ChoosingYourWorkflow.tex

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\href{http://www.ctan.org/tex-archive/help/Catalogue/entries/biblatex.html}{BibLaTeX}, a new package
from Philipp Lehman that gets around some limitations BibTeX has when it comes to generating citation
and reference styles common in the humanities and social sciences.}
\textbf{\href{http://www.gnu.org/software/auctex/}{AUCTeX}} and \textbf{RefTeX} are typically bundled
along with Emacs. These packages allow Emacs to understand the ins and outs of typesetting LaTeX
documents. AUCTeX color-codes the marked-up text to make it easier to read, and it has keyboard
shortcuts for producing all the necessary formatting commands for LaTeX. RefTeX helps you outline
documents more easily, and also manages references to Figures, Tables and bibliographic citations in
the text. Both these packages could also be listed under the ``Minimize Error'' section below,
because they automagically ensure that, e.g., your references and bibliography will be complete and
consistent.

More information on Emacs and LaTeX is readily available via Google, and there are several excellent
books available to help you get started. \citet{kopka03:_guide_latex} and
\citet{mittlebach04:_latex_compan} are good resources for learning LaTeX. The latter comes with a CD
containing a complete LaTeX installation for Linux and Windows. For further argument about the
advantages of text-editors over word processors see Allin Cottrell's polemic,
``\href{http://www.ecn.wfu.edu/~cottrell/wp.html}{Word Processors: Stupid and Inefficient}.''

\subsection{Analyze Data and Present Results}
You will probably be doing some --- perhaps a great deal --- of quantitative data analysis.
\textbf{R} is an environment for statistical computing. It's exceptionally well-supported,
continually improving, and has a very active user community who have produced many add-on packages. R
has the ability to produce sophisticated and high-quality statistical graphics. The documentation
that comes with the software is complete, if somewhat terse, but there are a large number of
excellent reference and teaching texts that illustrate its use. These include
\citet{dalgaard02:_introd_statis_r}, \citet{venables02:_moder_applied_statis_s_plus},
\citet{maindonald03:_data_analy_graph_using_r}, \citet{fox02:_r_s_plus_compan_applied_regres},
\citet{frank01:_regres_model_strat}, and
\citet{gelmanhill07:data_analysis}. Although it is a command-line tool at its core, it has a good
graphical interface as well. You can download it from \href{http://www.r-project.org/}{The R Project
Homepage}.

R can be used directly within Emacs by way of a package called \textbf{ESS}
(for ``Emacs Speaks Statistics''). As shown in Figure~\ref{fig:ess}, it allows you to work with your
code in one Emacs frame and a live R session in another right beside it. Because everything is inside
Emacs, it is easy to do things like send a chunk of your code over to R using a keystroke. This is a
very efficient way of doing interactive data analysis while building up code you can use again in
future.

\begin{figure}[h]
    \centering
        \includegraphics[scale=0.25]{/Users/kjhealy/Documents/figures/EmacsESS2}
    \caption{An R session running inside Emacs using ESS. The R code file is on the left, and R
itself is running on the right.}
    \label{fig:ess}
\end{figure}

\subsection{Minimize Error}
A significant source of error in data analysis is the gap between the procedure used to produce a
figure or table in a paper and the subsequent use of that output later. In the ordinary way of doing
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Line: 138 Column: 1 LaTeX Tab Size: 4 Minimize Error

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2.2 Analyze Data and Present Results

You will probably be doing some — perhaps a great deal — of quantitative data analysis. **R** is an environment for statistical computing. It's exceptionally well-supported, continually improving, and has a very active user community who have produced many add-on packages. R has the ability to produce sophisticated and high-quality statistical graphics. The documentation that comes with the software is complete, if somewhat terse, but there are a large number of excellent reference and teaching texts that illustrate its use. These include Dalgaard (2002), Venables and Ripley (2002), Maindonald and Braun (2003), Fox (2002), Harrell (2001), and Gelman and Hill (2007). Although it is a command-line tool at its core, it has a good graphical interface as well. You can download it from The R Project Homepage.

citation and reference styles common in the humanities and social sciences.

R can be used directly within Emacs by way of a package called ESS (for "Emacs Speaks Statistics"). As shown in Figure 2, it allows you to work with your code in one Emacs frame and a live R session in another right beside it. Because everything