Decision Behavior: Theory and Practice (Davies, Winter 2007)

Problem set 3 (Mar. 8, 2007, due Mar. 23, 2007)

Note: 6-Induction notes references are to the March 8, 2007, version, and 7-Action notes references are to the March 6, 2007, version.

1. Prove theorem 6.1.10.
2. Calculate the sample correlation coefficient between the symptom and disease in the table in experiment 6.2.6.
3. Instructors sometimes prefer to give "holistic" grades to students at the end of the quarter rather than calculating them from scores on assignments. Do the experimental findings on generalization imply that this process likely to lead to grades that are more, or less, reflective of students' true performance? Justify your answer.
4. Suppose someone establishes that baseball batters show evidence of streak hitting, in line with spectator beliefs. Would such a finding invalidate the "hot hand" study by Gilovich, Vallone, and Tversky (6.3.1)? Why or why not?
5. Prove 6.3.9.
6. Show that the majority pattern in experiment 6.4.3 is inconsistent with probability theory.
7. Formulate a principle of order independence for evidence assimilation using precise, formal language.
8. Describe an experiment whose outcome you would expect would show a violation of the Betweenness principle (7.2.1(e)).
9. Give examples when a person might change their preference between x and y that (a) does and (b) does not violate the stability assumption for preferences.
10. Provide an example of a standard gamble for which you would expect most people to be risk seeking.