

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>
- TeXmaker: <http://www.xm1math.net/texmaker>
- 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 in boxed in green with the corresponding output shown in 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
.....                        

\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

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.

the 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 of 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. L^AT_EX 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.”

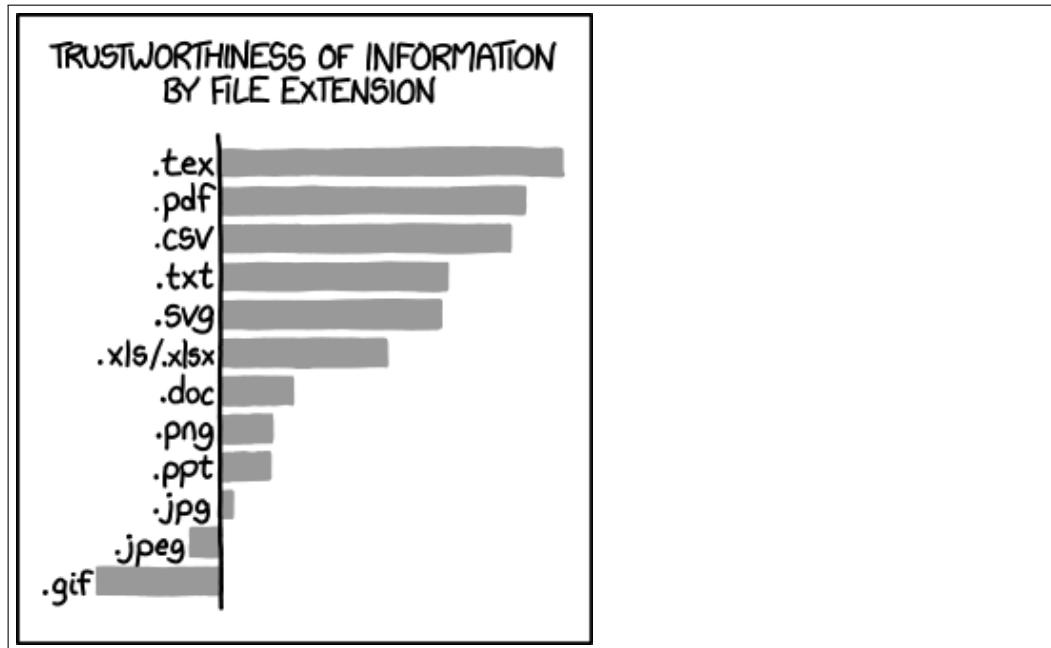
And you can refer to (4) and (3) anywhere else you want too, and L^AT_EX will get the numbering right.

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}
```

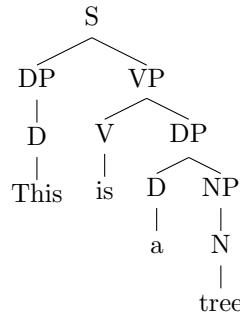


7 Basic trees

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:

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

$$x_{i_a} = 6y^{2^2} + 7$$
$$z_j = 7 - 6x^5$$

There are a number of special commands to get special symbols used for logic (and semantics), like `\forall`, `\exists`, 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.:

```
\(z = 8 + 9y^{x_a}\) , this is a formula but the typesetting is messed up\\\
\text{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 `stmaryrd` 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^{\#1}}}
```

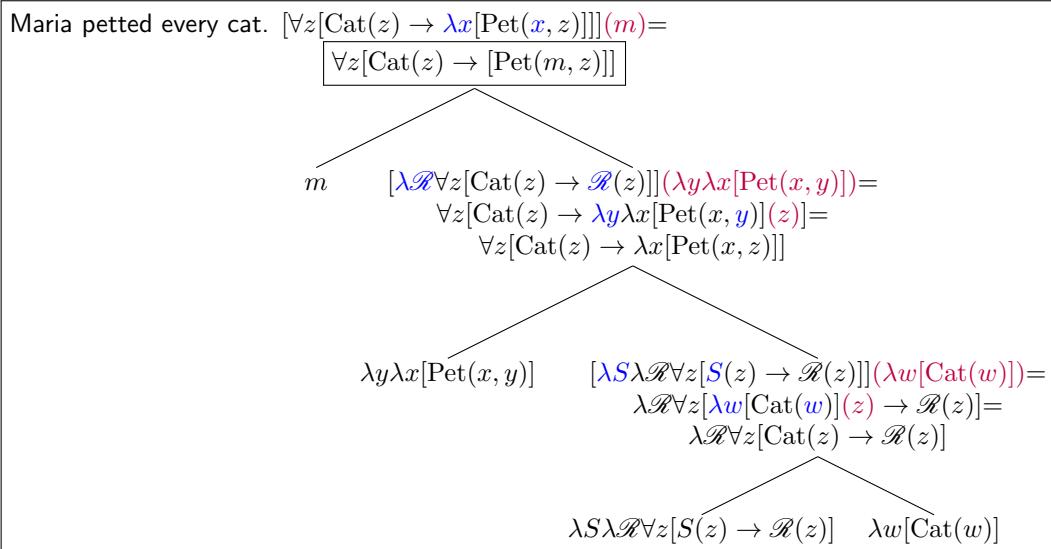
which allow you to enter something like `\(\fancydenotes[t,w,M]{every cat}\)` which takes optional arguments (passed via the square brackets) which get typeset as following superscripts, producing $\llbracket \text{every cat} \rrbracket^{t,w,M}$.

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

```

\$hfill \textsf{Maria petted every cat.}
\Tree [. {.\$[\forall{z}[\mathrm{Cat}(z)\rightarrow\color{blue}\lambda{x}{\mathrm{Pet}(\color{blue}x,z)}]\color{purple}(m)}=\\" 
[\mathrm{Cat}(z)\rightarrow\color{blue}\lambda{\mathrm{Pet}(m,z)}] ]\$]
\fbox{\$[\forall{z}[\mathrm{Cat}(z)\rightarrow\mathrm{Pet}(m,z)]\$]}
[.{\$m\$} ] [.{\$[\color{blue}\lambda{\mathrm{scr}R}\forall{z}[\mathrm{Cat}(z)\rightarrow\color{blue}\mathrm{scr}R(z)]\$}]
[\mathrm{Cat}(z)\rightarrow\color{blue}\lambda{\mathrm{scr}R}(z)]
\color{purple}(\lambda{y}\lambda{x}[\mathrm{Pet}(x,y)])\$=\\" 
\$[\forall{z}[\mathrm{Cat}(z)\rightarrow\mathrm{Pet}(x,\color{blue}y)]\$]
\lambda{y}\lambda{x}[\mathrm{Pet}(x,\color{blue}y)]]
\color{purple}(z)\$=\\" 
\$[\forall{z}[\mathrm{Cat}(z)\rightarrow\mathrm{Pet}(x,z)]\$]
[.{\$[\lambda{y}\lambda{x}[\mathrm{Pet}(x,y)]]\$} ]
[.{\$[\color{blue}\lambda{S}\lambda{\mathrm{scr}R}\forall{z}[\color{blue}S(z)\rightarrow\mathrm{scr}R(z)]\$}]
[\color{blue}S(z)\rightarrow\mathrm{scr}R(z)]
\color{purple}(\lambda{w}[\mathrm{Cat}(w)])\$=\\" 
\$[\lambda{\mathrm{scr}R}\forall{z}[\color{blue}w]\mathrm{Cat}(w)]\$]
[\mathrm{Cat}(\color{blue}w)]\color{purple}(z)\rightarrow\mathrm{scr}R(z)\$=\\" 
\$[\lambda{\mathrm{scr}R}\forall{z}[\mathrm{Cat}(z)\rightarrow\mathrm{scr}R(z)]\$]
[.{\$[\lambda{S}\lambda{\mathrm{scr}R}\forall{z}[S(z)\rightarrow\mathrm{scr}R(z)]\$} ] [.{\$[\lambda{w}[\mathrm{Cat}(w)]\$] } ] ] ]

```

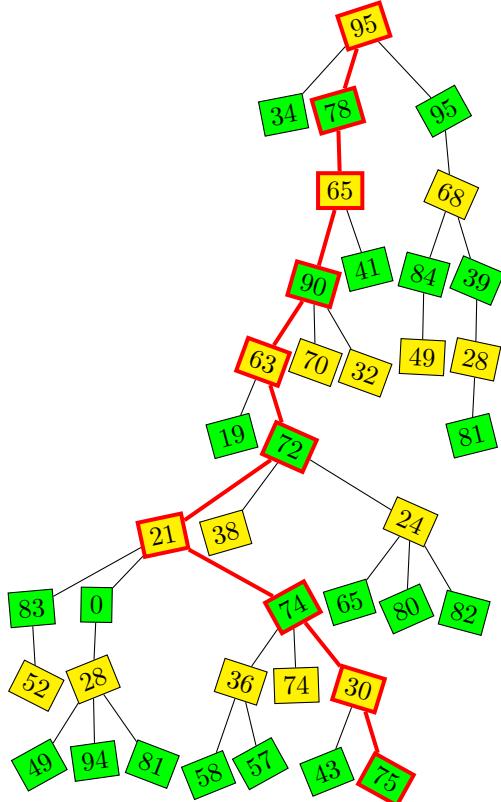


And really these are still very basic examples. The underlying TeX markup language is actually Turing-complete, so you could in theory write anything you could in any other programming language (e.g. Python, C, Lisp, Java, etc.). In practice, since TeX is oriented towards type-setting, you're better 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 T_EX, showing what can be created using customised commands and/or CTAN packages:

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



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

```
%\CompileMatrices
\[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_1\}} \cong
\\
& (M',h',z') \oplus H(\Lambda^k) \ar[dd]^{<(25)\{pi_0\}} \ar[rr]^{<(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]^{<(6)\{pi_{0d}\}}[rr]
&& (M_d,h_d,0) \ar@{=}[]{}[dd] \ar[dr]^{\{alpha_d\}} \cong
\\
& (M'_0,h'_0,z'_0) \oplus H(\Lambda^{k-1}) \ar[dd]^{<(25)\{beta'_0\oplus text{id}\}} <(25)\cong
\ar[rr]^{<(25)\{pi_{0d}\}}
&& (M'_d,h'_d,0) \oplus H(\Lambda^k) \ar[dd]^{\{beta'_d\oplus text{id}\}} \cong
\\
(M_0,h_0,z_0) \ar[dr]^{\{beta_0\}} \cong \ar'[r]^{<(6)\{pi_{0d}\}}[rr]
&& (M_d,h_d,0) \ar[dr]^{\{beta_d\}} \cong
\\
& (L,\lambda x) \oplus H(\Lambda^k) \ar[rr]^{\{pi_{0d}\}}
&& (L_d,\lambda x) \oplus H(\Lambda^k)
}\\]

\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=treenodes}{important,typeset node}}]
    [,,random tree={9}{3}{100}]}
\end{forest}
```

8.1.1 Make use of the L^AT_EX package ecosystem

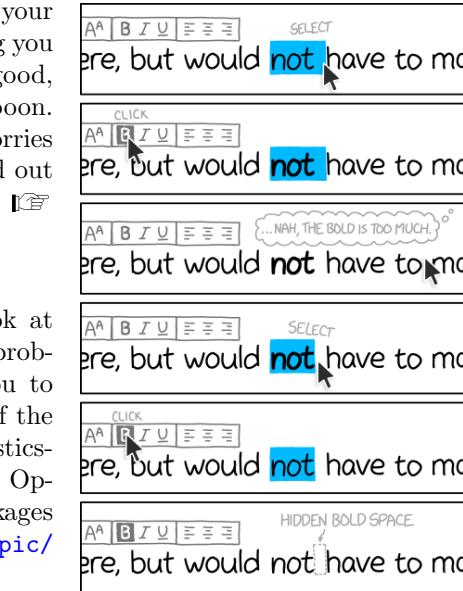
The power of L^AT_EX also means that lots of people have already designed fantastic add-on packages (which we've already used some in this document), most of which have equally good documentation. If there's something you'd like to be able to do in L^AT_EX, or would like to be able to do more easily, 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_LA^TE_X 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)



WHEN EDITING TEXT, IN THE BACK OF MY MIND I ALWAYS
WORRY THAT I'M ADDING INVISIBLE FORMATTING THAT WILL
SOMEHOW CAUSE A PROBLEM IN THE DISTANT FUTURE.

A Examples of the beauty of L^AT_EX typesetting

A.1 Bible de Genève 1564

1



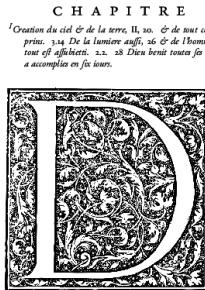
Le premier liure de Moyse, Di^t Genese.

¶

ARGUMENT.

Ce premier liure comprend l'origine & causes de toutes choses, principalement la creation de l'homme, qu'il a esté du commencement, sa chute & rebulement : comment d'un tout ont esté proroces, & pour leurs enormes pechés Dieu les a confisés, par le deluge, refusé bauli, dont la femme a rempli toute la terre. Puis il desfris les nés, faillis, religion, & lignees des saints Patriarches, qui ont regn^e devant la Loy : Les benedictions, promesses, & alliance du Seigneur faites avec eux : Comment de la la terre de Chanaan, sont defendues en Egypte. Aucuns ont appelle ce liure, le liure des Iustes. Touzefci ceci a obtenu entre nos predeceurs & nous, qu'il est appelle Genese, qui est en mot Gre, signifiant generation & origine : d'autant qu'en icelui est desfris l'origine & procreation de toutes choses : & nommement des Peres ancens, qui ont esté tant devant qu'après le deluge, & eu regard à IESVS CHRIST defens du temps selon la chair.

I Ce premier chapitre est fort difficile : & pour cette cause, il est devenu foudroyant, les Hebreux de le lire & interpréter devant l'assemblée de trente ans.
a Fit de rien, & sans aucune matière.
1 Job 38.4. P^rles.
33.6. &
8412.
135.5. Ezechiel 22.
13.4. &
49.14
& 17.14
b Tout premiers, mais, pas qu'il y eut aucune creation, Iean 1.20.
c Le ciel & la terre, les eaux, les abyssines, le printemps, l'ete, l'automne, la medine chose : siq, certe au temps dans forme, q Dieu a creue & agencé apres par sa Parole, d Où il me souvient. Cela souffre, non et conseruera en son etre cette medine chose, car il est impossible q aucuns autre chose que la chose q Dieu a creue & agencé apres par sa Parole, e Cela hantie nelius point en core au soleil, car il n'aient pas esté ces matins, mais, au contraire, la main de Dieu, ayant fin ordre fait q il ait done, chose que fait le jour & la nuit & ce quiques au quatrième et cinquième Dieu fit le soleil pour estre ministre & dispenseur de cette lumiere, au contraire la lune & etoilles.
3 P^rles. 336. &
terre. 10.11 &
1155 est la cause



CHAPITRE I.
Creation du ciel & de la terre. II. 10. & de tout ce qui y est compris. 14. De la lumiere asq, 16. & de l'homme. 23. A quel tout est affichet. 22. 28. Dieu bennit toutes ses œuvres, y q'il a accomplies en six iours.

1 Ieu a crea
au com
mence -
ment le
ciel & la
terre.
2 Or la
terre es-
toit sans
forme, &
uide, & les tenebres estoit sur les abyfmes : & l'Esprit de Dieu estoit espandu par dessus les eaux.
3 Adonc Dieu dit, [¶]Qu'il y ait lumiere. Et la lumiere fut.
4 Et Dieu vid q la lumiere estoit bonne : & separa la lumiere des tenebres.
5 Et Dieu appela la lumiere iour, & les tenebres nuit. Lors fut fait le soir & le matin du premier iour.
6 ¶ Puis Dieu dit, [¶]Qu'il y ait vne esfendue entre les eaux, & quelle separe les eaux d'avec les eaux.
7 Dieu donc fit l'estendue, & diuisa

les eaux, qui estoient sous l'estendue, d'avec celles, qui estoient sur l'estendue. Et fut ainsi fait.

8 Et Dieu appella l'estendue, Ciel. Lors fut fait le soir & le matin du second iour.

9 ¶ Puis Dieu dit, [¶]Que les eaux, qui sont sous le ciel, soyent assemblees en un lieu, & que le sec apparoisse. Et fut ainsi fait.

10 Et Dieu appella sec, Terre, & l'assembly des eaux, mers. Et Dieu vid que cela estoit bon.

11 Et Dieu dit, Que la terre produise verdure, herbe produisant semence, & arbre fructier, faisant fruct felon son espece, lequel ait la semence en foymefme sur la terre. Et fut ainsi fait.

12 La terre donc produisit verdure, herbe produisant semence felon son espece,

& arbre sans fruct, lequel auoit la semence en foymefme felon son espece. Et Dieu vid que cela estoit bon.

13 Lors fut fait le soir & le matin du troisième iour.

14 ¶ Apres Dieu dit, [¶]Qu'il y ait lumières en l'estendue du ciel, pour separer la nuit du iour : & soyet en signes,

pourquoy les Hebreux commencent le iour naturel le soir apres le soleil couchant.

g Ce mes d'Elle d'apres q il est fait par deus nous, sit en la region celeste quodammodo.

¶ P^rles. 13.7.

k il est ici parlé des deux iours des deux temps, asquats, celles q font fons l'evenement, les humains, & autres q font

sur la terre & celles, q font sur l'hebdomade humaine.

l Cest appeler au secod iour, auquel Dieu feura, & fit appeler sec, et redu milles des eaux.

m il influe vn nomb^r ordre en nature, q il fait & ordonne le soleil diffributeur de la lumiere, q il auoit fait auant lui, & assant la lune & les etoiles.

n P^rles. 14.7.

l Cest pour si-
guiller diverses dif-
ferences q les corps spheriques le-
los iudic^e de na-
ture, & divers corps celestes, done cau-
ses feodes ordon-
nes de Dieu a ces
corps, q tout
tellos fait faire cu-
rrie^r, & purifi-
cation q les hom-
mes ont obrouies sur
cela.

a en

https://github.com/raphink/geneve_1564

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 fad Monument appear'd,
Round which the Mournful Statues wring their hands and
weep;
Distracted Objec^ts all! with mighty Grief, prepar'd
To rouse me from my painful Sleep.
Not the fad Bards that wail'd *Jerusalems* 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;
Ah! wretch, undone they Cry! awake forlorn,
The King! the King is Dead! rise! rise and Mourn.

5

10

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

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 incalculable precepts superior to those of the Jewish teachers, he was persecuted for blasphemy. When the Jews, in their rage, sought the killing of the teacher, they sought to subdue by physical power. The treacherous award of injustice was unshaken; Jesus was wrongfully accused, condemned and crucified. His enemies believed their system of worship permanent and immutable, and treated him as a blasphemous impoter.

For centuries, for centuries, the rights of free inquiry, were condemned in solemn council. First, Lucifer, Heron, Luther, Zwingli, Calvin, and a host of others, for lifting up the standard of independence, rejecting the infallibility of papacy, and condemning the unnecessary ceremonies and legalized licentiousness of the church, were hunted down by inquisitors of the Pope, and banished by the horrors of the Vatican. It was wrong for the human race to have been separated from God, and the curse from the restorers which had left the church and the world in darkness and degradation for centuries. Socrates taught the Athenians the existence of a supreme being, the source of all good, and the only true object of adoration. For this, he incurred the vengeance of those who should have venerated his gratitude, and was condemned to death at the price of the hemlock.

When Socrates taught that the soul of man was created by God, and the party of philosophy, and with all headlong ardor overthrew the infamies of the infidel author to be burned. It was but a short time, however, till this same infidel University adopted the very doctrine it had combated so lustily; and when Locke and Condillac attacked it, the of massachusetts, and the universities of Paris, Oxford, Cambridge, and Aristotle were held for many years to be permanent as the neck of truth. Francis I. passed a decree against Peter Ramus, interdicting him under pain of corporal punishment, from uttering any more shadowous invectives against Aristotle, and other such authors, received and approved. About a century after the Pope of Paris passed a decree forbidding any person, save a monk, to teach in public school, and any man to teach in private, with the most audacious authors, especially the infidel Aristotle. More than a century after this, the medical faculty in Paris became alarmed for the safety of genuine medical science, and the Royal Academy of Medicine condemned inoculation as "unadorned, criminal and magical." Jenner was threatened with disgrace if he did not cease annoying the quackade and all the physicians of Paris, and was compelled to give up his vaccination. Harvey for discovering the circulation of the blood, and announcing the heretical fact, was treated with scorn by medical brethren, deprived of his practice and driven into exile. It is a fact, containing an instructive moral, that not one of his contemporaries at the age of forty years, when Harvey made known his discovery, would consent to its correctness. They were all too much engrossed in the shop of Aristotle, and satirized the boy's play of novelties. When Columbus made application to the Sovereigns of Europe for assistance in his project of western discovery, he 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 as to finding land, that was only the day dream of a visionary madman. All the pillars of society were to be moved to accommodate to suit the fantasy of an adventurer. When the pernicious Fulton proposed to make steam a mighty agent in the propulsion of vessels, his capacious minded countrymen laughed at him. Steam had never propelled vessels; therefore, no could. The world was as stupid as aardvark, as absurd as to look to the past for all wisdom, and Fulton 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 level, and unscrupulous in bestowing upon its author and those engaged in its application, the vilest vituperation. Knaves, fools, quacks and every degrading epithet which jealousy, ignorance and blind fanatical superition could invent, have been applied to them.

Notwithstanding this gross opposition, those engaged in the Oxygenated Air practice have calmly pursued their labors, and those ranks of victims to the old school practice, who were the very scum of society, have been raised to the highest rank of health and happiness. Thomas Jefferson, who was ever on the road to eternity from consumption and other supposed incurable diseases, are to-day sound in body, and are living immortally to the worth of Oxygenated Air.

It is more than an eighth of a century since Dr. Blood invented the art of combining Oxygen and Nitrogen in such proportions as to make the Oxygen positively creative 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 sought 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 derision and bitterness which would have driven an ordinary man from his purpose. His office was that he dared to doubt the plenary inspirations and traditions of dead and rotten medical authors, whose errors were to be held as sacred as the living truths of Doctry. 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 in advance 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.

Anthonse Paré introduced the ligature as a substitute for the painful mode of staunching 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 unmerciful rancor by the Faculty, who ridiculed the idea of such a procedure as being that of "a vulgar fellow, who had not even the test for centuries. The Jesuits of Peru introduced the Peruvian Bark (mimulus as a medicine), but being a remedy used by the Jesuits, the Protestants at once rejected the drug as an invention of the devil.

Dr. Blood believes that this complicity "general practice" destructions of thousands of lives every year. He also believes that the rule of medical societies which prohibits its members from advertising or making known to suffering humanity where they can be relieved or cured, is unjust and only calculated to gratify or benefit a few old foggy 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 training and character, and note the following testimony will show. Notwithstanding the fact that Dr. Blood has never written a word, nor looked into medical literature without finding it replete with virtual confessions that medical men are immensely indebted to what they call quacks.

Rudclif 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 "nothing would fill a church past." Prof. Jackson of Philadelphia said that he "would rather a patient die than call in another doctor when each a step might appear to imply any share of his own abilities."

One of the foremost English physicians and scientists of the medical college at Paris as follows: "Gentlemen, medicine is a grand lumbering. I know it is studied as a science. Doctors are mere imitators when they are not charlatans. They are ignorant as to what can be done, and know nothing in the world about medicine. There is not such thing as medical science. I pray you people are cured, but how? Nature does a great deal, imagination does a great deal, doctors do devilish little."

Dr. O. W. Holmes says, "Medicine is a grand colossal lumbering. There was a certain pope who lost his physician, and to all who applied for the office, he said, "Send me the best." But he said, "Send me none." Each doctor in turn solemnly asserted that he had "never killed anyone." An old doctor, with a big beard, came at last. "How many have you killed?" asked the pope. "Two thousand," said the old fellow, 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.

Saints claimed to be authentic show a mortality under homoeopathy 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 despaired of any possible treatment."

He is an expert for the Homoeopathic Insurance Companies have about one-third the deaths on their homoeopathic policies that they do among the policy holders treated by allopathy—the actual fact being that they charge on the former a considerably less premium for the risk. Researches into the respective results of homoeopathic and allopathic private practice in New York City shows, for twenty years, thirty thousand three hundred and twenty-four deaths in the former, and only twelve thousand eight-hundred allopathists and fifteen hundred and twenty in that of one hundred and fifty-two homoeopaths, 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.

Prior to Dr. Blood's discovery of Oxygenated Air, he was engaged in the regular practice of medicine, prescribing for his patients from home and down in medical journals, and in the medical periodicals abroad before it was discovered that the blood circulated through the system, and which he was educated to believe would cure the various ills to which humanity are subject. But in many cases, he found that the disease did not improve as he anticipated and expected, he saw them grow worse under the treatment called scientific, but which he found a curse and a delusion. Being a man of strong integrity, he abandoned the practice, feeling if he could not improve the physical well-being of suffering mankind, he would not part in entailing misery on the already myriads of victims of pernicious drugs.

Since Dr. Blood commenced the Oxygenated Air practice he has treated persons over the United States, Canada, and thousand patients, and in a majority of cases has obtained the finest results, restoring persons to health who had been dragged almost to death by other physicians and by them pronounced incurable. Unlike other physicians, Dr. Blood does not advise persons to seek the stage of convalescence to seek the air of the South or a trip across the high deep, leaving home and kindred at the very time they need their care, to risk their frail constitutions by pernicious and exhausting journeys to far-off lands, and places of health, but instead where they can often speak with the rate of change among strangers and in a strange land. If the disease in the lungs has not advanced too far, all the patient requires to regain his lost tone 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 the oxygen by which the vital principle of life, Oxygen, is converted directly into the lungs, and its life-giving properties brought to bear at once upon the seat of disease?

Dr. Blood, enabled by this great discovery to alleviate the sick and suffering, must have reflected on his own soul the benign 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 St., 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 rigidly wedded to a dogmatic theory and system of treating diseases, suffering 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 वाल्मीकिर्मुनिपुणगवम् ॥ १ ॥ को न्वस्मिन् साम्प्रतं लोके गुणवान् ।
कश्च वीर्यवान् । धर्मज्ञश्च कृतज्ञश्च सत्यवाक्यो दुष्क्रतः ॥ २ ॥ चारित्रेण च को युक्तः सर्वभूतेषु को हितः । विद्रान् कः कः समर्थश्च
कर्शकप्रियदर्शनः ॥ ३ ॥ आत्मवान् को जितक्रोधो मतिमान् को ज्ञासूयकः । कस्य विभूति देवाश्च जातरोषस्य संयुगे ॥ ४ ॥ एतद्
इच्छायाहं प्रोतुं परं कौतूहलं हि मे । महर्षे त्वं समर्थोऽसि ज्ञातुम् एवविधं नरम् ॥ ५ ॥ श्रुता चैतत् त्रिलोकज्ञो वाल्मीकीर्नारदो वचः ।
श्रुताम् इति चामन्त्रं प्रदर्शो वाक्यमब्रवीत् ॥ ६ ॥ बहवो दुर्लभाश्रैव ये त्वया कीर्तिता गुणाः । मने वक्ष्यायाहं बुद्ध्या तैर्मुकः श्रयतां
नः ॥ ७ ॥ इक्ष्वाकुर्वश्चाभ्यो रामो नाम जने श्रुतः । विपुलासो महाबाहुः कान्दुप्रायो महात्मुः ॥ ८ ॥ बुद्धिमान् नीतिमान् वाग्मी
श्रीमात् शत्रुनिवर्हणः । विपुलासो महाबाहुः कान्दुप्रायो महात्मुः ॥ ९ ॥ महोरस्को महेष्यासो गूडजत्रुर्विदमः । आजानुबाहुः सुशिरा:
सुलालाटः सुविक्रमः ॥ १० ॥ समः समविभक्ताङ्गाः स्निग्धवर्णः प्रतापवान् । शीनवक्षा विशालाक्षी लक्ष्मीवाज् शुभलक्षणः ॥ ११ ॥
वा०का० धर्मज्ञः सत्यसंधथ प्रजानां च हिते रतः । यशस्वी ज्ञानसंपन्नः शुचिर्वर्णः समाधिमान् ॥ १२ ॥ रक्षिता जीवलोकस्य धर्मस्य परिरक्षिता ॥ १३ ॥

वा०रा० । वेदवेदाङ्गतत्त्वो धनुर्वेदे च निष्ठितः ॥ १३ ॥ सर्वसात्रार्थतत्त्वो स्मृतिमान् प्रतिभानवान् । सर्वलोकप्रियः साथुर् अदीनात्मा
विचक्षणः ॥ १४ ॥ सर्वदाभिगतः सद्दिः समुद्र इव सिन्धुभिः । आर्यः सर्वसमश्वेव सदैकप्रियदर्शनः ॥ १५ ॥ स च सर्वगुणोपेतः ।
कौसल्यानन्दवर्धनः । समुद्र इव गाम्भीर्यं शैर्णेण हिमवान् इव ॥ १६ ॥ विष्णुना सदृशो वीर्यं सोमवत् प्रियदर्शनः । कालाग्निसदृशः
क्रांथं क्षमगा पृथिवीसमः ॥ १७ ॥ धनदेन समस् त्यागो सत्ये धर्मं इवापरः । तम् एवंगुणसंपन्नं रामं सत्यपराक्रमम् ॥ १८ ॥ ज्येष्ठ
श्रेष्ठगुणैर्युक्तं प्रियं दशरथः सुतम् । यौवराज्येन संयोक्तुम् ऐच्छत् प्रीत्या महीपतिः ॥ १९ ॥ तस्याभिषेकसंभारान् दृष्ट्वा भार्याथ कैकीयी
। पूर्वं दत्तवादेवी वरम् एनम् अयाचत ॥ २० ॥ विवासनं च रामस्य भरतस्याभिषेचनम् । स सत्यवचनाद राजा धर्मपाशेन संयतः ॥
२१ ॥ विवासयाम् आस सुर्तं रामं दशरथः प्रियम् । स जगाम वर्णं वीरः प्रतिज्ञाम् अनुपालयन् ॥ २२ ॥ पिरुवचननिर्देशात् कैकीय्या:
प्रियकारणात् । तं व्रजन्तं प्रियो भ्राता लक्ष्मणो उनुजगाम ह ॥ २३ ॥ स्नेहाद् विनयसंपन्नः सुमित्रानन्दवर्धनः । सर्वलक्षणसंपन्ना
नारीणाम् उत्तमा वधूः ॥ २४ ॥ सीतायनुगता रामं शरिनं रोहिणी यथा । पौरीरुगतो दूरं पित्रा दशरथेन च ॥ २५ ॥
वा०का० २

वा०रा० तेन गत्वा पुरुषो लङ्घकां हत्वा रावणम् आहो । अभ्यषिज्यत स लङ्घकायां राक्षसेन्द्रं विभीषणम् ॥ ६६ ॥ कर्मणा तेन महता
त्रैलोक्यं सचराचरम् । सदेवर्षिगणं तुष्टं राघवस्य महात्मनः ॥ ६७ ॥ तथा परमसंतुष्टैः पूजितः सर्वदैवतैः । कृतकृत्यस् तदा रामो
विज्वरः प्रमुमोद ह ॥ ६८ ॥ देवताभ्यो बरान् प्राय्य समुत्थाय च वानरान् । पुष्पकं तत् समारुद्धा नन्दिग्रामं ययौ तदा ॥ ६९ ॥
नन्दिग्रामे जटा हित्वा भ्रातृभिः सहितो उन्धः । रामः सीताम् अनुप्राप्य राज्यं पुनरवाप्तवन् ॥ ७० ॥

वा०का० ३