**Statistics for the Social Sciences**

**Assignment 5.2**

Devise and discuss (in an essay of 300 to 500 words) a hypothetical research situation involving a policy decision wherein your supervisor asks you to evaluate something “scientifically” using data collected from a sample of agency employees. The “something” should consist of a variable that represents a current practice and a proposed new practice such that you have an “experimental group” and a “control group.” The control group can be doing nothing (such as when you don’t have a Neighborhood Watch program and are considering adding one), or it can represent the status quo (such as when you are considering moving from 10-hour shifts to 8-hour shifts). In your discussion, consider the possibility of finding a statistically significant difference, and also consider the possibility of not finding a statistically significant difference. What is the *probability* of being wrong in both cases (these will be general terms from the reading, not actual numbers)? How do statisticians refer to each of those four possible situations. What are the practical problems (impact on your agency) that arise if you are wrong in making your statistical decision? How does that inform your choice when setting the alpha level for your experiment?