Phil 12
Winter 2009

First Writing Assignment

Write a short paper (1-2 pages, double-spaced, typed) on the question assigned for your section. These are to be turned in by Noon on Friday, February 20. Papers should be submitted electronically to your TA in .doc or .rtf format. If this is not possible, you may deliver them to your TA's mailbox by Noon. The goal of this paper is to explain clearly the central concepts employed in the question you are to address. Assume that your audience is a fellow student not in this class. To explain the material to that person you cannot just use the concepts we have developed in class but *explain* them. Present your answers totally in your own words—do not quote material either from the website, the lecture powerpoints, or anyone else.

A-01. Your parents are always harping on your incessant text- and instant-messaging, warning that frequent use of the abbreviated slang common to both will have a negative impact on your writing skills. You decide to find out whether there exists a correlation between the use of text- and instant-messaging (specifically, the use of the typical slang associated with both) and poor writing skills. In order to begin your research, you will need operational definitions for your variables. Explain why this is necessary. Then give two operational definitions for each variable (use of slang, poor writing skills), noting a strength and weakness of each one. These should be discussed in terms of construct validity. Keep in mind that both variables must be score variables, so you need operational definitions that allow you to render them numerically. If a positive correlation were found, would it confirm your parents' hypothesis that use of the slang is a negative predictor of your writing skills? Discuss the reasons that a study of this kind might confront serious difficulties.

A-02. Pretend that on an average week, you watch about 10 hours of TV, and that your roommate is always complaining that this is way too much. What bothers him is not your being too loud or hogging the living room. Rather, he believes it bodes poorly for your future—he thinks people who watch lots of TV end up not doing well in life. To try to convince you to watch less TV, your roommate gives you a study he found on the internet showing a correlation between hours of TV watched per week during college, and average annual income (in thousands of dollars) during adulthood. The study reports a Pearson correlation coefficient of -0.51, a regression coefficient of -2.36, a regression constant of 130, and statistical significance of $p < 0.28$. Appealing to this paper, your roommate says he can predict from the amount of time you spend watching TV that you will end up poor. Explain why your roommate's conclusion about your future income is suspect. Make your roommate understand what the Pearson correlation coefficient is, what the regression coefficient and regression constant enable you to infer, and what the p-value means. You don't need to repeat this scenario; just get straight to the point about why, given this study, your roommate's prediction of your future salary from your hours of TV watching is problematic.

A-03. Your team wants to discover whether there is any significant difference in visual acuity between men and women. You cannot, of course, test every man and woman, and so your team must test suitable samples of the population. Explain what constitutes the null hypothesis and the research Hypothesis and how they relate to each other, as well as what are the possible Type I and Type II errors in this scenario. Explain the concepts of Type I and Type II error. Assume your team demands a p-value of .05. Explain what this means in considerable detail and what would be reasons to accept this or prefer some other p-value.

A-04. Imagine you are part of a student organization investigating a sample of UCSD students to determine whether UCSD students who attend the Sun God Festival are more satisfied with their overall experience at UCSD than those who do not attend the Sun God Festival. Explain what the research hypothesis and the null hypothesis are for this study. Why does one need to consider the null hypothesis? What would it mean for the researchers to commit a Type I error in this study? What would it mean for the researchers to commit a Type II error? If your group is trying to convince people to attend the Sun God Festival, which type of error will you care most about avoiding, and why? What could you do to reduce the likelihood of committing a Type I error? What could you do to reduce the likelihood of committing a Type II error?