ID# _____ Final Exam PS306, Spring 1999
(You need to use your *real* student ID #)

As always, the Skidmore Honor Code is in effect, so keep your eyes focused on your own exam. Read each question carefully and answer it completely. Don't hesitate to comment on any aspects of the design of a study that seem problematic to you. Keep in mind that I think of a point as a minute, so don't spend too much (or too little) time on any one question. The exam should take you a little over two hours to complete, which means that no one should be pressed to complete the exam in a three-hour period. Thanks for making my semester an enjoyable one. Have a peaceful and relaxing summer!

1. During class, we broke into groups to read three studies and discuss the extent to which they adhered to the APA ethical guidelines. Choose any *one* of the three studies and briefly describe your reaction to the ethical aspects of the study. Be specific in your application of the guidelines. [10 pts]

2. Apply the APA ethical guidelines to *either* of two studies described in your textbook: (1) the West, Gunn & Chernicky study (hint: field study in which participants were invited to participate in an illegal burglary) *or* (2) the Cobb et al. study (hint: heart bypass surgery). Briefly summarize the study, then tell me what guidelines, if any, you feel were violated and whether or not your would approve the research. [10 pts]

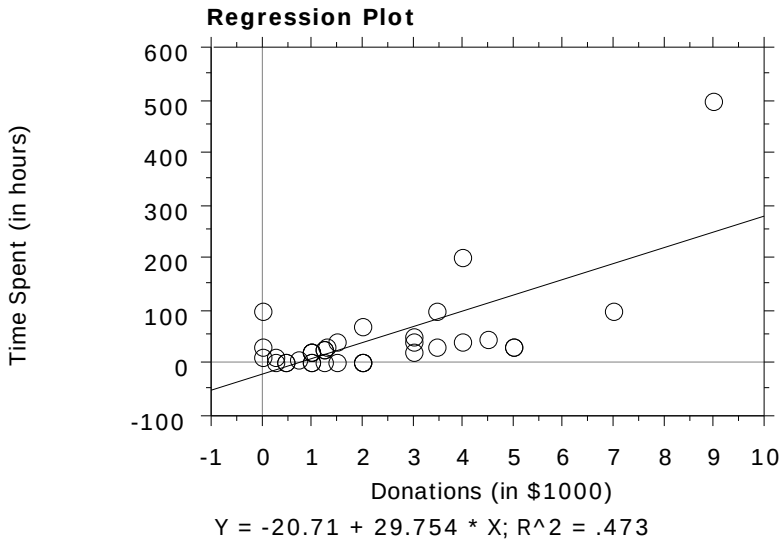
3. We discussed the problem of experimenter expectancy effects in class. Describe the nature of the problem these effects create and describe the experiments discussed in class that argue for the existence of these effects. Discuss at least two alternatives that might be used in experiments to minimize experimenter expectancy effects. Finally, if experimenter expectancy effects really do exist, why do you think that it might be difficult to prove conclusively that they *do* exist? [15 pts]

4. Deception is certainly allowed in psychological research. First, tell me what the APA guidelines have to say about using deception in research. Then briefly describe the Ross, Lepper, & Hubbard study and tell me what you see as its implications for psychologists using deception in research. [15 pts]

5. Dr. Paul Tree was interested in the relationship between charitable donations and time spent in volunteer work in a given year. He expected a positive relationship between the two variables. Below are the results of his initial study. First, interpret them as completely as you can. Then, tell me what amount of time you would expect a person to spend in volunteer work, if that person had donated $5000 per year. What if a person donated $10000 in a year? Provide three possible explanations for the observed results, and tell me why such possible explanations make it difficult to arrive at causal claims from correlational data. [20 pts]

Regression Summary
Time Spent (in hours) vs. Donations (in $1000)

Count	35
Num. Missing	0
R	.687
R Squared	.473
Adjusted R Squared	.457
RMS Residual	65.642



ANOVA Table
Time Spent (in hours) vs. Donations (in $1000)

	DF	Sum of Squares	Mean Square	F-Value	P-Value
Regression	1	127374.093	127374.093	29.561	<.0001
Residual	33	142194.479	4308.924		
Total	34	269568.571			

Regression Coefficients
Time Spent (in hours) vs. Donations (in $1000)

	Coefficient	Std. Error	Std. Coeff.	t-Value	P-Value
Intercept	-20.710	16.465	-20.710	-1.258	.2173
Donations (in $1000)	29.754	5.473	.687	5.437	<.0001

6. Dr. Shirley A. Starr was interested in the impact of the nature of information on memory for that information. To that end, she showed each participant a series of 6 movies in different orders, with a test for the content of the movie given at the end of each movie (high percentages = high memory). The six genres that Dr. Starr used were Science Fiction, Comedy, Action, Romance, Cartoon, and Documentary. Complete the source table below, then analyze the results of this study as completely as you can. [20 pts]

ANOVA Table for Type of Movie

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
Subject	14	150.289	10.735				
Category for Type of Movie	5	2744.722	548.944	66.315	<.0001	331.577	1.000
Category for Type of Movie * Subject	70	579.444	8.278				

Means Table for Type of Movie
Effect: Category for Type of Movie

	Count	Mean	Std. Dev.	Std. Err.
SciFi	15	81.267	1.534	.396
Comedy	15	80.867	4.673	1.207
Action	15	89.333	2.257	.583
Romance	15	80.800	2.678	.691
Cartoon	15	89.400	3.043	.786
Documentary	15	73.467	2.532	.654

7a. Dr. Ray Gunn was also interested in studying how the nature of the movie would have an impact on memory, so one group watched a science fiction movie, another group watched a comedy, and a final group watched an action movie. At the same time, he was interested in the impact of exposure to various movies on memory for information from the movies. To that end, he had one-third of each group of people watch the movie once, another third watch the movie twice, and a final third of each group watch the movie four times within a 48 hour period, expecting that memory scores would increase with increased exposure. His dependent variable was the score on a test (high percentages = high memory). Below are the results of the study. Interpret these results as completely as you can. [20 pts]

ANOVA Table for Memory Score

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
Number	2	1483.822	741.911	158.227	<.0001	316.455	1.000
Type of Movie	2	597.756	298.878	63.742	<.0001	127.483	1.000
Number * Type of Movie	4	142.844	35.711	7.616	<.0001	30.464	.998
Residual	81	379.800	4.689				

Means Table for Memory Score
Effect: Number * Type of Movie

	Count	Mean	Std. Dev.	Std. Err.
Four, Action	10	96.100	1.663	.526
Four, Comedy	10	93.000	2.261	.715
Four, SciFi	10	94.900	2.846	.900
Once, Action	10	89.600	1.838	.581
Once, Comedy	10	82.300	3.020	.955
Once, SciFi	10	82.300	2.312	.731
Twice, Action	10	93.900	.994	.314
Twice, Comedy	10	87.800	1.687	.533
Twice, SciFi	10	86.100	2.132	.674

7b. Suppose that Dr. Gunn had obtained exactly the same data set, but had analyzed the data as a single factor experiment with Number of viewing times as the factor (i.e., ignoring the type of movie). What would the results of this single-factor experiment look like?

Source	SS	df	MS	F
Total				

8. Suppose that you were conducting a 3x4 mixed design, with the first factor independent groups (between) and the second factor repeated measures (within). Suppose, also, that you were interested in obtaining a minimum of 30 scores per cell (for power considerations). [10 pts]

a. How many participants would you need to run in your entire experiment? (Show how you arrived at that number.)

b. What considerations would lead you to run the study as a mixed design, rather than as a completely within (repeated measures) design?

c. Why would you prefer a mixed design to a completely between (independent groups) design?