

Basic L^AT_EX for Linguists

Benjamin Slade

v0.1

1 Introduction

A working draft of a quick “L^AT_EX-in-half-an-hour” guide for linguists.

2 Install L^AT_EX, download a L^AT_EX editor

Install T_EXLive (free, open-source software) following the instructions appropriate for your operating system: <https://www.tug.org/texlive/quickinstall.html>.

There are heaps of L^AT_EX editors, as you can see from, for instance, <https://tex.stackexchange.com/questions/339/latex-editors-ides> or https://en.wikipedia.org/wiki/Comparison_of_TeX_editors.

Lots of high-powered text editors have L^AT_EX plugins, including Emacs, Vim, Visual Studio Code, etc.

I like using [Emacs](#) with the [AUCTeX](#) package, but these sorts of text editors have their own learning curves. So that you aren’t adding yet another learning curve that the one you already have with L^AT_EX, using one of these simpler L^AT_EX-specialised editors might be good, at least to begin with:

- [TeXstudio](http://www.texstudio.org): <http://www.texstudio.org>
- [TeXmaker](http://www.xm1math.net/texmaker): <http://www.xm1math.net/texmaker>
- [TeXworks](http://www.tug.org/texworks): <http://www.tug.org/texworks>

All of these are free (no cost) and open-source (as are the high-powered text editors mentioned above). These will make producing L^AT_EX documents much easier, though in principle you could hand-type L^AT_EX code anywhere.

You could also use an online service like [Overleaf](#), but it’s nice to have a local T_EX installation.

The following sections include actual L^AT_EX code boxed in green with the corresponding output shown in a black box. You can copy and paste the green code into your editor, and/or inspect the [.tex file](#) from which this .pdf was generated.

3 Basic Document

The basic L^AT_EX document consists of a PREAMBLE followed by the actual content of your document. So a L^AT_EX file might look like this:¹

```
% PREAMBLE BEGINS HERE
\documentclass{article}      % specify type of document

\usepackage{linguex}          % example package for lazy linguists
\usepackage{qtree}            % for easy basic trees
\usepackage{forest}           % for advanced trees
\usepackage{stmaryrd}         % add semantic evaluation brackets
\usepackage{graphicx}         % include images
\usepackage{simpsons}         % Simpsons characters
% some mathematics packages
\usepackage{amsmath,amsthm,amscd}
\usepackage{amssymb}
\usepackage[all]{xy}

\title{Your Title Here}      % title
\author{Some Linguist}        % author
% PREAMBLE ENDS HERE

\begin{document}              % start of actual document

\maketitle                  % this auto-produces a title for you

Hello, world!                % your actual content would be here
.....                         % your actual content would be here

\end{document}                % document ends here
```

This will produce a document that looks something like this:

Your Title Here

Some Linguist

11 February 2019

Hello, world!

Not very exciting yet of course. You can, however, copy the above code into your L^AT_EX editor (save it as `testing.tex` or whatever) and try it out, and use it as the basis for the

¹Note: the '%' symbol is a comment symbol; L^AT_EX won't process anything following % on the same line. I provide comments just to indicate what each thing does, but they aren't necessary and L^AT_EX just ignores them.

following extended examples, just entering or pasting the commands somewhere in-between `\begin{document}` and `\end{document}`.

4 Basic formatting

Putting the following L^AT_EX code between `\begin{document}` and `\end{document}`:

```
“some text in quotes”\\
\textbf{some bold text} \\
\textit{some italic text} \\
\textsl{some slanted text} \\
\texttt{some typewriter-style text} \\
\textsf{some sans serif text} \\
\textsc{some smallcaps text}
```

produces:

```
“some text in quotes”
some bold text
some italic text
some slanted text
some typewriter-style text
some sans serif text
SOME SMALLCAPS TEXT
```

Your L^AT_EX editor should have these formatting things as commands bound to shortcut keys, just like in a word-processor, so if you select some text and hit **Ctrl-B** your editor should wrap `\textbf{...}` around the selected text.²

You also don't need to worry about spacing for the most part. L^AT_EX will take care it for you. You like entering two spaces after a full stop? Great. One space? Also great. Twelve spaces? No problem.

```
Note how many arbitrary spaces I'm putting
in. \LaTeX\ doesn't care. It'll just do the right
thing.
```

L^AT_EX, nevertheless, produces sanely formatted text:³

Note how many arbitrary spaces I'm putting in. L^AT_EX doesn't care. It'll just do the right thing.

Once you get the basics of L^AT_EX down, then you can just worry about the content and let L^AT_EX worry about making it **look beautiful**.

²The `\\" at the ends of the lines just adds a line-break.`

³If you actually do want to make sure L^AT_EX inserts spaces exactly as you have them, you can use “`\`” (that is, a backslash followed by a space, for each space you want. Or you can insert horizontal space with a command like `\hspace{1in}`.

5 Basic sectioning and footnotes

```
\section{My first main section}
Some text here.

\subsection{A subsection}
More text here.

\subsubsection{A subsubsection}
Even more text here.
```

produces:

1 My first main section

Some text here.

1.1 A subsection

More text here.

1.1.1 A subsubsection

Even more text here.

You want footnotes?

```
You can easily add footnotes like so.\footnote{I'm a footnote!}
The footnote will appear\footnote{I'm another footnote!}
wherever you insert the footnote command and \LaTeX\ will
automatically format and number\footnote{Here
the footnotes appear as letters because of the special
environment, but usually they'll appear as normal arabic
numerals unless you specify otherwise.} them for you.
```

You can easily add footnotes like so.^a The footnote will appear^b wherever you insert the footnote command and L^AT_EX will automatically format and number^c them for you.

^aI'm a footnote!

^bI'm another footnote!

^cHere the footnotes appear as letters because of the special environment, but usually they'll appear as normal arabic numerals unless you specify otherwise.

You can force a line-break with the command \\; you can force a page-break anywhere with the command \pagebreak.

5 Easy numbered examples

Examples are easy with `linguex` (the example package for lazy linguists).

```
\ex. A boring example without glossing.  
  
\exg. Yah rahā ek hindī vākyā\  
      This remain.\textsc{past.masc.sg} one Hindi example\  
      \trans ‘‘This is a Hindi sentence.’’
```

produces:

- (1) A boring example without glossing.
- (2) Yah rahā ek hindī vākyā
 This remain.PAST.MASC.SG one Hindi sentence
 “This is a Hindi sentence.”

You can also add “labels” to your examples and then easily refer to them anywhere later (or earlier) in your text by referring to that example, as in the following L^AT_EX code:

```
In \ref{boring} and \ref{newhindi} below, you can see  
examples of labelled examples.  
  
\ex. Another boring example without glossing.\label{boring}  
  
\exg. Yah rahā ek aur hindī vākyā\  
      This remain.\textsc{past.masc.sg} one more Hindi example\  
      \trans ‘‘This is another Hindi sentence.’’\label{newhindi}  
  
And you can refer to \ref{newhindi} and \ref{boring} anywhere  
else you want too, and LATEX will get the numbering right.
```

Which produces:

In (3) and (4) below, you can see examples of labelled examples.

- (3) Another boring example without glossing.
- (4) Yah rahā ek aur hindī vākyā
 This remain.PAST.MASC.SG one more Hindi example
 “This is another Hindi sentence.”

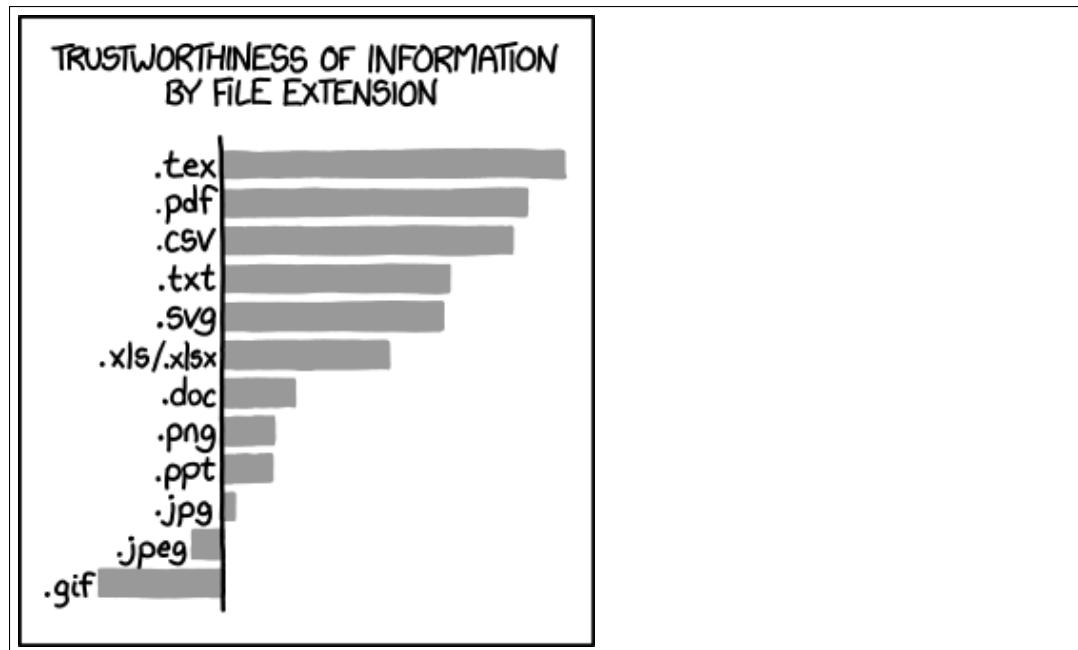
And you can refer to (4) and (3) anywhere else you want too, and L^AT_EX will get the numbering right.

You can also label and refer to sections, subsections, footnotes, tables, figures, etc. in the same manner as well.

6 Including graphics

Having added the `graphicx` package to your preamble, you can place images in the same directory as your `.tex` file and use the command `\includegraphics{filename.extension}` with an optional bracketed size specification, e.g. assuming you have a file called `file_extensions.png` in the same directory as your `.tex` file:

```
\includegraphics[width=3in]{file_extensions.png}
```

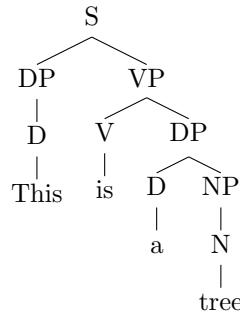


7 Basic trees

There are a bunch of packages for drawing syntax trees in L^AT_EX. A really good one for more complex trees is `forest`, but for basic things you can use `qtree` which has very straightforward syntax. Like this:

```
\Tree
[.S [.DP [.D This]] [.VP [.V is] [.DP [.D a] [.NP [.N tree]]]]]
```

For which the `qtree` package will produce:



8 Semantics (and creating your own custom L^AT_EX commands)

L^AT_EX is incredibly useful for semantics, as T_EX was designed specially as a typesetting program for mathematical formulae and this is part of what formal semantics involves.⁴ L^AT_EX in addition to regular type-setting mode also has a “math” mode. You can enter this mode by wrapping your maths formula in $\$...$$ or else in $\backslash(\dots \backslash)$. You can also do superscripts and subscripts in math mode, using $\hat{}$ and $_$, respectively:

```
$x_{i\_a} = 6y^{2^2} + 7$  
\(z\_j = 7 - 6x^5\)
```

$$\begin{aligned} x_{i_a} &= 6y^{2^2} + 7 \\ z_j &= 7 - 6x^5 \end{aligned}$$

There are a number of special commands to get special symbols used for logic (and semantics), like `\forallall`, `\existsists`, which produce \forall , \exists , respectively.⁵ In math mode, regular text will be set funny unless you switch back in normal roman text mode, e.g.:

```
\(z = 8 + 9y^{x\_a} , \text{this is a formula but the typesetting is messed up}\)\\
\(\zeta = 8 + 9y^{x\_a} , \text{\textrm{this is a formula, properly set}}\)
```

⁴Nb: If you try to use a word-processor to write semantic formulae you will slowly drive yourself mad.

⁵Note: these only work in math mode, so you'll have wrap them in $\$...$$ or $\backslash(\dots \backslash)$.

Note that you need `\textrm{...}` to get regular roman text; otherwise L^AT_EX tries to typeset each letter like a mathematical variable, which is unlikely to be what you want in this case, as shown by the output:

```

$$z = 8 + 9y^{x_a}, this is a formula but the typesetting is messed up$$


$$z = 8 + 9y^{x_a}, \text{this is a formula, properly set}$$

```

The `stmaryroad` package we loaded earlier gives us access to the special semantic evaluation brackets `[], []`, produced with the (math mode only) commands `\llbracket`, `\rrbracket`, respectively.

8.1 Create your own L^AT_EX commands

Finally, here we can also catch a glimpse of the power of L^AT_EX by seeing how we can define our own commands. While you could type out the brackets each time, e.g.:

```
\(\llbracket \textrm{every cat}\rrbracket =
\lambda P\forall x[\textit{Cat}(x) \rightarrow P(x)]\)
```

```

$$\llbracket \text{every cat} \rrbracket = \lambda P \forall x [Cat(x) \rightarrow P(x)]$$

```

you can also define your own command in the preamble, like so:

```
.....
\newcommand{\denotes}[1]{\ensuremath{\llbracket \textrm{#1}\rrbracket}}
.....
```

This command takes a single argument and places it between the evaluation brackets and sets it in normal roman type. Just now you can just use your new command `\denotes` as follows:

```
\denotes{\every cat purrs} =
$\forall x[\textit{Cat}(x) \rightarrow \textit{Purr}(x)]$
```

producing:

```

$$\llbracket \text{every cat purrs} \rrbracket = \forall x [Cat(x) \rightarrow Purr(x)]$$

```

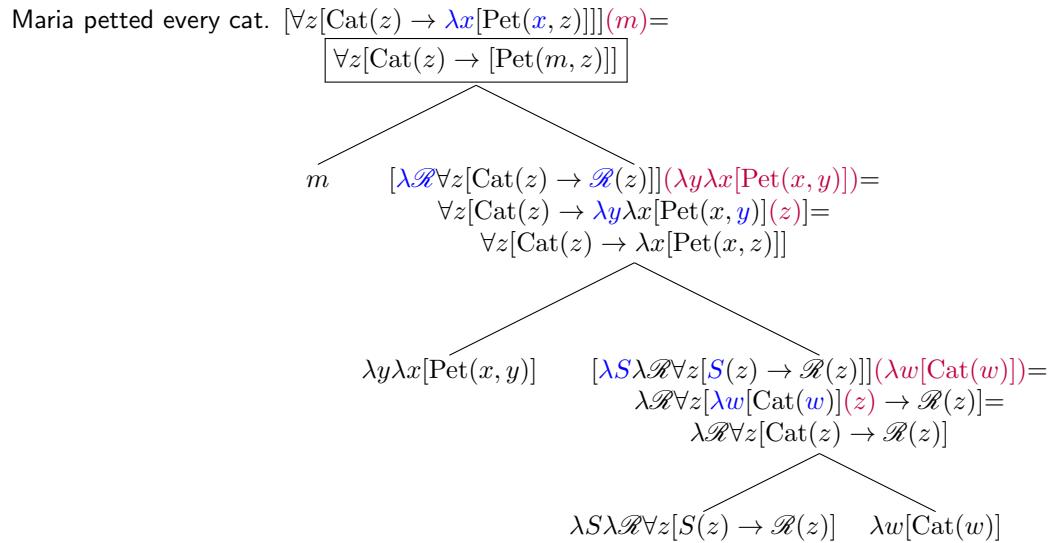
Define once, use infinite times.

And you can define much fancier custom commands like:

```
\newcommand{\fancydenotes}[2] []
{\ensuremath{\llbracket \textrm{#2}\rrbracket^{\textrm{#1}}}}
```

which allow you to enter something like `\(\fancydenotes[t,w,M]{every cat}\)` which takes optional arguments (passed via the square brackets) which get typeset as following superscripts, producing $\llbracket \text{every cat} \rrbracket^{t,w,M}$.

And now we can combine trees and lambdas, e.g.:

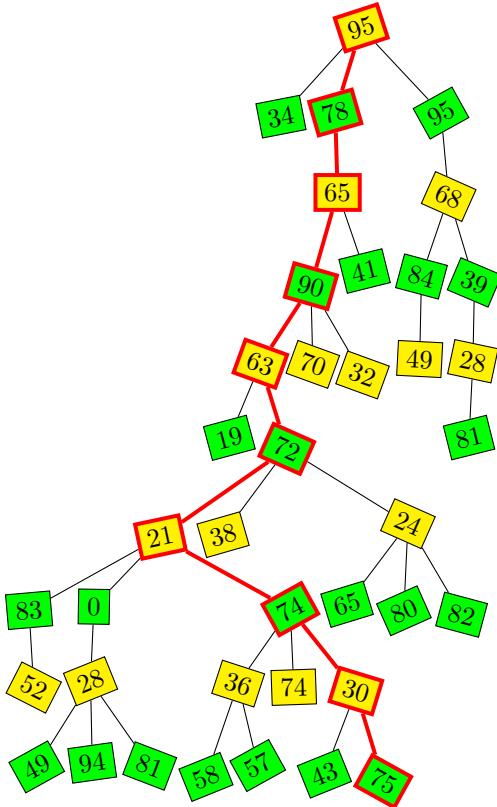


And really these are still very basic examples. The underlying TeX markup language is actually Turing-complete, so you could in theory write anything you could in any other programming language (e.g. Python, C, Lisp, Java, etc.). In practice, since TeX is oriented towards type-setting, you're better off not attempting major programming feats (despite their theoretical possibility), but you certainly can create lots of your own commands which will save you lots of time and mental effort in the end. Here is a resource for more information on command creation: <https://www.overleaf.com/learn/latex/Commands>.

Here are a couple of examples (the first taken from the [TeX Showcase](#), the second from

the [forest manual](#)) which provide a hint of the creative power of TeX, showing what can be created using customised commands and/or CTAN packages:

$$\begin{array}{ccccc}
 (M, h, z) & \xrightarrow{\pi_1} & (M_1, h_1, 0) & & \\
 \downarrow \pi_0 & \searrow \alpha \cong & \downarrow \pi_{1d} & \searrow \alpha_1 \cong & \\
 (M', h', z') \oplus H(\Lambda^k) & \xrightarrow{\pi_1} & (M'_1, h'_1, 0) \oplus H(\Lambda_1^k) & & \\
 \downarrow \pi_0 & & \downarrow \pi_{1d} & & \\
 (M_0, h_0, z_0) & \xrightarrow{\pi_{0d}} & (M_d, h_d, 0) & & \\
 \parallel & \searrow \alpha_0 \cong & \parallel & \searrow \alpha_d \cong & \\
 (M'_0, h'_0, z'_0) \oplus H(\Lambda_0^k) & \xrightarrow{\pi_{0d}} & (M'_d, h'_d, 0) \oplus H(\Lambda_d^k) & & \\
 \downarrow \beta'_0 \oplus \text{id} & & \downarrow \beta'_d \oplus \text{id} & & \\
 (M_0, h_0, z_0) & \xrightarrow{\pi_{0d}} & (M_d, h_d, 0) & & \\
 \downarrow \beta_0 \cong & & \searrow \beta_d \cong & & \\
 (L, \lambda, x) \oplus H(\Lambda_0^k) & \xrightarrow{\pi_{0d}} & (L_d, \lambda_d, 0) \oplus H(\Lambda_d^k) & &
 \end{array}$$



Note that these are NOT images, but are rather generated programmatically in L^AT_EX with the following bits of code:

```
%\CompileMatrices
\[\begin{array}{l}
\text{\textbackslash xymatrix\{} \\
(M,h,z) \ar[dd]^{\pi_0} \ar[dr]^{\alpha\_cong} \ar[rr]^{\pi_1} \\
&& (M_1,h_1,0) \ar[d]^{\pi_{1d}}[dd] \ar[dr]^{\alpha_{1d}\_cong} \\
&& \\
&& (M',h',z') \oplus H(\Lambda^k) \ar[dd]^{\beta_{0.25}(\pi_0)} \ar[rr]^{\beta_{0.25}(\pi_1)} \\
&& && \\
&& (M'_1,h'_1,0) \oplus H(\Lambda^{k-1}) \ar[dd]^{\pi_{1d}} \\
&& \\
(M_0,h_0,z_0) \ar@{=}[dd] \ar[dr]^{\alpha_0\_cong} \ar[r]^{\beta_{0.6}(\pi_{0d})[rr]} \\
&& && \\
&& (M_d,h_d,0) \ar@{=}[d][dd] \ar[dr]^{\alpha_{d\_0d}\_cong} \\
&& \\
&& (M'_0,h'_0,z'_0) \oplus H(\Lambda^k) \ar[dd]^{\beta_{0.25}(\beta_{0d}\oplus\text{id})} \ar[rr]^{\beta_{0.25}\_cong} \\
&& \ar[rr]^{\beta_{0.25}(\pi_{0d})} \\
&& && \\
&& (M'_d,h'_d,0) \oplus H(\Lambda^{k-d}) \ar[dd]^{\beta_{d\_0d}\oplus\text{id}} \\
&& \\
(M_0,h_0,z_0) \ar[dr]^{\beta_{0d}\_cong} \ar[r]^{\beta_{0.6}(\pi_{0d})[rr]} \\
&& && \\
&& (M_d,h_d,0) \ar[dr]^{\beta_{d\_0d}\_cong} \\
&& \\
&& (L,\lambda,x) \oplus H(\Lambda^k) \ar[rr]^{\pi_{0d}} \\
&& && \\
&& (L_d,\lambda_d,0) \oplus H(\Lambda^{k-d}) \\
\}\]
\\
\pgfmathsetseed{14285}
\begin{forest} random tree/.style n args={3}{%
    % #1 = max levels, #2 = max children, #3 = max content
    content/.pgfmath={random(0,#3)}, if={#1>0}{repeat={random(0,#2)}{append={[,random
        tree={#1-1}{#2}{#3}]}}},%
    before typesetting nodes={for tree={draw,s sep=2pt,rotate={int(30*rand)},l+={5*rand},
        if={isodd(level())}{fill=green}{fill=yellow}},%
        important/.style={draw=red,line width=1.5pt,edge={red,line width=1.5pt}},%
        before drawing tree={sort by=y, for nodewalk={min=tree,ancestors}{important,typeset node}}%
    [,random tree={9}{3}{100}]}
\end{forest}
```

8.1.1 Make use of the L^AT_EX package ecosystem

The power of L^AT_EX also means that lots of people have already designed fantastic add-on packages (which we've already used some in this document), most of which have equally good documentation. If there's something you'd like to be able to do in L^AT_EX, or would like to be able to do more easily, chances are someone else has already thought of it and made a package to do it. Search/browse CTAN to see the full range of extension packages: <https://ctan.org/pkg/>.

9 Staring into N_{NNN}

There is rarely a single right way of doing something in L^AT_EX. It's a powerful tool, and like all good powerful tools it gives you lots of different ways of doing things. This also means you can *always* learn something new in L^AT_EX. But you only need to know a fairly basic set of things to productively use L^AT_EX (I wrote a dissertation in L^AT_EX knowing much less about L^AT_EX than I know now:— which is still relatively little). Looking at other people's .tex files is often a “cheap” way of learning new things or figuring out problem in L^AT_EX (though it can be illuminating to work out your own solutions as well). The { T_EX } StackExchange site is a great place to browse or ask L^AT_EX-related questions.

9.1 Get to know your text editor

Getting to know your text editor (as well as choosing a good/suitable text editor) can be extremely helpful to your productivity. L^AT_EX taking care of formatting and letting you concentrate on the content is great, but the power of a good, customisable text editor is also an often under-rated boon. (And you'll free yourself from a whole class of certain worries produced by word-processors, including the one pointed out in the xkcd comic seen on the right.)



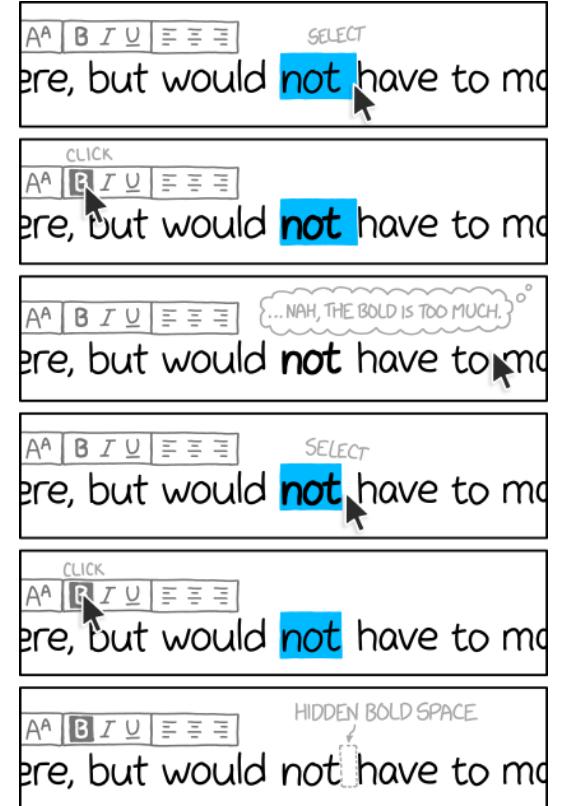
9.1.1 Other packages to explore

For special phonetic (e.g. IPA) characters, have a look at the [tipa package](#). However, just using [X_LAT_EX](#) is probably a better choice in the long-term as it allows you to use any font installed on your computer with the aid of the [fontspec package](#). There are a number of other linguistics-related packages, including the [ot-tableau package](#) for Optimality Theory tableaux. Here is a listing of CTAN packages with "linguistics" as a keyword: <https://ctan.org/topic/linguistic>.

9.2 L^AT_EX is fun

Happy T_EX'ing!

\Left\Goofy\Bart(1,1.6)(.85,1.6)



A.2 Aphra Behn: A Pindarick on Charles II

I

A PINDARICK ON THE DEATH Of Our Late SOVEREIGN: *With an Ancient Prophecy on His Present MAJESTY*

[Written by A. BEHN. 28 Feb 1685]

I

Sad was the *Morn'*, the fadder *Week* began,
And heavily the God of Day came on:
From Ominous *Dreams* my wondering Soul lookt out,
And saw a Dire *Confusion* round about.
My Bed like some sad Monument appear'd,
Round which the Mournful Statues wring their hands and
weep;
Distracted Objects all! with mighty Grief, prepar'd
To rouse me from my painful Sleep.
Not the sad Bards that wail'd *Jerusalem's* woes,
(With wild negle^ct throu'out the peopl'd street,
With a Prophetick rage affrighting all they meet)
Had mightier Pangs of sorrow, mightier throes;
Ab! wretch, undone they Cry! *awake forlorn,*
The King! the King is Dead! rise! rise and Mourn.

5

to

II

Again I bid 'em tell their Sorrows Theam,
Again they Cry, *The King! the King is Dead!*
Extended, Cold and Pale, upon the Royal Bed;
Again I heard, and yet I thought it *Dream.*
Impossible! (I raving Cry)
That such a *Monarch!* such a *God* should dye!
And no *Dire Warning* to the *World* be given:
No *Hurricanes* on Earth! no *Blazing Fires* in Heaven!
The Sun and Tyde their *constant Courses* keep:

15

20

[https://gitlab.com/emacsomancer/tex-poems/tree/
master/Behn/Pindarick-on-death-of-Charles-II](https://gitlab.com/emacsomancer/tex-poems/tree/master/Behn/Pindarick-on-death-of-Charles-II)

A.3 Quacksalver's advertisement for "oxygenised air"

PERSECUTION OF NEW IDEAS.

—

Dr. C. L. Blood, Inventor of Oxygenized Air, for Diseases of the Throat and Lungs.

—

When Christ appeared, and incited precepts superior to those of the Jewish teachers, he was persecuted for blasphemy. What the Jews could not overthrust by the learning of their priests, they sought to subdue by physical power. The treacherous sword of injustice was unsheathed; Jesus was wrung from his innocent, condemned and crucified. His enemies believed their system of worship permanent and immutable, and trusted him as a blasphemous impostor.

Absurd, for maintaining the rights of free inquiry, was condemned in ecclesiastical council. Fard, Lefeve, Hutton, Luther, Zwingle, Calvin, and a host of others, for little more than the act of individualism, rejecting the infallibility of popes and ecclesiasticism, unmasking superstition, and legalised licentiousness of the church, were hunted down by mercenaries of the Pope, and massacred by the hordes of the Vatican. It was wrong for the human mind to assert its independence, and attempt to break loose from the restraints which had held the church and the world in darkness and degradation, for centuries. The Pope, in his infinite wisdom, knew nothing of science, or the source of all good, and the only true object of salvation. For this, he incurred the vengeance of those who should have rendered him gratitude, and was condemned to drink the juice of the hemlock.

When Descartes taught the doctrine of innate ideas he was declared an Atheist. The University of Paris became alarmed for the being of a God, and the safety of the soul of man, and proposed that the heretical and atheistical works of the illustrious teacher be burned. It was but a short time, however, till this same infallible University adopted the very doctrine it had combated so lustily, and when Locke and Cousin attacked it, the cry of materialism and fatalism was turned against them. The teachings of Aristotle were held for many years to be as permanent as the rock of truth. Francis Bacon, Galileo, and Kepler, and others, who had the audacity to make pains of corporal punishment, from uttering one mere shadowing invective against Aristotle, and other ancient authors, received and approved. About a century after, the Parliament of Paris passed a decree prohibiting any person, under pain of death, from holding or teaching any maxim at variance with the ancient and approved authors, especially the infallible Aristotle. Then followed a century after, when the Pope and Councils were condemned for the safety of popular medical science, and the Royal Academy of Medicine condemned inoculation as "unruevous, criminal and magical." Jenner was threatened with disgrace if he did not cease annoying the quietude and self-complacency of his friends with the silly visionary subject of vaccination. Harvey for discovering the circulation of the blood, and anesthetist for his great services to the medical world, were persecuted in strict measure, that not one of his contemporaries at the age of forty years, when Harvey made known his discovery, even conceded its correctness. They were stable-minded men and despised being led astray like boys by the glories of novelties. When Colombe made his discovery to the Sovereigns of France and Castile in a paper of seventeen pages, he was met with cold neglect, and repeated rebuke. The earth was as flat as a board, and how could he get to the East Indies by sailing west, and so to finding land, that was only the day dreams of a visionary madman. All the philosophy of the past was not to be captivated to suit the fantasy of an old fool.

When the persevering Falton proposed to make a passage again in the propulsions of vessels, his capacious-minded countrymen laughed at him. Steam had never propelled vessels; therefore it never could. The conclusion was as natural as to look for the past for all wisdom, and Falton was ridiculed and neglected, and at last died in poverty.

From the introduction of Oxygenated Air, until the present time, the Old School has been lavish and unscrupulous in bestowing upon its author and those who practice it, its approbation, and recommendations. Kisses, flocks, quacks and every degrading epithet which jealousy, ignorance and blind fanatical superstition could invent, have been applied to them.

Notwithstanding the great opposition, these men in the Oxygenated Air practice have calmly pursued their labors, and thousands of victims to the old school practice, who were on the verge of the grave, have been saved. Thousands who were on the road to certain consumption and other supposed incurable diseases, are to-day sound in body, and are living monuments to the worth of Oxygenated Air.

Dr. Blood is one of the remarkable men of the age, commanding presence, great intelligence, a frank, a polished, gentleman, and is one of the most successful physicians in the country, if not in the world.

It is more than an eighth of a century since Dr. Blood discovered a method for combining Oxygen and Nitrogen in such proportions that the Oxygen positively curative in its effects for diseases of the blood and lungs, and at the same time perfectly safe to inhale in any condition of health or disease.

When Dr. Blood began to advocate the merits of his invention for the cure of diseases of the respiratory organs, he was met at the threshold of his career by a storm of execration, bitterness, which he could not withstand, and which drove him from his purpose. In offence which he had to sustain, the plenary inspiration and traditions of dead and rotten medical authors, whose errors were to be held as sacred as the living truths of Deity. War was declared, and the decree of social ostracism and defamatory rebuke was to silence the audacious innovator.

There is scarce an exception to the rule that many who are so far advanced of the age in which they live, as to discover a new, or rather a before unknown principle, for nothing is absolutely new, are generally reviled.

Anselme Paré introduced the ligature as a substitute for the painful mode of stamping the blood, after the amputation of a limb, viz. by applying boiling pitch to the surface of the stump. He was, in consequence, persecuted with remorseless rancor by the Faculty, who ridiculed the idea of putting the life of a person upon a thread, when boiling pitch had stood the test for centuries. The Faculty of Paris introduced the Peruvian Bark (invaluable as a medicine) but being a remedy used by the Jesuits, the Protestants at once rejected the drug as an invention of the devil.

He believes that the compunctionary "general practice" destroys tens of thousands of lives every year. He also believes that the rule of medical societies which prohibits its members from advertising or making known their honest belief, is a wise regulation, but it is also a wise just and only calculated to gratify a bunch of old fogey doctors who never should have been born. Dr. Blood also believes that there is no science or safety in the old school practice. How far his views are sustained by medical men of character and note the following testimony will show. Notwithstanding learned medical men are very severe on quacks, it is impossible to locate any literature containing a ringing rebuke to the confessions that medical men are immensely interested in what they call quacks.

Radeloff said that "when he died he would leave behind him the whole mystery of physics on half a sheet of paper." Sir Ashley Cooper is reported to have acknowledged that his "mistakes would fill a church yard." Prof. Jackson of Philadelphia said that he "would rather see a patient die than pull his teeth when such a step might appear to injure and distract his own abilities."

One of the foremost English physicians and medical writers, Dr. James Johnson, says: "I declare my conscientious opinion, founded on long observation and reflection, that if there was not a single physician, surgeon, apothecary, chemist, druggist or drugg, on the face of the earth there would be no sickness and no death among mankind."

Prof. Magendie addressed his students at the medical college at Paris as follows: "Gentlemen, medicine is a great business. I know it is studied as a science. Doctors are mere imperts when they are not charlatans. We are as ignorant as men can be. Who knows anything in the world about medicine? There is no such thing as medical science. I grant you people are good; but how good does a great deal, imagination and common sense do?"

Dr. O. W. Holmes says: "Medicine is a grand colossal humbug." There was a certain pope who lost his physician, and to all who applied for the office, he put the question, "How many have you killed?" Each doctor in turn solemnly responded that he had "never killed anyone." An old soldier with a big beard said at last, "How many have you left?" After saying this, pope, "Two thousand and ten old fellows, pulling his beard with both hands." The pope was pleased with the confession, and, believing he must be a man of experience at least took him as his physician.

Statistics claimed to be authentic show a mortality under homoeopathic treatment of about half-and in some diseases much less--than under allopathic treatment.

An allopathic physician in London sent to inspect the different cholera hospitals, concluded his report by avowing that, "if taken with the disease, he desired homoeopathic treatment."

It is an alleged fact that Homoeopathic Insurance Companies have about one-third the deaths on their homoeopathic policies that do allopathic companies, and that the mortality is still greater, and that they cling on the former a considerable loss premium for the risk. Researches into the respective results of homoeopathic and allopathic private practice in New York City shows, two years, thirty thousand three hundred and ninety-five deaths in the private practice of nine hundred and eighty-four allopathists and one hundred and twenty in that of one hundred and twenty homoeopathic practitioners, showing fifty-three per cent. in favor of homoeopathy. Dr. Blood advocates the homoeopathic treatment because if it does not always cure it does no harm.

Previous to Dr. Blood's discovery of Oxygenated Air, he was engaged in the regular practice of medicine, prescribing for his patients from formulas laid down in medical works, written by ignorant doctors who lived in the dark ages. He found that it was in the blood circulatory system that it was necessary to change the blood, and he was educated to believe would cure the various ills to which humanity are subject. But in many cases, in place of seeing his patients recover as he anticipated and expected, he saw them grow worse and worse, and then die. This was a great blow to his scientific, but which he found a curse and a delusion. Being a man of strong integrity, he abandoned the practice. Seeing if he could not labor to promote the physical welfare of suffering mankind, he would not assist in estinating misery in the already myriads of victims to persons dead.

Since Dr. Blood commenced the Oxygenated Air practice he has treated personally over one hundred and twenty thousand patients, and in a majority of cases has obtained the finest results, restoring patients to health who had been diagnosed about to death by other physicians and by them pronounced incurable. Unlike other physicians, Dr. Blood does not advise persons in the last stage of consumption to seek the aid of the Society. A trip around the world does not bring home and klanched at the very time they must need their care, to risk their frail constitution by perilous and exhausting journeys to far-off lands in pursuit of health; but, also! when they too often meet with the sad fate of dying among strangers, as in foreign lands. If the disease in the lungs has not advanced too far, all the patient requires to regain his lost force and vitality is the soothing and purifying influence of Oxygenated Air, which, when taken into the lungs, sends the life blood gushing through the system and dyes their faded cheeks with the bloom of health.

What can be more natural, more simple and efficacious than the treatment of consumption by this method, by which the vital principle of life, Oxygen is conveyed directly into the lungs, and its life-giving properties brought to bear upon the diseased tissue?

In France, enabled by this great discovery to alleviate the sick and suffering, must have reflected on his own coat the benig smile of those he has been the means of benefiting and a grateful people will hand down to posterity the blessed name of the one who gave to humanity the great boon of Oxygenated Air.



Dr. C. L. BLOOD,
Inventor of Oxygenized Air.

—



OFFICE AND RESIDENCE OF Dr. C. L. BLOOD,
27 Bond Street, near Broadway, New York City.

—

perceived on until now his Oxygenated Air is almost universally acknowledged the most important medical discovery of the age. Over two hundred regular physicians have adopted it as a practice, and nearly every city in America, and many in Europe, have an office and a physician devoted to its application.

Dr. Blood believes that if physicians of the old school would become less egotistic, wedded to a dogmatic theory and systems of treating diseases, sufficient humanity would be greatly benefitted. He also believes that the rule of medical societies which does not allow its members to practice specialties, but compels them to treat all diseases, is productive of danger, suffering and death, as no physician is equally skilful in all dis-

<https://github.com/logological/blood>

A.4 Rāmāyaṇa excerpt

वा०रा० तपःस्वाध्यायनिरतं तपस्वी वाग्विदां वरम् । नारदं परिप्रच्छ वाल्मीकीमुनिपुण्गवम् ॥ १ ॥ को न्वरिमन् साम्रांतं लोके गुणवान् ॥ स० १
कथं वीरवान् । धर्मज्ञथं कृतज्ञश्च सत्यवाक्ये दुष्क्रातः ॥ २ ॥ चारित्रेण च को युक्तः सर्वभूतेषु को हितः । विद्वान् वः कः समर्थश्च
कथेकप्रियदर्शनः ॥ ३ ॥ आत्मवान् को जितक्रांधो मतिमान् को उनसूयकः । कर्त्य विभ्यात देवाश्च जातरोषस्य संयुगे ॥ ४ ॥ एतद्
इच्छाम्यहं श्रीते परं कौतूहलं हि मे । महर्षे त्वं समर्थोऽसि ज्ञातुम् एवविधं नरम् ॥ ५ ॥ श्रुत्वा चैतत् त्रिलोकज्ञो वाल्मीकिनरिदो वचः ।
श्रूयताम् इति चामन्त्र्य प्रहृष्टो वाक्यमब्रवीत् ॥ ६ ॥ बहुवो दुर्लभाश्चैव ये त्याग कीर्तिता गुणाः । सुने वक्ष्याम्यहं बुद्ध्या तैर्युक्तः श्रूयतां
नारः ॥ ७ ॥ इक्ष्वाकुवंशभावो रामो नाम जैः श्रुतः । नियतामा महावीर्यो द्युतिमान् धृतिमान् वरीयो ॥ ८ ॥ बुद्धिमान् नीतिमान् वार्मी
श्रीमात्र शत्रुनिर्वहणः । विपुलांसो महाबाहुः काम्बुडीवो महाहनुः ॥ ९ ॥ महोरस्को महेष्वासो गृहजरुरिदमः । आजानुबाहुः सुशिरा:
सुलाटः सुविक्रमः ॥ १० ॥ समः समविभक्ताङ्गः स्त्रिगृहवर्णः प्रतापवान् । पीनवक्षा विशालाक्षो लक्ष्मीवाऽश्च शुभलक्षणः ॥ ११ ॥
बा०का० सत्यसंधश्च प्रजानां च हिते रतः । यशस्वी ज्ञानसंपन्नः शुचिर्वश्यः समाधिमान् ॥ १२ ॥ रक्षिता जीवलोकस्य धर्मस्य परिरक्षिता ॥ १२

वा०रा० । वेदवेदाङ्गतत्त्वानो धनुर्वेदं च निष्ठितः ॥ १३ ॥ सर्वशास्त्रार्थतत्त्वज्ञो स्मृतिमान् प्रतिभानवान् । सर्वलोकप्रियः साधुर अदीनात्मा ॥ स० १
विचक्षणः ॥ १४ ॥ सर्वदाभिगतः सद्गः समुद्र इव सिन्धुभिः । आर्यः सर्वसमश्वैर सदैकप्रियदर्शनः ॥ १५ ॥ स च सर्ववृणोपेतः
कौसल्यानन्दवर्धनः । समुद्र इव गाम्भीर्यं धैर्येण हिमवान् इव ॥ १६ ॥ विष्णुना सदूशो वीर्ये सोमवत् प्रियदर्शनः । कालग्निसदृशः
क्रोधे क्षमया पृथिवीसमः ॥ १७ ॥ धनदेन समस् त्यागे सन्त्ये धर्म इवापः । तम् एवंगुणसंपन्नं रामं सत्यपराक्रमम् ॥ १८ ॥ ज्येष्ठ
श्रेष्ठगुणीर्युक्तं प्रियं दशरथः सुतम् । योवराज्येन संयोक्तुम् ऐच्छत् ग्रीत्या महीपतिः ॥ १९ ॥ तस्याभिषेकसंभारान् दृष्ट्वा भायथ कैकयी
। पूर्वं दत्तवरा देवी वस् एनम् अयाचत ॥ २० ॥ विवासनं च रामस्य भरतस्याभिषेकनम् । स सत्यवचनाद राजा धर्माशेन सयतः ॥
२१ ॥ विवास्याम आस सुतं रामं दशरथः प्रियम् । स जगाम वनं वीरः प्रतिज्ञाम अनुपालयन् ॥ २२ ॥ पितुर्वचनानिर्देशात कैक्य्या:
प्रियकारणात् । तं व्रजन्तं प्रियो भ्राता लक्ष्मणोऽनुजगाम ह ॥ २३ ॥ स्नेहाद विनयसंपन्नः सुमित्रानन्दवर्धनः । सर्वलक्षणसंपन्ना
बा०का० नरीणाम् उत्तमा वधूः ॥ २४ ॥ सीताप्यनुगता रामं शशिनं रोहिणी यथा । पौरैरुगते दूरं पित्रा दशरथेन च ॥ २५ ॥ २

वा०रा० तेन गत्वा पुरोऽलङ्कक हत्या रावणम् आहवे । अभ्युक्तिवृत् स लङ्काया राक्षसेन्द्रं विभीषणम् ॥ ६६ ॥ कर्मणा तेन महता ॥ स० १
त्रैलोक्यं सचराचरम् । सदेवर्षिणां तुष्टं राघवव्य महात्मनः ॥ ६७ ॥ तथा परमसंतुष्टैः पूजितः सर्वदेवतैः । कृतकृत्यस् तदा रामो
विज्वरः प्रसुपोद ह ॥ ६८ ॥ देवतायो वरान् प्राप्य समुद्धाय च वानरान् । पृष्ठके तत् समालृहा नन्दिग्रामं ययो तदा ॥ ६९ ॥
नन्दिग्रामे जटां हित्वा भ्रातृभिः सहितोऽनधः । रामः सीताम् अनुप्राप्य राज्यं पुनरवाप्तवान् ॥ ७० ॥

बा०का०

<https://tex.stackexchange.com/a/369211/1135>