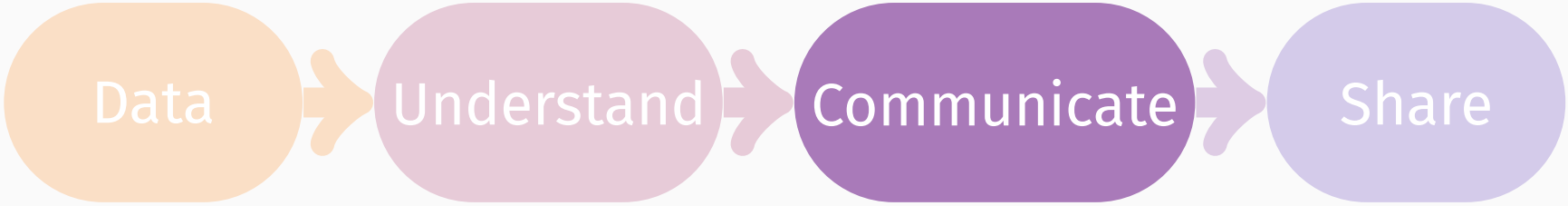
Figure 1: An illustration of a union and an intersection.

As illustrated in Figure 1, there is a a big difference between ∪ and ∩.

```
As illustrated in
Figure \ref{fig:rock},
there is a a big difference
between $\cup$ and $\cap$.
```

Questions?

Communicating



import, clean, transform, export, visualize, model

document, create clean and beautiful reports

connect, collaborate, backup

Table of contents

Big projects

Big projects

Writing everything in one file gets messy *fast*.

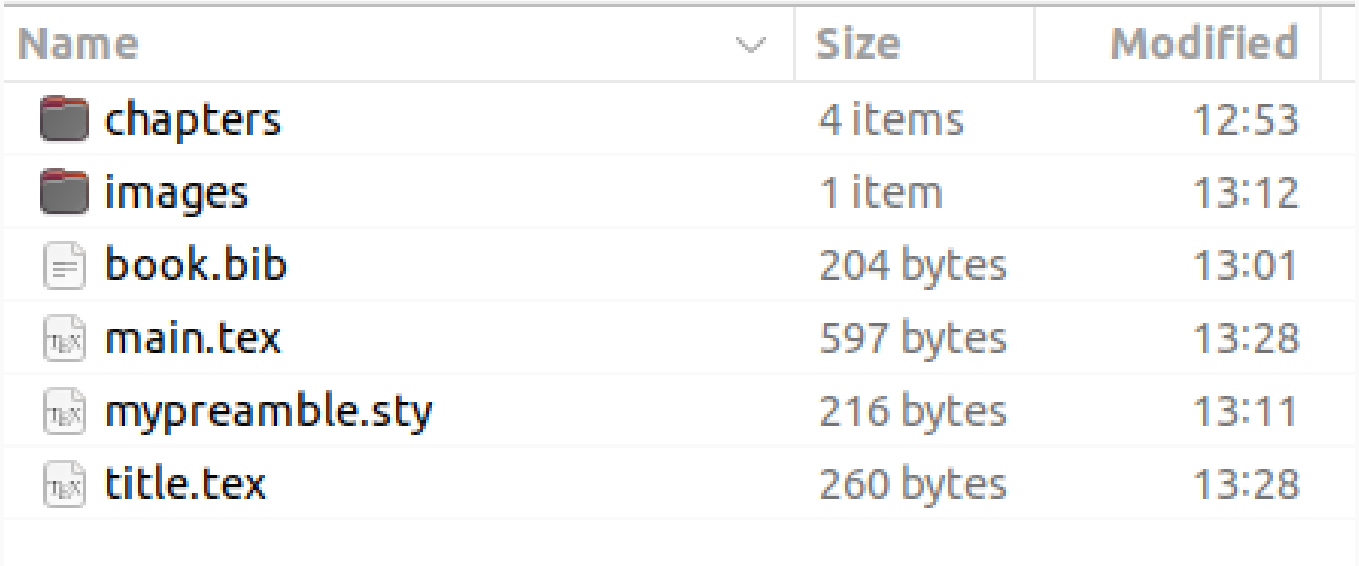
Solution: Split document into smaller files (e.g. chapters) via the package `import`

`\input{FILENAME}`
treat the file contens as part of main file

`\include{FILENAME}`
same but good on slow computers, inserts empty pages

No preamble, just text!

File structure



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 file, e.g. `mypreamble.sty` and keep it with your main file.

Keeps your main file tidy.

`\usepackage{mypreamble}`

```
\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{amssymb}            % Mathematical symbols
\usepackage{bm}                 % For that one bold letter in mathmode
\usepackage{csquotes}           % Fancy quotes
\usepackage{pifont}             % Matching checkmarks
\usepackage{stmaryrd}           % Semantic brackets
\usepackage{drs}                % DRS boxes
\usepackage{polyglossia}        % Language settings
\setdefaultlanguage{english}
\usepackage{graphicx}           % Images
\usepackage{xcolor}             % Color
\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}
\addbibresource{thesis.bib}
\usepackage{subfiles}           % Subfiles
\usepackage{subcaption}         % Subcaptions for figures
\usepackage{lscape}             % 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
```

(not its final form)

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

```
\begin{titlepage}
\begin{center}

{\Huge \textbf{Bielefeld conspiracy}}\\

{\Huge Anna Pryslopska}\\

{\Huge \today}
\vfill

\includegraphics[width=\textwidth]{Bielefeld}
\vfill

Supervised by: Nobody

Special collaborator: \LaTeX

\end{center}
\end{titlepage}
```

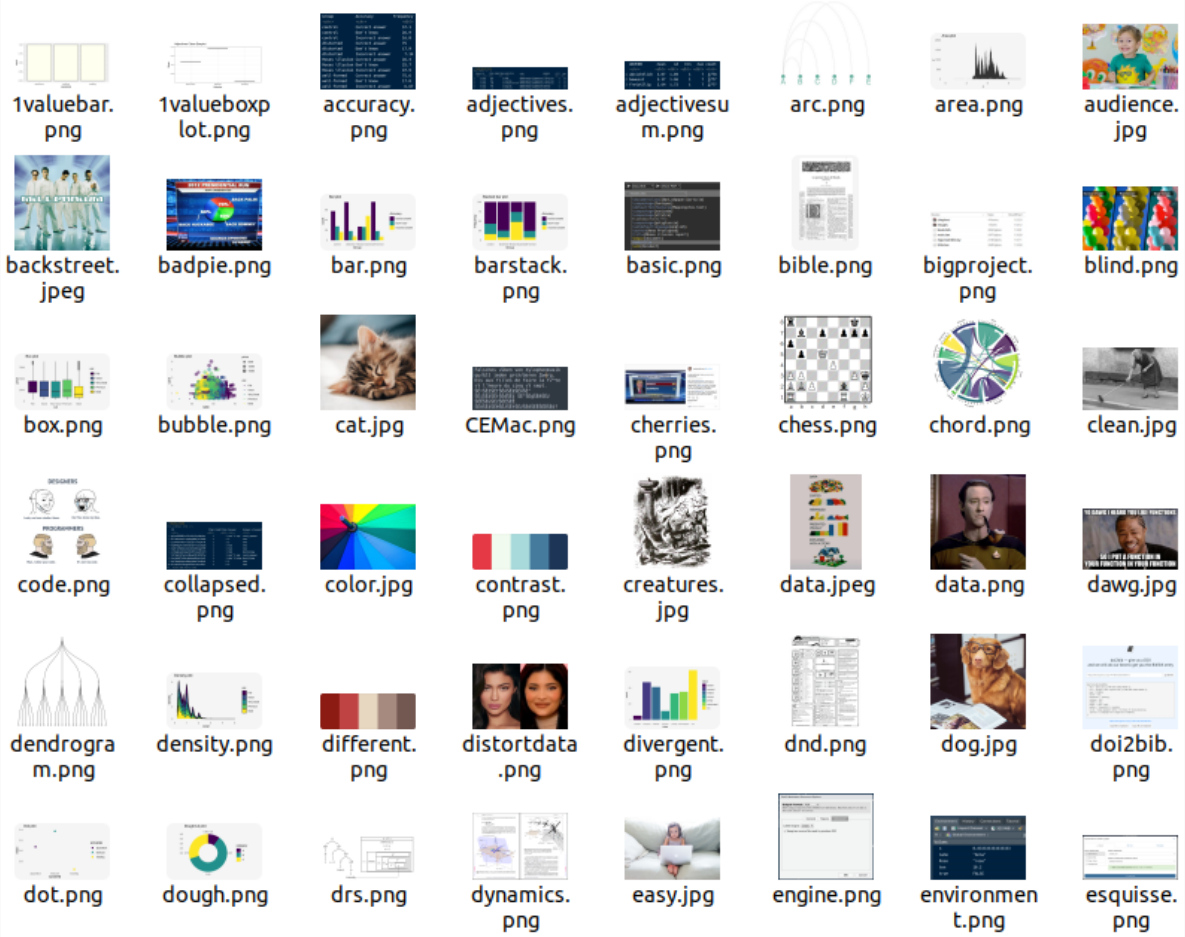
Bielefeld conspiracy
Anna Pryslopska
June 24, 2022

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{myfile.pdf}
```

For longer code, use the package **listings**.

Bibliographies

Bib basics

Bib basics

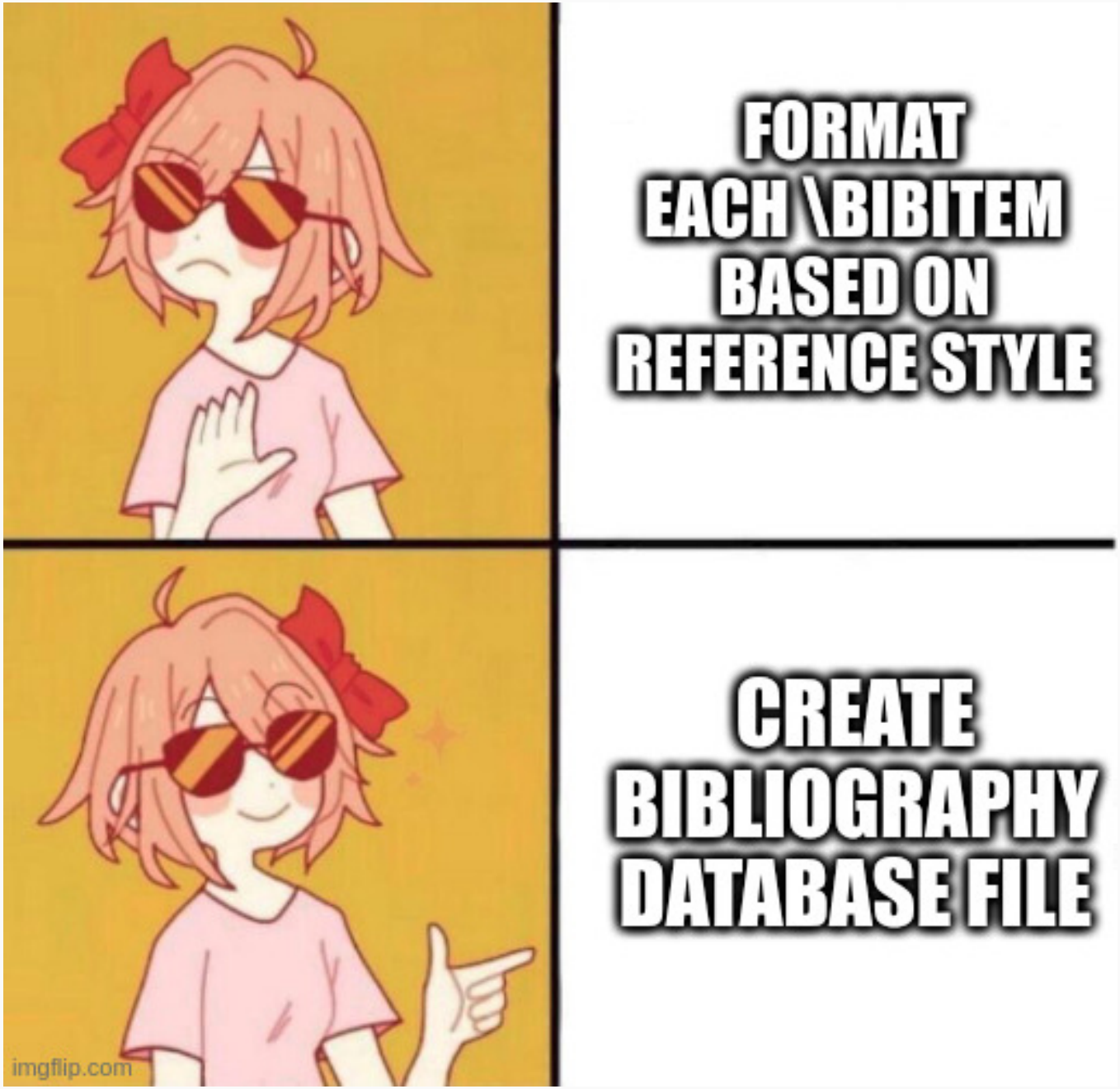
LaTeX has a special feature for creating and referencing bibliographies.

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
imgflip.com

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}
```

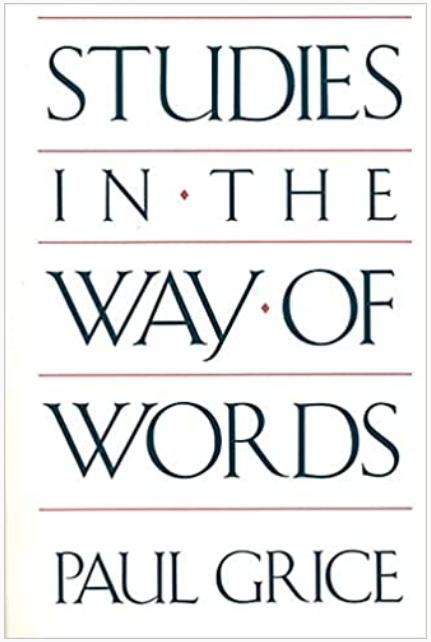
In the document body:

```
\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{wickham2016,
  title={R for data science: import, tidy, transform,
  visualize, and model data},
  author={Wickham, Hadley and Grolemund, Garrett},
  year={2016},
  publisher={O'Reilly Media, Inc.},
  url={https://r4ds.had.co.nz/}
}
```

```
author={Hadley Wickham and Garrett Grolemund}
```

Hadley Wickham and Garrett Grolemund (2016). *R for data science: import, tidy, transform, visualize, and model data*. O'Reilly Media, Inc. URL: https://r4ds.had.co.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
`\cite{}`	bare	Grice 1989
`\parencite{}`	parenthetical	(Grice 1989)
`\textcite{}`	textual	Grice (1989)
`\footcite{}`	footnote	[1]
`\smartcite{}`	context-dependent	[2]
`\citeauthor{}`	author list	Grice
`\citetitle{}`	(short) title	*Studies in the Way of Words*
`\citeyear{}`	year	1989
`\fullcite{}`	full reference	Paul Grice (1989). *Studies in the Way of Words*. Cambridge: Harvard University Press
`\nocite{}`	include in bibliography w/o citation	

[1] Grice 1989.
[2] 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`

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.

Journal website

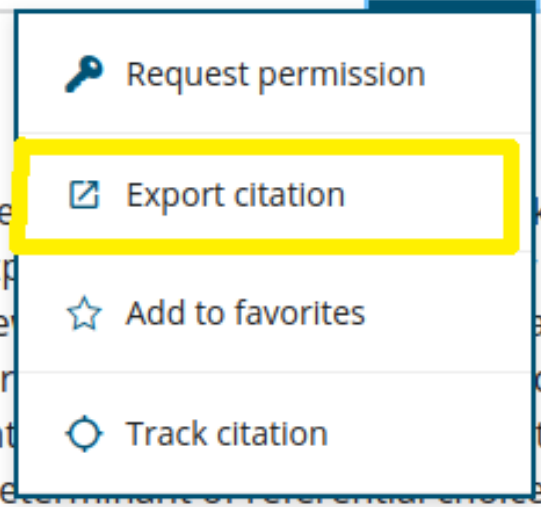
How Speakers Refer: The Role of Accessibility

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 TOOLS SHARE



Abstract

One of the core components of language is refe ker to choose between expressions that are highly exp *Peter*), and reduced lexical forms (e.g., *he*). This paper revie argely driven by the *accessibility* or *salience* of the refer cesses that underlie these effects. Two classes of constraint tatus, which has traditionally been identified as the de s 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.

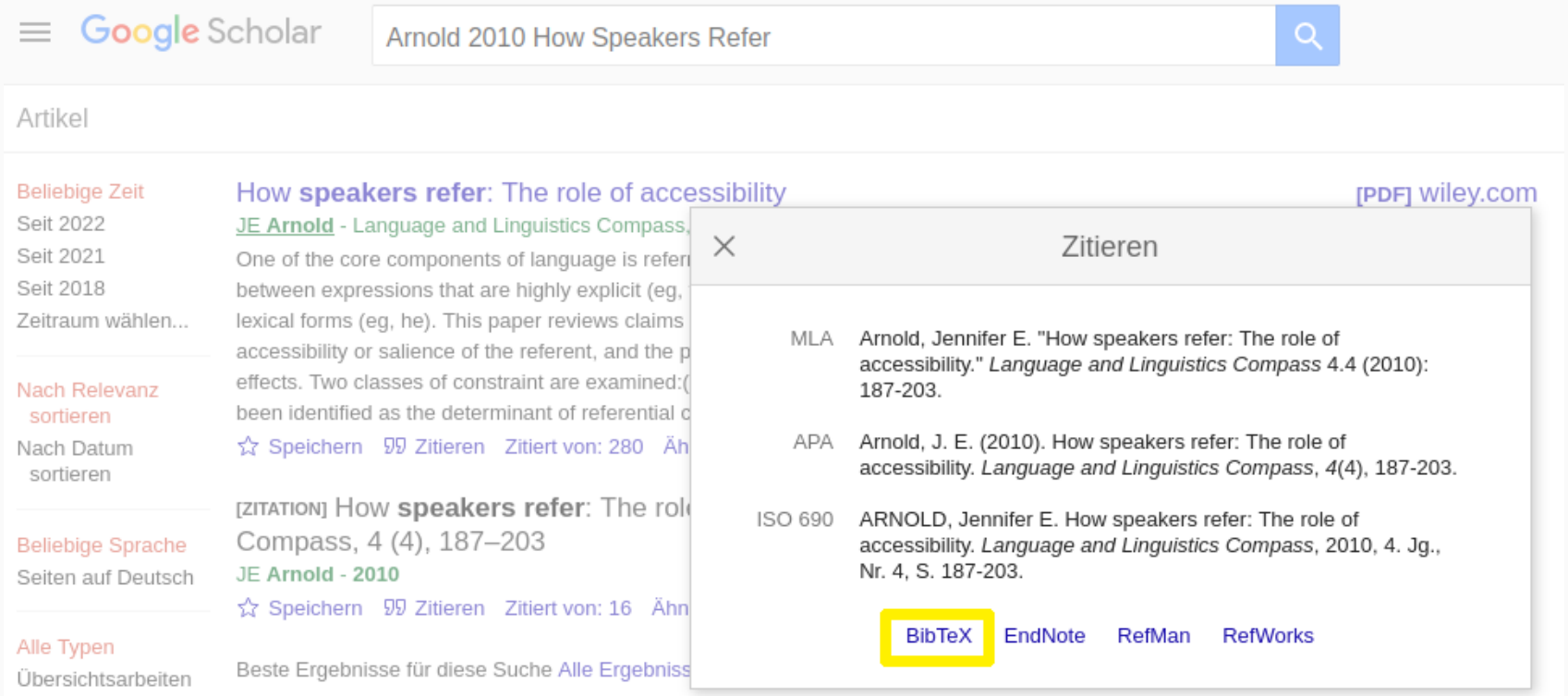
Doi-to-bib

DOI = (persistent) Digital Object Identifier

`https://www.doi2bib.org/`

Google Scholar

`scholar.google.com`



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. *Studies in the Way of Words*. Cambridge: Harvard University Press, 1989.
alphabetic	[Gri89] Paul Grice. *Studies in the Way of Words*. Cambridge: Harvard University Press, 1989.
reading	**Grice: Studies in the Way of Words grice1989** Paul Grice. *Studies in the Way of Words*. Cambridge: Harvard University Press, 1989.
authoryear	Grice, Paul (1989). *Studies in the Way of Words*. 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. XeLaTeX — basic file info
2. XeLaTeX — labels, references, citations, indices, toc, etc.
3. BibTeX — input citations, bibliography
4. XeLaTeX — 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 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 and Garrett Grolemund (2016). *R for data science: import, tidy, transform, visualize, and model data*. O’Reilly Media, Inc. URL: `https://r4ds.had.co.nz/`.

Questions?

Homework assignment

Homework assignment due July 4

1. Add 10 different references to your report, among them
   - at least one journal `@article`
   - at least one book `@book`
   - at least one part of a book `@incollection`
   - at least one thesis `@thesis`
2. Reference all the citations in the text (does not need to make sense in the context, but bonus points if it does) so that there is at least one of each of these:
   - as a parenthetical reference
   - as a textual reference
   - reference only the author item reference only the publication year
   - reference only the title
   - reference it without a citation but include in bibliography
3. Sort the entries by name, year, and title
4. Use the `authoryear` or `apa` reference style