What Stresses Us?

Directions: Follow along with the slides and answer the questions in **BOLDED** font in your journal.

In the previous lab...

- We made a data set that combined our *Stress/Chill* data with our *Personality Color* data.
  - Load your data by clicking on it in the *Files* pane.
- In case you missed the last lab (or did not save your merged data):
  - Load your *Personality Color* data and name it `colors`.
  - Load your *Stress/Chill* data and name it `stress`.
  - Then run the following to merge them together:

```
stress_colors <- merge(stress, colors,
                       by = "user.id")
```

For this lab ...

- We will use the techniques we learned in previous labs to explore and analyze our `stress_colors` data.

Stress/Chill

- Make a plot that shows the distribution of the `stresschill` values.
- Using only your plot:
  - **Describe the *shape* of the distribution.**
  - **Typically, what `stresschill` level did your class report?**
  - **Estimate the *variability* of `stresschill` values.**
- **Write a sentence explaining how and why you chose your particular values to describe the *variability* and *center* of the data.**

Stress/Chill & Sports

- Create two boxplots of `stresschill` values, based on whether a person plays sports or not.
- Based on your plot:
  - **Does it appear that one group has higher levels of stress than the other? Justify your answer.**
  - **Compute (do not estimate the answers using the plot) the *min*, *max*, *Q1*, *median*, *mean*, and *Q3* for each group.**
  - (HINT: You can compute these numbers with a single line of code. Check Lab 2.2 if you forgot how.)

Colors & Sports

- The color test predicts that people with *ORANGE* personalities like physical activity. So, we should see more sports players in the orange group than in the other colors.
- **Does the data support this claim?**
  - **Write out the code you used to determine this answer.**

Going even further...

- **Could it be that the proportion of sports players who are *ORANGE* is just due to chance?**
- **Answer this question by comparing the actual proportion of sports players who identify as *ORANGE* to 300 randomized trials.**
- **Justify your answer with a plot and your corresponding explanation.**