Decisions, Games, and Negotiation

Assignment 3 Notes and Grading Standard

The nature of Assignment 3 makes a traditional solution set with a single correct answer impossible because of the variety of satisfactory answers. Excerpts from responses that we felt particularly well applied the decision-making methodology in question will be posted on the discussion forum.

B: Required

If you are thinking of attending a professional school after college, then you are probably trying to decide which school is best for you. If you aren’t thinking of going to a professional school, then pretend for a minute that you are, and choose a field that interests you: business, law, medicine, education, or engineering. **(50 points)**

1. To avoid anchoring, first write down three or four of the most important objectives you have in this problem. How might you choose scales to evaluate these objectives? What sort of scales would they be? If they are interval scales, then what units might you use?

   **Objectives:** 5 points
   **Identifying scales/units:** 5 points

   Now review the data from *U.S. News Best Graduate Schools*, which is available on the course website in an Excel file named “Assignment 3 Data.” An online version is also available at:
   http://www.usnews.com/usnews/edu/grad/rankings/rankindex.htm, but access to rankings requires a paid subscription. Pick four such schools that you would like to compare and answer the following questions about what you see.

   2. What general categories of objectives has U.S. News selected in preparing this report? Prepare a list of four or five categories or objectives. Don’t consider specific sub-objectives like “percent employed in manufacturing.” Instead, provide a more general grouping, more like your list of ends objectives.

   **Objectives:** 5 points

   3. For each objective of your own, select a proxy variable from the data listed that you think best represents that objective. If your objective is not reflected in the data from U.S. News, then you can add information from other sources and from your personal knowledge. Make a consequence table. Evaluate the four graduate programs by first doing a purely ordinal analysis, and then by
imagining tradeoffs as necessary. Explain briefly your swaps. Come up with a ranking of the schools. Now review the U.S. News rankings for graduate schools in your field of interest.

Consequences table: 5 points  
Ordinal analysis (Borda count): 5 points  
Tradeoffs (either using weighted average or even swaps): 10 points

4. In what order does U.S. News rank your schools? Is this different from your own rankings? How do you think U.S. News weights its objectives, and how does this compare to your analysis? Do you think they’ve left out anything?

Comparison: 5 points

5. Now review the “methodology” for the professional school of your choice. The U.S. News methodology is available online for free at: http://www.usnews.com/usnews/edu/grad/rankings/about/index.htm.

What sort of weighting does U.S. News use (linear or nonlinear)? List examples of all the different types of scales employed (nominal, ordinal, interval, and ratio). Provide a brief critique of how they are used. For example, does the “quality assessment” component of the ranking make use of a meaningful statistic?

Critique of U.S. News’s use of scales/quality assessment component: 5 points  
Listing examples of scales: 2 points  
Commenting on linear weighting and its appropriateness: 3 points

C: Choices

Think of a real decision problem you face and analyze it using the PrOACT approach. Try incorporating the method of even swaps as well, explaining explicitly about what tradeoffs you would make and why. Does this exercise make you feel closer to making a good decision? What about your PrOACT analysis might you now want to refine or adjust? (35 points)

Pr: 5 points  
O: 5 points  
A: 5 points  
C: 5 points  
Tradeoffs (using even swaps or weight average): 10 points  
PrOACT evaluation/comments on what to refine/adjust: 5 points

D: Writing

Write a paragraph explaining something that you understand better this week than you did last week. Include a specific example, such as an item on a previous problem set that you now know how to do better. (15 points)
Clear explanation: 10 points
Specific example: 5 points