STATISTICAL GRAPHICS FOR VISUALIZING DATA:
AN INTRODUCTION TO LATTICE GRAPHICS IN R

William G. Jacoby
Michigan State University and ICPSR

Indiana University Workshop
Bloomington, IN
January 29, 2010

http://polisci.msu.edu/jacoby/iu/graphics
**Figure 1:** A unidimensional scatterplot.
Figure 2: A histogram.
**Figure 3:** A smoothed histogram.
Figure 4: A scatterplot.
Figure 5: Histogram, with text tick labels on horizontal axis.
Figure 6: Histogram, with two-line text tick labels on horizontal axis.
Figure 7: Scatterplot with a third variable encoded into the plotting symbols.
Figure 8: Scatterplot with coded plotting symbols and a key.
Figure 9: Scatterplot with a loess curve fitted to the data.
Figure 10: Scatterplot with loess curve and OLS line fitted to the data.
**Figure 11:** A multipanel trellis display showing policy priorities, by region.
Figure 12: A three-dimensional scatterplot.
Figure 13: A three-dimensional wireframe plot.
Figure 14: A Levelplot, using color to code values of a third variable.
**Figure 15: Obtaining R.**

A. The R-Project Web Site.
Figure 15: Obtaining R.

B. Selecting a CRAN Mirror for the download.
Figure 15: Obtaining R.

C. The download page.

![The Comprehensive R Archive Network](http://www.bionet.ncsu.edu/CNAM/)

- CRAN
- Manuals
- What's new?
- Task Views
- Search
- About R
- R Homepage
- Software
- R Sources
- R Primer
- Packages
- Other
- Documentation
- Manuals
- FAQs
- Contributed
- Newsletter

**Frequently used pages**

**Download and Install R:**

Precompiled binary distributions of the base system and contributed packages, Windows and Mac users most likely want one of these versions of R:

- Linux
- MacOS X
- Windows (95 and later)

**Source Code for all Platforms:**

Windows and Mac users most likely want the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it:

- Sources of R [alpha and beta releases](http://www.bionet.ncsu.edu/CNAM/) (daily snapshots, created only in time periods before a planned release).
- Daily snapshots of current patched and development versions are [available here](http://www.bionet.ncsu.edu/CNAM/). Please read about new features and bug fixes before filing corresponding feature requests or bug reports.
- Source code of older versions of R is [available here](http://www.bionet.ncsu.edu/CNAM/).
- Contributed extension packages

**Questions About R:**

- If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](http://www.bionet.ncsu.edu/CNAM/) before you send an email.
Figure 15: Obtaining R.

D. After downloading, double-click on the icon for the executable file.
**Figure 16:** Installing packages in R

A. Within R, click on “Packages” and “Install package(s) ...”.
Figure 16: Installing packages in R

B. Select a CRAN mirror from which to download packages.
C. Select a package to download.
Figure 17: Use the “library()” function to load the lattice package.
Figure 18: Lattice graphs are rendered within a separate window.