Honors Theses and Academic Articles

The Weinberg Institute for Cognitive Science webpage already has a lot of great information on how to develop a Cognitive Science Independent Study (COGSCI 497, COGSCI 498) or how to begin an Honors thesis in Cognitive Science (COGSCI 499). However, you may be wondering: how do I even write a thesis or an academic article? What are the parts of a thesis and article, and how do I structure them? In most cases, your thesis or independent study advisor will indicate to you what parts of a thesis are required based on the type of research you're pursuing. Quantitative and qualitative studies may look vastly different in terms of length, charts, data analysis, and much more. Here are some parts of a thesis or article your advisor may ask you to include.

- **Justification of the Study**
  This section usually provides a brief overview of the main issue you wish to explore, and why it is relevant.
- **Literature Review**
  Jumping off of your justification for your study, this section looks at previous related research on your topic. Do not worry if you do not see studies available on exactly your topic: that just means your study is going to explore new territory! Your literature should have a good mix of a lot of primary sources (empirical studies written directly by the researcher using their own data) and a few secondary sources (meta syntheses of data, or studies using others' data).
- **Research Questions/Hypotheses**
  What is the question you seek to answer? This is possibly the most important part of your study, as this question and your predicted outcome will be what you measure your results against. You can also use the Shapiro Library's Research Question Generator to help kick start your process.
- **Methodology/ Instrumentation**
  This section covers how you plan to explore your research question. Are you asking participants questions with a survey? Are you going to be using electrodes to measure physical responses? It is important that you explain which tools you have selected for your study and why.

- **Participants**

  Who or what are you studying? It is very easy to want to study as many people or things as possible. However, your participants section should narrow do who your intended population is, and why. If you are doing a study about how many University of Michigan alumni are working at Google, you would not survey Ohio State alumni! This seems intuitive, but be sure to make your criteria for participant selection clear: not just for the reader, but for yourself.

- **Results**

  What was the outcome of your experiment? This section is reports all the results without interpreting the data.

- **Analysis/Discussion**

  This section should both answer your research questions (even if the answer is that your results can't answer the question!) as well as interpret explore the meaning of your results. This tends to be the longest section of any piece of academic writing, and can include tables, diagrams, and models.

- **Citations**

  Finally, give credit where credit is due! Be sure to properly cite all sources.