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Learning the Basics of R

Agenda

- Check in

- Discussion of readings

- Small group work

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Goals for the Class

- To introduce you to R, build your confidence/comfort using statistical software, and explore why R could be useful to you as a social work researcher

- To gain hands on experience working with datasets, selecting variables, running descriptive, creating graphs, and bivariate statistics in R

My Disclaimer

- I am not a statistician, but I've taken a lot of statistics courses

- I am not an expert in R, but I am familiar with the statistical program and multiple others

- Data analysis software, both qualitative and quantitative, have unique affordances and constraints
  - It's up to you to decide which works best for your research goals!

What is R? Why Should I Use It?

- Free, open-source statistical program that was designed to democratize access to statistical software

- Uses object-based programming language for statistical analysis

- Available on all operating systems

Other Types of Statistical Programs

- SPSS

- SAS

- Stata

- Mplus

.....all cost a lot of money!

Language

- Comprehensive R Archive Network (CRAN): this is the place where you download software and packages. Select the CRAN location nearest you.

- Packages: a program that tells R how to run a particular test
  - To install the package "haven", type the following in the console window > install.packages("haven")
  - In order to use the package, you need to use the following statement > library(haven)

- Objects: everything in R is an object
  - Create/assign value to object with <- command, like Object <- 10 or combine a set of numbers like Object3 <- c(10, 20, 30)

- Script file: where you write and save programming
  - Opening a script file: File > New File > R Script
  - To run a particular code, simply select the command and click "run" at the upper righthand corner of script file

Working in RStudio

2.1 What are R and RStudio?

For much of this book, we will assume that you are using R via RStudio. First time users often confuse the two. At its simplest:

- R is like a car's engine
- RStudio is like a car's dashboard
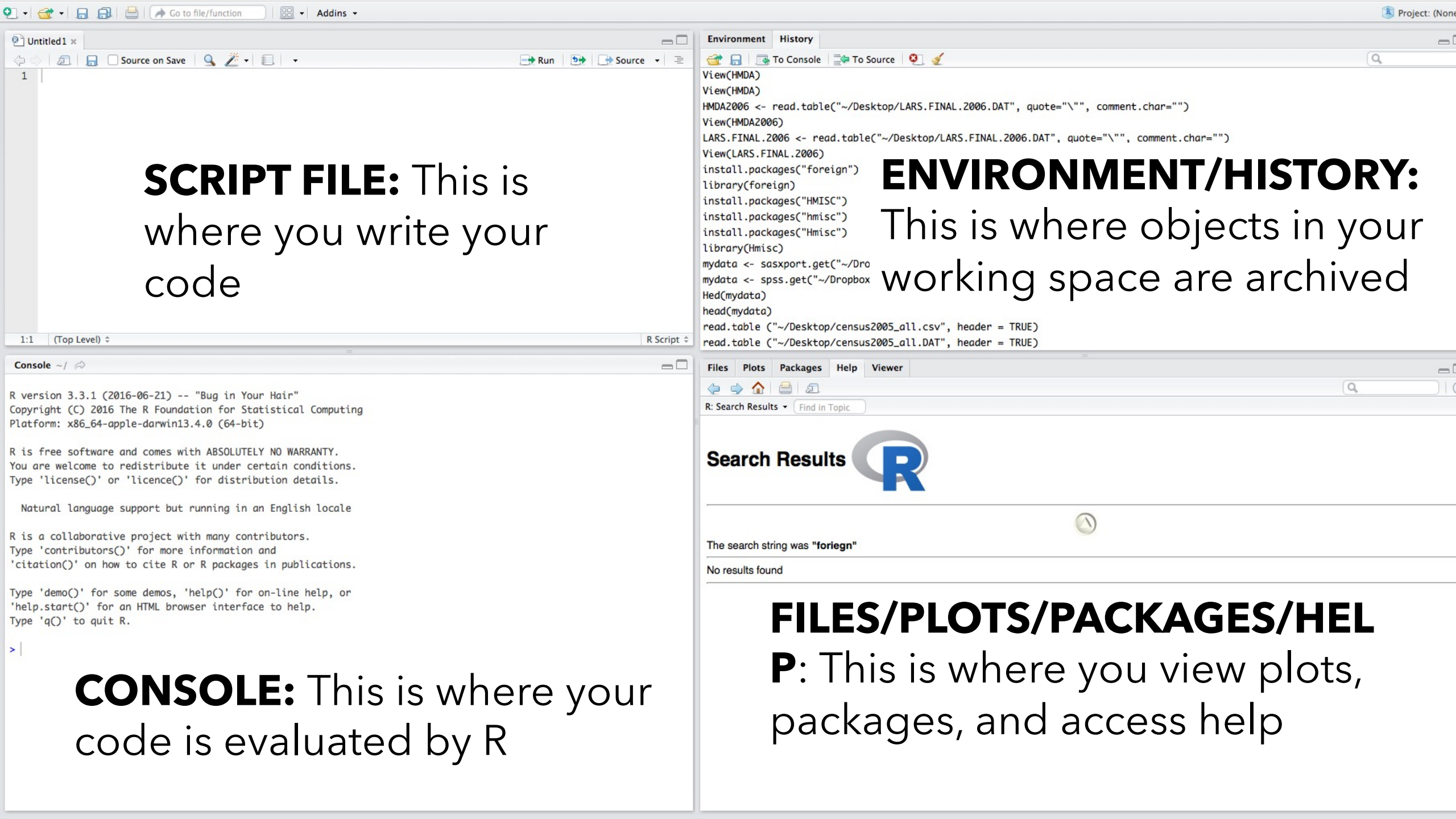
R: Engine	RStudio: Dashboard

Hands on Experience

Thank You!