

**FINAL EXAM**  
**Integrated Studies 8C - Fall 2002**

**Instructions:** There are two categories of questions – fact and opinion. Answer **5** out of the 7 questions in **each category**. Each question should require no more than a few paragraphs to answer fully. Your work is to be yours alone, but you may use resources such as your book, the class reader or a computer. Turn in your exam to my office (387 Kerr Hall) or the Department of Statistics, 368 Kerr Hall, by **5pm Tues, Dec. 10**.

**Factual Questions: (Answer 5)**

1. Based on data presented in this course, which of the following do you think has the strongest evidence to support it? Precognition, global consciousness, PK, survival after physical death. Explain your answer.
2. At the beginning of the course it was noted that there are two criteria needed for testing psychic claims statistically. First, it should be known what would happen just by chance. Second, normal means of communication must be prevented. Explain how each of these is accomplished in ganzfeld experiments.
3. Suppose ten psi experiments were done, each consisted of  $n = 20$  trials, using the “direct hit” method of analysis with four choices. Further, suppose each experiment resulted in 7 hits, when 5 would be expected by chance. Using the formulas below, compute the z-score and effect size for each experiment *and* for the combined results of all ten experiments. A z-score of 1.645 or higher corresponds to a p-value of 0.05 or less. Using these results, explain what role z-scores, statistical significance and effect sizes should have in examining the evidence for or against the existence of psi.

$$z = \frac{\text{hits} - (n/4)}{\sqrt{n(.25)(.75)}} \quad \text{and effect size} = \frac{z}{\sqrt{n}}$$

4. Explain how the "fuzzy set" analysis method works, and why or when it would be used.
5. Suppose that for remote viewing and ganzfeld sessions, receivers really can get the correct answer with probability 1/3, when the chance probability is 1/4. A study is to be done with 50 trials. Using the concept of power, explain how to determine whether 50 trials is likely to be a large enough number.
6. Explain the reasoning behind decision augmentation theory (DAT) as an alternative explanation for the statistically significant results in the “micro-PK” experiments.
7. Explain the difference between the US Government’s experimental and operational remote viewing programs, and explain why they decided to end them in 1995.

**Opinion Questions: (Answer 5)**

8. Dr. Ed May showed a video of a sensational remote viewing of a ship channel by Joe McMoneagle. In the absence of other evidence, would this video convince you of the reality of psi? Why or why not?
9. Suppose you believe that the results of remote viewing and ganzfeld experiments you have seen really are indicative of psi, and the effect size is similar to what has been found in those experiments. How (if at all) would you change the way you conduct your daily life? Explain.
10. If you were a psi debunker, what argument would you use to try to persuade an open-minded person that psi is not real? If you were a psi proponent, what argument would you use to try to persuade an open-minded person that psi is real? (Your answer should address both of these.)
11. The movie “Vibes” portrayed a sampling of the daily lives of two psychics. Do you think the portrayal was realistic? Give examples to support your answer.
12. Former UCD Professor Charles Tart has proposed that there is a general “fear of psi” that even affects psi researchers, and that keeps the results from being stronger. Do you think that is true, and if so, what do you think people are afraid of?
13. Figure 15.6 in Radin’s book gives two lists of basic assumptions (by Willis Harman), one for *Orthodox “Separateness” Science* and one for *Proposed “Wholeness” Science*. Which list do you think most people in the general public would prefer to be true? Do you think the preferred list would be different for scientists? Explain.
14. Refer to the previous question. Which list do you think is better supported by current scientific evidence? Explain. (You don’t have to answer Question 13 to answer this one.)