

HUMBOLDT-UNIVERSITÄT ZU BERLIN



L^AT_EX for Linguists

L^AT_EX 6: Examples & glossing

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LOT 2019, Amsterdam

January 16, 2019

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Package: gb4e

Different packages for examples:

- linguex
- gb4e
- langsci-gb4e
- ...

gb4e has **more options** than linguex, but it re-defines commands causing problems with the math mode (with `_`) and other packages (e.g. forest).

Load gb4e as one of the **last packages**:

```
\usepackage{gb4e}  
\usepackage[hidelinks]{hyperref}
```

Similar to the `itemize` environment, use an `exe` **environment** for examples, putting every sentence/phrase in an `\ex` **item**.

```
This is a sample text.
\begin{exe}
  \ex This is an example.
  \ex This is an example. The only purpose of this text is to show how to work
      with \LaTeX .
\end{exe}
This is a sample text. The only purpose of this text is to show how to work
with \LaTeX .
```

This is a sample text.

- (1) This is an example.
- (2) This is an example. The only purpose of this text is to show how to work with L^AT_EX.

This is a sample text. The only purpose of this text is to show how to work with L^AT_EX.

For **embedded example levels**, use the `xlist` environment.

```
\begin{exe}
  \ex This is an example.
  \ex This is an example. The only purpose of this text is to show how to work
    with \LaTeX .
  \begin{xlist}
    \ex This is an example on a new level.
    \ex This is an example. The only purpose of this text is to show how to work
      with \LaTeX .
  \end{xlist}
  \ex This is an example on the first level.
\end{exe}
```

- (3) This is an example.
- (4) This is an example. The only purpose of this text is to show how to work with L^AT_EX.
 - a. This is an example on a new level.
 - b. This is an example. The only purpose of this text is to show how to work with L^AT_EX.
- (5) This is an example on the first level.

For **embedded example levels inside embedded examples**, keep using the `xlist` **environment**.

```
This is a sample text.
\begin{exe}
  \ex This is an example.
  \ex This is an example. The only purpose of this text is to show how to work
    with \LaTeX .
  \begin{xlist}
    \ex This is an example on a new level.
    \ex This is an example. The only purpose of this text is to show how to work
      with \LaTeX .
    \begin{xlist}
      \ex This is an example on a whole new level.
      \ex This is an example. The only purpose of this text is to show how to
        work with \LaTeX .
    \end{xlist}
    \ex This is an example on the second level.
  \end{xlist}
  \ex This is an example on the first level.
\end{exe}
This is a sample text. The only purpose of this text is to show how to work
with \LaTeX .
```

This is a sample text.

- (6) This is an example.
- (7) This is an example. The only purpose of this text is to show how to work with L^AT_EX.
 - a. This is an example on a new level.
 - b. This is an example. The only purpose of this text is to show how to work with L^AT_EX.
 - i. This is an example on a whole new level.
 - ii. This is an example. The only purpose of this text is to show how to work with L^AT_EX.
 - c. This is an example on the second level.
- (8) This is an example on the first level.

This is a sample text. The only purpose of this text is to show how to work with L^AT_EX.

Embedding examples with **letter numbering** in **arabic numbering**:

```
\begin{exe}
  \ex %empty!
  \begin{xlist}
    \ex This is an example.
    \ex This is a different example.
  \end{xlist}
\end{exe}
```

- (9) a. This is an example.
 b. This is a different example.

Cross-references with `label` and `ref`:

```
\begin{exe}
  \ex \label{ex:Arabic}%empty!
  \begin{xlist}
    \ex This is an example.
    \label{ex:Letter1}
    \ex This is a different example.
    \label{ex:Letter2}
  \end{xlist}
\end{exe}
```

See the following cross-references: (10), (10a), and (10b).

- (10) a. This is an example.
 b. This is a different example.

Acceptability judgements

For acceptability/grammaticality judgements, use the **square brackets** and enclose the sentence in **curly brackets**.

```
\begin{exe}
  \ex[*]{These ungrammatical example is.}
  \ex[] {This example is grammatical.}
  \ex[\#]{colorless green idea}
  \ex This example is grammatical.
\end{exe}
```

- (11) * These ungrammatical example is.
- (12) This example is grammatical.
- (13) # colourless green idea
- (14) This example is grammatical.

Glossing

- ① The `\ex` line remains empty;
- ② use `\gll` and write your **example** in that line; **end** it with `\;`;
- ③ write the **glosses**, and **end** this line with `\;`;
- ④ **optionally**, give a **translation** `\glt`.

```
\begin{exe}
  \ex
  \gll Jeder Bauer, der einen Esel besitzt, schlägt ihn. \;
  every farmer that a.\textsc{acc} donkey owns beats it.\textsc{acc}\;
  \glt 'Every farmer who owns a donkey beats it.' \hfill \citep{Geach62}
\end{exe}
```

- (15) Jeder Bauer, der einen Esel besitzt, schlägt ihn.
 every farmer that a.ACC donkey owns beats it.ACC
 'Every farmer who owns a donkey beats it.'

(Geach, 1962)

Use **curly brackets** to group elements that are being **glossed as a unit**.

```
\begin{exe}
\ex
\gll {Multiword expression} -s can be glossed too.\\
Mehrwortlexem -e.\textsc{pl} können sein glossiert auch\\
\glt 'Auch Mehrwortlexeme können glossiert werden.'
\ex
\gll Peter$_{1}$ $t_{1}$ schläft$_{2}$ $t_{2}$\\
Peter {} sleeps\\
\glt 'Peter ist sleeping.'
\end{exe}
```

- (16) Multiword expression -s can be glossed too.
 Mehrwortlexem -e.PL können sein glossiert auch
 'Auch Mehrwortlexeme können glossiert werden.'
- (17) Peter₁ t₁ schläft₂ t₂
 Peter sleeps
 'Peter ist sleeping.'

Leipzig Glossing Rules (cf. Comrie et al., 2015)

Customizing identifiers

With the command `\exi{ }` instead of `ex`, you can choose own identifiers. The automatic numbering skips the `exi` examples, see (18), and (19).

```
\begin{exe}
  \ex a noun phrase \label{ex:DetNP}
  \exi{($\alpha$)} a noun phrase modified with a PP
  \ex[*]{noun phrase a} \label{ex:NPDet}
  \exi{($\beta$)}[*]{a with a PP noun phrase modified}
\end{exe}
```

(18) a noun phrase

(α) a noun phrase modified with a PP

(19) * noun phrase a

(β) * a with a PP noun phrase modified

With the command `\extr{ }` and `\exp{ }` instead of `ex`, you can **repeat the numbering** of earlier examples or repeat it with a **prime**, respectively.

```
\begin{exe}
  \ex[] {a new noun phrase}
  \extr{ex:DetNP}[] {a noun phrase}
  \exp{ex:NPDet}[*] {noun a phrase}
  \ex[] {another noun phrase}
\end{exe}
```

- (20) a new noun phrase
- (18) a noun phrase
- (19') * noun a phrase
- (21) another noun phrase

For further features of `gb4e`, take a look at the package documentation (Kolb et al., 2010).

- 1 Package: gb4e
- 2 Package: langsci-gb4e
- 3 Package: jambox

Package: langsci-gb4e

There is an **improved version** of `gb4e` made by the *Language Science Press* team.

```
\usepackage{langsci-gb4e}
```

You can use **all** `gb4e` **commands**, but there is also a shorter version for the `exe` and `xlist` environments (open and close every level with `\ea` and `\z`, every further item in a level is given by `\ex`), as well as further glossing lines, e.g. `\gl111`.

```
\ea This is an example.
  \ea This is an example.
  \ex This is an example.
  \z
\ex This is an example.
\z
```

- (22) This is an example.
- a. This is an example.
 - b. This is an example.

- (23) This is an example.

For further features of `gb4e`, take a look at the LSP guidelines (Nordhoff & Müller, 2018).

- 1 Package: gb4e
- 2 Package: langsci-gb4e
- 3 Package: jambox

Package: jambox

For adding comments to your examples, you can use the `\hfill` command (alignment on the right side)

```
\ea If no mistake have you made, yet losing you are \dots\ a different game you
    should play. \hfill [Yoda-English]
\ex Das ist ein Beispiel. \hfill [German]
\ex Este es un ejemplo. \hfill [Spanish]
\z
```

- (24) If no mistake have you made, yet losing you are ... a different game you
 should play. [Yoda-English]
- (25) Das ist ein Beispiel. [German]
- (26) Este es un ejemplo. [Spanish]

... or the jambox package.

You will need the `jambox.sty` **file** in the same folder as your `.tex` file.

```
\usepackage{jambox}
```

With `jambox.sty`, you can adjust the **spacing from the right margin to the beginning of the comments** (see: `\settowidth\jamwidth{ }`)

```
\settowidth\jamwidth{[Yoda-English]X}  
\ea If no mistake have you made, yet losing you are \dots\ a different game you  
    should play. \jambox{[Yoda-English]}  
\ex Das ist ein Beispiel. \jambox{[German]}  
\ex Este es un ejemplo. \jambox{[Spanish]}  
\z
```

- | | | |
|------|---|----------------|
| (27) | If no mistake have you made, yet losing you are ... a different game you should play. | [Yoda-English] |
| (28) | Das ist ein Beispiel. | [German] |
| (29) | Este es un ejemplo. | [Spanish] |

Complex examples:

```
\settowidth\jamwidth{(Chomsky, 1957: 1)XX}
```

```
\ea[?]{Patience you must have, my young padawan. \jambox{(Yoda, 2005)}  
}\label{ex:Jam1}
```

```
\ex[] {Syntax is the study of the principles and processes by which sentences are  
        constructed in particular languages. Syntactic investigation of a given  
        language has as its goal the construction of a grammar that can be viewed as  
        a device of some sort for producing the sentences of the language under  
        analysis. \jambox{\citep[1]{Chomsky57a}}  
}\label{ex:Jam2}
```

```
\ex[] {  
\gll Jeder Bauer, der einen Esel besitzt, schlägt ihn. \\  
every farmer that a.\textsc{m}.\textsc{acc} donkey owns beats it.\textsc{m}.\textsc{acc} \\  
\glt 'Every farmer who owns a donkey beats it.'  
\jambox{\citep{Geach62}}  
}\label{ex:Jam3}  
\z
```

- (30) ? Patience you must have, my young padawan. (Yoda, 2005)
- (31) Syntax is the study of the principles and processes by which sentences are constructed in particular languages. Syntactic investigation of a given language has as its goal the construction of a grammar that can be viewed as a device of some sort for producing the sentences of the language under analysis. (Chomsky, 1957: 1)
- (32) Jeder Bauer, der einen Esel besitzt, schlägt ihn.
 every farmer that a.M.ACC donkey owns beats it.M.ACC
 'Every farmer who owns a donkey beats it.' (Geach, 1962)

Exercise

Go to
<https://github.com/langsci/latex4linguists/blob/master/3-2.md>
and follow the instructions of **all blocks** in your .tex file.

Internet sources I

- Link: Language Science Press
www.langsci-press.org
 [Access: 02/01/2019]
- YouTube-Tutorial: L^AT_EX Tutorial
<https://www.youtube.com/channel/UCC-3dzj6dfbWwGzQzhkUS5A>
 [Access: 23/10/2017]

Literature I

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<http://www.ctan.org/pkg/gb4e>.
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https://www.linguistik.hu-berlin.de/de/staff/amp/downloads/myp2018-04-06-hinweise_seminararbeit.pdf.
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<http://langsci.github.io/guidelines/latexguidelines/LangSci-guidelines.pdf>.