Exploring and understanding data

PSYC 11: Laboratory in Psychological Science

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Truth and data

- The “universe” produces data
- Math doesn’t lie
- Can we conclude that data tells us about truth?

Analytic flexibility

- There are typically many ways to analyze data
- Different analyses lead to different conclusions
- Sometimes those conclusions align… and sometimes they don’t

Matching questions and analyses

- Some questions can be answered directly by “obvious” analytic tools
- Other questions can only be answered indirectly, or are impossible even to explore with a given dataset
- Often more complex and abstract questions are harder to answer with simple analyses

What's in your toolkit?

- Observation, intuition, and logic
- Simple summaries of data (mean, standard deviation, sorting by value, etc.)
- Traditional statistical tests (t-tests, ANOVAs, correlations, etc.)
- Fancier tests and simulations

Getting help

- Teaching staff (instructor + TAs)
- Other students
- Slack (#stats-stuff, #data-sleuthing-lab)
- Google, stack exchange, wikipedia