

SOFTWARE

IN A PERFECT WORLD

12.12.2008

of science even computer nerds would need just one single word processor plus a statistics, a graphics and a bibliography program. While under Windows my work horse was Word + Endnote + SAS + Sigmaplot I have been stepping forward under OS X to MacTeX + BibDesk + R (+ thinking about Aabel). [LYX](#) is a nice frontend for [MacTeX](#) with a nice surprise as the package included also [BibDesk](#) that can import [Papers'](#) references. So the final task was to integrate R into the LYX environment where an online [documentation](#) helped me very much. A hurdle not mentioned there is to select the right style for the R code in the article(Noweb) template: it is "scrap" or "Ausschuss" in the German version ;-)

Nome non est omen - this looks already like a perfect setup (if you have also seen doctoral students tearing with MS Word), yea, yea.

The screenshot shows a LYX document interface. On the left, there is a code editor with the following R code:

```
1 In a perfect world
Gleitobjekt: Figure
Figure 1: Decrease
<<fig=T,echo=F,height=4>>=
asequence<-seq(from=0,to=5,by=0.1)
expnegx2 <- exp(-asequence^2)
plot(asequence,expnegx2,type="l",ylab=expression(exp(-z^2)),xlab="z")
@
1.1 we would have
yx [Anonym:2008p9632]
BibTeX-erzeugtes Literaturverzeichnis
```

On the right, there is a preview window showing a plot of the function $y = \exp(-z^2)$ for z from 0 to 5. The plot shows a smooth curve starting at (0, 1) and decaying towards zero. Below the plot, the document structure is visible, including the title "1 In a perfect world", a section "1.1 we would have", and a "References" section with four entries:

- [1] A brief history of raw milk, page 3, Nov 2008
- [2] Got raw milk, page 4, Nov 2008
- [3] How treatment and pasteurization, page 5, 7
- [4] Should this milk be legal, page 1, Nov 2008.

