36-707: Applied Regression Analysis

On writing... For Discussion in Class on Thursday, October 11, 2001

Overview

All documents have a beginning, a middle, and an end. Recently you read the chapters

- Alley, Chapter 2: Organizing your documents.
- Huth, Chapter 4: The Critical argument and the structure of the scientific paper.
- Spurrier, Chapter 12: Strategies for effective written reports.

on organizing general scientific papers (Alley and Huth), and data analysis reports (Spurrier) in particular. (Note: A discussion of the organizationHigham's *Handbook of writing for the mathematical sciences.*, which is available at Carnegie Mellon's Hunt Library). of a mathematical article is contained in Chapter 6 of

Please read the article

Kraut, R. Patterson, M., Lundmark, V., Kiesler, S, Mukophadhyay,T & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist, 53,* 1017–1031.

(Read this on the WWW at `http://homenet.andrew.cmu.edu/progress/research.html`; look for a link with this title in the bottom third of the paer). We will discuss the structure of this article (not the content!) in class on Thursday, so please do the exercises below and bring your answers with you to lecture.

Reading/writing exercises

Read the article on Internet usage and depression. The purpose of these exercises is to focus your attention on the *organization* and some overall *strategy choices* taken by the authors, <u>not</u> on the content[1] of the article.

1. Read through the article. Outline the article twice:
   - First, use just the section and subsection headings present in the article. Notes:
     - The Introduction is not explicitly labeled but it is the first text passage in the article, after the paragraph of acknowledgments which you can skip.
     - Sections are indicated by larger–type headings (*e.g.* the heading "Current Debate"). Subsections are indicated by regular–type headings separated by a blank line (*e.g.* the heading "Internet for Entertainment, Information, and Commerce").
   - Now expand your outline by adding one *sentence* or *phrase* describing the main point of each paragraph in the article.

   You only need to bring in the expanded outline.

[1] As a student of statistics, you may be interested to know that the main model-fitting tool in this paper is something called *path analysis*. Path analysis is a variation on multiple linear regression, that allows one to "stack" regressions on top of one another. Path coefficients are not the same as regression coefficients, but for the purposes of reading the article, you may interpret the estimated path coefficients the same way you would interpret estimated regression coefficients.

Questions 2 and 3 below have many parts. You don't have to have long answers, but I am expecting to find evidence in the discussion that you thought about how well the article addresses each issue.

2. Use your first outline (with headings only) to answer the following. I am imagining a sentence or two for each question.

   (a) Do the section (and sub- and subsub-)section headings adequately communicate the structure of the paper? Explain.

   (b) How strong (active, descriptive) is each heading?

   (c) Comment on parallelism in the headings (in form, and in parts of speech used).

3. Use your second outline, and the article itself, to answer the following. I am imagining a sentence or two for each question.

   (a) Is the title effective in saying what the paper is about without restricting the audience with jargon?

   (b) What is the intended audience (or audiences) of this paper?

   (c) As a statistician, you are probably not in the intended audience, but you are a reasonable secondary audience. What efforts were made in the paper to address you as a secondary audience? What (if anything) else would you like to see?

   (d) Is the Abstract *descriptive* or *informative*?

   (e) In the Introduction of the paper (the unlabeled section preceding "Current Debate") did the authors follow the guidelines given in Huth, Chapter 5 (pp. 60–62)?

   (f) Describe and comment on the organizational strategy that was chosen for the middle of the article.

   (g) Focus on the Discussion section at the end of the article.

   - Is there an informative summary of the article in this section—is it needed or a waste of space?
   - What other functions does this Discussion serve (just list them, e.g. summary, conclusions, generalizations, recommendations, future research, etc.).
   - Does the Discussion section "wrap up" the article in a way that satisfied your expectations after reading the Abstract and Introduction? Explain.