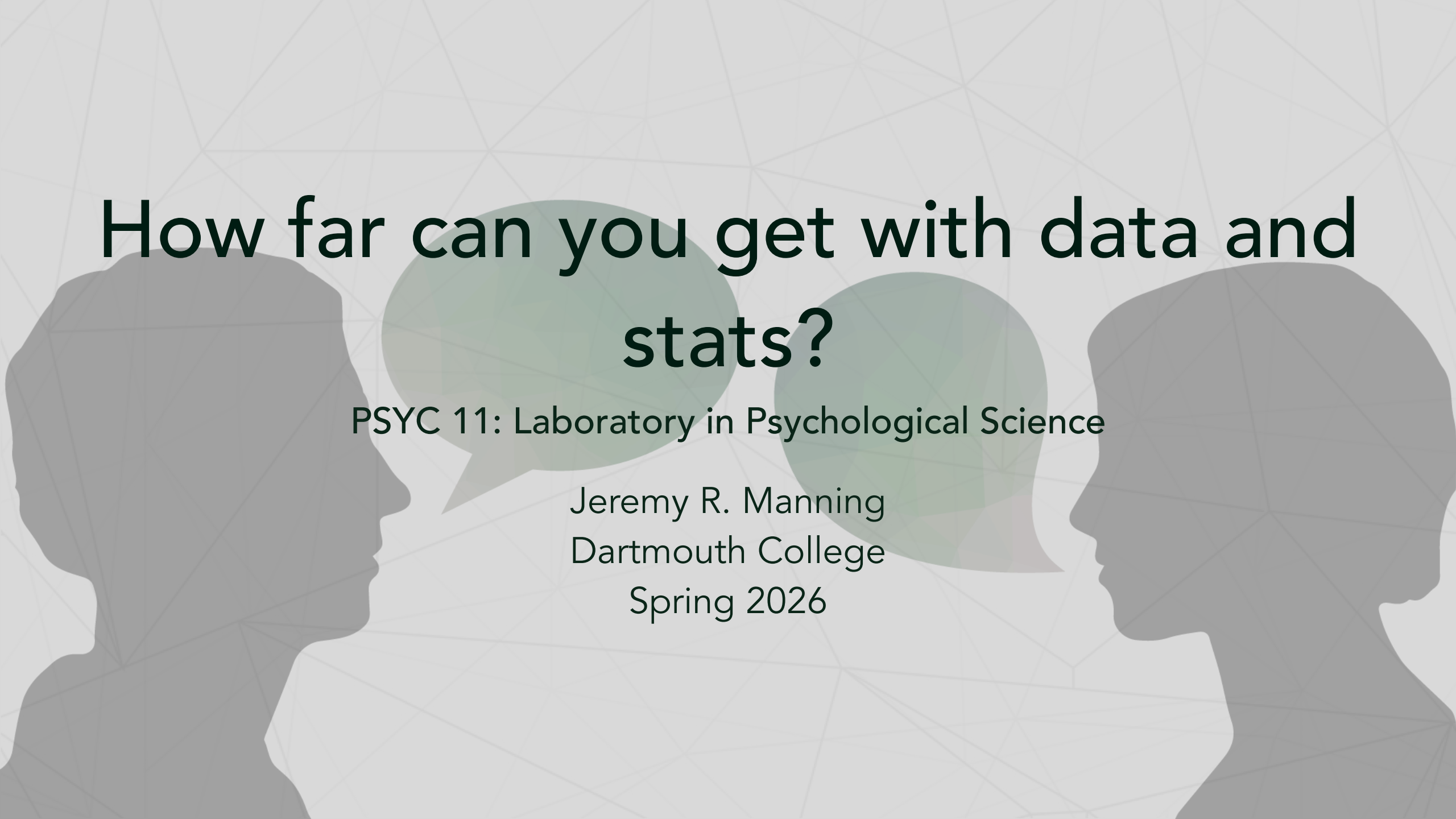

How far can you get with data and stats?

PSYC 11: Laboratory in Psychological Science

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Reflecting on the pitches

Class discussion

On Wednesday you presented your pitches and filled out your reflections. Let's hear from a few of you:

- What was the most **surprising** thing you observed during the pitches?
- Did any pitch change your mind about something?
- What made the most effective pitches *work*?

What is the point of this lab?

The big picture

- We're trying to gain insights into what makes an effective "pitch"
- This is directly relevant to the **Introduction** section of scientific articles
- Also relevant to presenting and describing your science more generally

What tools do we have?

Our tools

- **Ratings data** from the pitch evaluations (clarity, interest, efficiency, format)
- **Statistical tests** and analytic tools
- **Visualization tools** (figures!)
- **Our intuitions** from having been in the room

Planning your analysis

Think-Pair-Share

With a partner, discuss:

- What **specific questions** can you answer with the ratings data? (e.g., "Did group A score higher on clarity than group B?")
- What questions *can't* you answer with the data alone? (e.g., "Why was group C's pitch more interesting?")
- How would you test whether the differences between groups are "real" vs. due to chance?

Be ready to share one insight with the class.

The power of data

What CAN this lab's data and stats tell us?

- Reveal patterns we might not see on our own
- Quantify how confident we should be in our conclusions
- Compare groups, test hypotheses, make predictions
- For this lab: compare mean ratings, rank groups, test whether differences are statistically significant

What CAN'T this lab's data and stats tell us?

- The "truth" about which presentation was *actually* best
- Specific insights into *why* a pitch was effective (or not)
- How to account for every source of bias— presentation order, audience mood, confounding variables, etc.
- Whether the ratings reflect the quality of the **idea** or the quality of the **pitch** (remember: this is intentionally ambiguous!)

Data wrangling: getting the data into shape

Definition

Data wrangling means organizing or transforming your data into a format that is more convenient for you to work with.

Think about it...

- Are there any **challenges** to analyzing the pitch ratings in their current form?
- What format do you **want** the data in?
- How might you "wrangle" the dataset into a more convenient format?
- How might you use GenAI to help?

Data + Intuition = ❤️

Follow your intuitions...

- Don't throw your intuitions out the window
- You were *there*— you saw the pitches, felt the energy, noticed things the data can't capture
- Use common sense to interpret results and understand limitations

...But don't be blinded by them!

- At the same time, keep an open mind and be willing to revise your intuitions based on the data
- Data and intuition work best *together*
- The goal is to communicate your best understanding of the **truth**

Now: analyze the data with your group

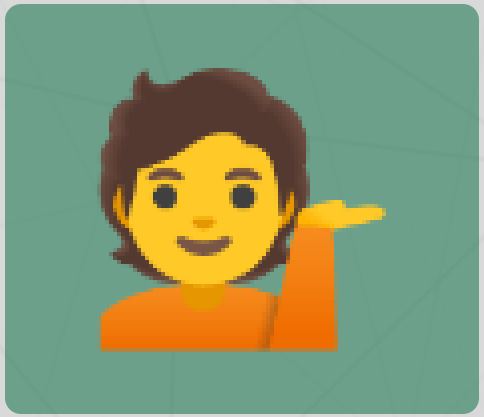
Your task

- Open the pitch ratings analysis notebook (also linked via QR code below)
- Work with your group to wrangle, analyze, and visualize the data
- Remember your predictions from Step 5 of the lab— how do the actual results compare?
- Use GenAI to help you explore different analyses and visualizations

Questions? Want to chat more?

Email me

Join our Slack



Come to office hours

Up next...

- Your written report on the pitch ratings analysis is due on **Monday**!
- **Next week**: Effective explaining + Picture (drawing) lab starts
- Please read the lab instructions before Monday