

**Lab Assignment #9: Mental Rotation, Final Project Data Analysis, & Results Section**

This week's lab has 2 main goals. Your first goal is to (a) analyze the data you collected for your research project and (b) write a draft of your Results section. Note that there are only two labs after this one to get your data analyzed and poster created in preparation for our poster session (on Dec. 3<sup>rd</sup>) so please use all available lab time to move your project forward! Your second goal is to complete the *Mental Rotation* experiment in CogLab and answer 3 questions about it. Please read the CogLab info about this classic experiment.

**A. Organize, format, & analyze your data (in Excel & Vassar Stats); then write a (nearly final) draft of your Results section.**

- Enter and organize your data in Excel**, in preparation for conducting your statistical analyses. Then choose the appropriate statistics to analyze your data and **conduct your statistical analyses** using Vassar Stats (link on the course webpage).
- Write the Results section for your research project.** Keep in mind that good Results sections often start with a brief summary of hypotheses and main results (without stats). This is then followed by a more detailed account of (a) how your data were scored, (b) how they were analyzed (including IV type & levels), and then (c) what exactly was found (with stats). The latter (stats) part should include both descriptive statistics (means and SDs) and inferential statistics (e.g., t-tests & ANOVAs). Your results should be written in APA format, an example of which can be found on the class webpage; you could also find examples from research papers that have examined similar topics.
- Consider using any remaining time to **create figures and/or tables** for your poster and/or paper. You are welcome to include these as part of today's lab assignment, especially if you want comments on them, but they are not required.

**B. Complete the *Mental Rotation* expt in CogLab and answer three questions.**

1. Did you show the mental rotation effect? In a brief sentence or two, explain what aspects of your data show this.
2. Describe an everyday task that might depend on the same cognitive abilities that you just used to do this experiment.
3. Describe one other way of explaining Shepard and Metzler's findings that does not rely on mental rotation.

**C. Name your completed assignment "*Lab09-yourlastname.doc*" and send it to the TA by 5pm this Friday. Your file should include (a) your Results section (with optional figures & tables); and (b) your answers to the Mental Rotation questions.**