# Free Assignment 3 - Regression and multiple regression in R

This lab will examine how various personality variables predict a person's desire to conform. When completing this assignment, make sure you create a R notebook that has your commands that you type in R, including the ones you paste from the assignment itself. You will upload your knitted R notebook as a pdf to complete this assignment. You can type your answers in your R notebook, or write them here. I prefer it if you include them in the R notebook.

We will use the data we previously used in Interactive Assignment 2. Here is a key to the variables:

- Participant: a participant number
- E: extraversion score
- A: agreeableness score
- C: conscientiousness score
- N: Neuroticism score
- O: Openness score
- Gender: gender coded F and M
- Age: participant age
- Conformity: their score on a survey about how much they would conform
- RATING: a participant's rating to the question "how much do I think I conform to others' behaviors"
- SelfEsteem: a score on a self-esteem inventory with higher scores indicating more self-esteem

The data are available as the dataframe "FA3.csv".

**Step 1:** Create a folder for this project and create a new R notebook and place the data in the folder. In the R notebook, create a code chunk which loads the data and the `ggplot2` package.

```
library(ggplot2)
```

**Step 2:** Create a regression examining each of the 5 personality variables (extraversion, agreeableness, etc.) as a predictor of conformity.

**Step 3:** In your annotations, write the regression equations for each of the 5 regressions below. Are any of the personality variables significant predictors of conformity?

**Step 4:** Repeat the same step that you used in Step 1 but instead of having Conformity be your outcome variable, use SelfEsteem. In this case, we want to see whether personality predicts self-esteem. In your annotations any of the personality variables significant predictors of conformity?

**Step 5**: Now we want to look at whether the relationship between Extraversion and Self-Esteem is due to Gender. Create a new regression with Extraversion predicting Self-Esteem and adding Gender as a control variable.

In your annotation, answer the following: Is the regression between Extraversion and Self-Esteem with Gender as a control variable different than the one that did not include Gender as a control variable? Did the b-value and significance change from the original regression?

**Step 6:** How would you summarize the results from this lab? Do you think there is any evidence that personality affects conformity? How about whether personality affects self-esteem?