

Introduction to R

POLI 205 Doing Research in Politics

Fall 2015

What Is It?

- Statistical Platform
 - Uses the S Programming Language created by Bell Labs
- Free and Open Source
- R is made up of currently about 6,000 free packages
 - Developed by people all over the world
 - CRAN – The App Store for R
- *New York Times Article*

Commands

- Type in commands
 - Commands are called functions
 - There are very few “buttons” or “menus”
- You generally don't save changes you make to your data
 - Instead, your R code will retain the data and the analysis steps you take
- Create files call R Scripts
 - R Scripts are a record of your functions (or code)
 - Then each time you launch R you run the scripts

Set Your Working Directory

- Where do you want R to save the files on your computer?
- You need to think of multiple projects
 - Class Labs
 - Data Analysis Project
- Windows Users
 - Example: C:\Users\Username\Documents\RFiles
- Mac Users
 - Example: /Users/username/Documents/Rfiles/
- RStudio does help with the process

The R Syntax

- `#` - the Hash Tag
 - Comment or a remark
 - Anything behind a `#` is ignored by R
 - `#` Use many comments
- R is case sensitive
 - Mean and mean are different!
- R is made up of objects
 - A function is one type of object
 - `function_name()`
 - Example: `mean()`
 - `function_name(variable)`
 - Example: `mean(age)` `#` this returns the average value for the variable age
- `<-` Assignment
 - You can assign objects to objects

Steps

- Create working directory
- Place files in the working directory
 - Data (.csv file) and R code (.R file)
- Open RStudio
- Set working directory
- Load the data set into R
- Attach the data set
- Do the analysis