Advanced Research Methods foR Psychologists

Practical Applications in R

What is R?

R is **free** 🤑 and **open source** programming language for **statistical computing and graphics** ☑ (but can also do a lot more).

Why R?

- Slowly replacing SPSS as the go-to stats software in social-sci.

- R is also significantly better than Excel for data analysis (which you should not use for data analysis!).

- One of the top programming languages for data/statistics in industry.

- New statistical methods are implemented first in R!

  (often never available in commercial applications...)

- Highly extendable – over 10,000 community-developed packages ▢.

Why *not* R?

- Requires *coding* 🙀, with no point-and-click user interface.

- Learning to code is like más nyelv tanulása…

- Slow learning curve… Requires lots of practice!

Hadley Wickham ✔
@hadleywickham

The only way to write good code is to write tons of shitty code first.

(I hope can write some shitty code together)
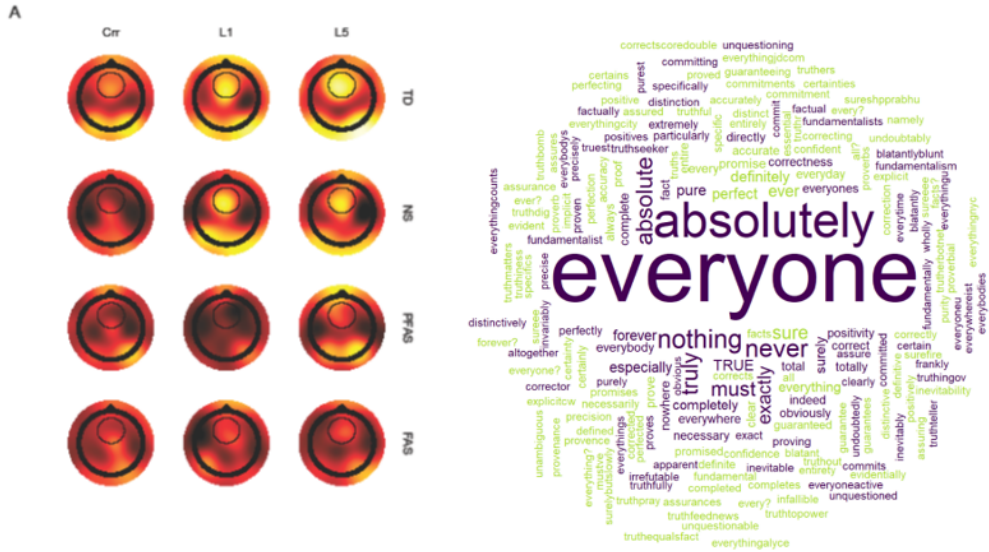
Why R after all?

Within R you can:

- **Prepare** your data for analysis and plotting.
- **Model** your data with all the familiar (and new!) stats model.
- Create beautiful **plots and figures**.
- (Even write you whole thesis / papers...)

Long term benefits:

- All of this in a **reproducible manner**.
- **Reuse code** on new data - just copy and paste!

Why R after all?

R can also be used for writing papers and reports >>

What you will learn

- How to import and prepare data
- Generate summary
- Make plots
- How to fit and explore statistical models

What you will *NOT* learn

- How to make your code more efficient.
- How to write your own packages.
- You will also not learn *everything*...

Resources

- ***Free online books and courses***
    - **R for Data Science** | r4ds.had.co.nz/
    - **Learning Statistics with R** | learningstatisticswithr.com
    - **R for Psychological Science** | psyr.org
    - **Statistical Thinking for the 21st Century** | statsthinking21.org

- ***Cheat sheets*** | rstudio.com/resources/cheatsheets
- ***Stay up-to-date***
    - **R-bloggers** | r-bloggers.com
    - **Twitter** | #rstats

Even more here>>

Andrea Pollard
@AndreaSPollard

I'm convinced that nobody actually gets better at using R, you just get better at articulating whatever it is you're trying to do using R in a Google search
#stillcountsasprogress #AcademicChatter

12:33 PM - 17 Sep 2019

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- Getting-help Guide >>
- R Search engine >>

DON'T GIVE UP
THE BEGINNING IS ALWAYS THE HARDEST

GOOGLE IS YOUR FRIEND