Psychology 212: <u>Introduction</u> to Experimental Psychology, Honors

Winter 1993

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Beginning my studies the first step pleas'd me so much,
The mere fact consciousness, these forms, the power of motion,
The least insect or animal, the senses, eyesight, love,
The first step I say awed me and pleas'd me so much,
I have hardly gone and hardly wished to go any farther,
But stop and loiter all the time to sing it in ecstatic songs.

--Walt Whitman

This is the task of natural science: to show that the wonderful is not incomprehensible, to show how it can be comprehended--but not to destroy wonder. For when we have explained the wonderful, unmasked the hidden pattern, a new wonder arises...

--Herbert Simon

During Psy 211 you have studied human information processing: perception, cognition, and decision making. In the current course, Psy 212, we will add the basic psychological processes of emotion and motivation, and individual differences in personality as they develop in a social context. We will also consider some aspects of psychopathology and treatment.

We will continue reading Peter Gray's book as the text. I will ask you to rework some of the material you read in the text last quarter so that we might achieve some integration for the overall course.

Two short answer essay exams, a mid-term and a final, will be based upon class lecture-discussions and readings, and given on 2/4 (Midterm) and 3/18 (Final). Each of these exams will count for 30% of the course grade. The final 40% of the grade will be based upon your proposal, paper and class presentations on the research project you will complete this quarter.

Classes will follow a lecture-discussion format. Because I am going to depend on your understanding and ability to describe the points of the text, it is essential to the class that you have completed the assigned reading before the scheduled day for its discussion. If you have not completed the reading, it would be better for you to skip class than to attend. Positive contributions to class can increase your course grade 1/2 a grade, e.g., from a B+ to an A-. Non-preparation and/or non-attendance can also lower your course grade by an equivalent amount.

Laboratory Assignment

This quarter, we will use the scheduled lab hour only for special events, such as the presentation on how to use the library. Your laboratory assignment for the quarter will be to carry out in groups no larger than 3 a research study in psychology. Individually written research proposals and

research reports on this work will also be required. The research proposal on your project will be due on Jan. 26. The proposal should be no longer than about 3-4 pages, and include a first, brief, version of the <u>Introduction</u>, <u>Method</u>, <u>Discussion</u> and <u>References</u> sections. The final version of your research report will be due on or before <u>March 11</u>. This final report will also be written individually even though the research has been carried out by a group. Final reports will include all 6 sections of the scientific paper.

Students will be expected to meet with the instructor and/or TA at least <u>once before</u> writing the research proposal and <u>once after</u> the data is collected and before handing in the final research report. Be sure to start working on your project as soon as possible; this is a short quarter.

Course Schedule

| <u>Date</u> | Topic | <u>Readings</u> |
|-------------|-----------------------------------|--------------------------------|
| Jan. 5 | Intro; Assignment of Projects | pp. 28-41, Ch. 7 |
| Jan. 7 | Emotion; Lab Library | pp. 172-180, 187-190, 81-104, |
| | | 240-242, 265-270, 378-381, |
| | | 122-130, 157 |
| Jan. 12 | Emotion | |
| Jan. 14 | Emotion | pp. 130-143, 148-149, 264-265, |
| | | 180-187, 190-195, 104-119 |
| Jan. 19 | Motivation | |
| Jan. 21 | Motivation | |
| Jan. 26 | Temperament; <u>Proposals Due</u> | pp. 590-600, 368-375, 54-78 |
| Jan. 28 | Personality | Ch. 16 |
| Feb. 2 | Personality | Ch. 13, pp. 357-362 |
| Feb. 4 | <u>Midterm Examination</u> | |
| Feb. 9 | Development | Ch. 12 |
| Feb. 11 | Development | |
| Feb. 16 | Development | Ch. 15 |
| Feb. 18 | Social Influence | |
| Feb. 23 | Social Influence | Ch. 14, pp. 319-321 |
| Feb. 25 | Social Perception | |
| March 2 | Social Perception | Chs. 17 & 18 |
| March 4 | Psychopathology & Therapy | |
| March 9 | Student Reports | |
| March 11 | Student Reports; Papers Due | |
| March 18 | Final Exam 10:15 am | |

Research Proposal (Due January 26)

In order to make a report that is as clear as possible, psychology and other scientific fields have developed a framework for both research proposals and reporting results that allows clear communication of procedures, results and their meaning. This handout outlines the format for reporting used in psychology. The format is similar to that developed in other disciplines. Your proposal will be no longer than about 4 type-written, double-space pages.

The major parts of your report will be: <u>Introduction</u>, <u>Method</u>, <u>Discussion</u>, and <u>References</u>:

- 1. <u>Introduction</u>: This section tells in general words what you are trying to find out and why it is important. Basically, the introduction should answer the question, "What are the reasons for conducting this research?" Here, you prove to the reader that you are investigating an interesting and important problem. If possible, you review relevant research findings and methods from the psychological literature related to your question. The introduction should conclude with a clear statement of the hypothesis you are testing about the relation of one variable to another or the question you hope to answer stated in terms of variables. The hypothesis or question is first stated in conceptual terms, followed by a general description of how you will operationalize those constructs.
- a. <u>Variables</u>: often but not always in your project, you will be relating independent variables to dependent variables:

<u>Independent variables</u> are procedures or attributes that produce effects you are interested in observing, e.g., a loud noise that startles someone or which is a signal for a subsequent event.

<u>Dependent variables</u> are the events that result from the action of independent variables or are influenced by them in some way (e.g., the startle in the above example is the dependent variable because it depended on the loud noise). Your study may also examine the relationship between two or more variables that you do not manipulate, e.g., the relation between gender and some other variable.

- 2. <u>Methods</u>: The purpose of research is to provide a public demonstration of a result. It is public in the sense that the reader should be able to go out and by following the same method and procedures, find similar results. In order to allow for this, the description of the method you followed should be detailed and <u>very clear</u>. In describing the method, you will report these features:
- a. <u>Subjects</u>: description of the number of subjects, how they will be selected, relevant characteristics, such as age, sex, occupation, etc.
- b. <u>Procedure</u>: description of measures and of exactly what will be done in making your observations or collecting your measures. In addition, information about how the measures will be treated after their collection to allow you to describe the relationship between one variable and another, i.e.,

what you will do with the numbers or other recorded data in order to test your hypothesis or answer your research question. When you have completed this section, ask yourself: "Can the reader determine <u>exactly</u> how the research will be conducted? Could another person carry out this study by following directions from the <u>Methods</u> section?"

- 3. <u>Discussion</u>: In this section, discuss results you might get from this study and how you would interpret their meaning.
- 4. References: Your reference list cites fully the work of others referred to in the report so that others can consult it. References are given in alphabetical order and a standard bibliographic form so that readers of the report can consult them if they wish. You can use the reference list in the text as a model for your References list.
- 5. Appendix: One member of your group should include in an appendix all of the measuring instruments (questionnaires, etc.) you plan to use.

Reporting Your Results (Due March 11)

After your project has been carried out, how do you describe the rationale for your project, how it was done, what you found and what you think it meant? In order to make a report that is as clear as possible, psychology and other scientific fields have developed a framework for reporting results that allows clear communication of procedures, results and their meaning. This handout outlines the framework or format for reporting used in psychology. The format is similar to that developed in other disciplines.

The major parts of your report will be: <u>Introduction</u>, <u>Method</u>, <u>Results</u>, <u>Discussion</u>, <u>Summary and Conclusions</u>, and <u>References</u>:

1. <u>Introduction</u>: This section tells in general words what you are trying to find out and why it is important. Basically, the introduction should answer the question, "What are the reasons for conducting this research?" Here, you prove to the reader that you are investigating an interesting and important problem. If possible, you review relevant research findings and methods from the psychological literature related to your question. The introduction should conclude with a clear statement of the hypothesis you are testing about the relation of one variable to another or the question you hope to answer stated in terms of variables. The hypothesis or question is first stated in conceptual terms, followed by a general description of how you will operationalize those constructs.

c. <u>Variables</u>: often but not always in your project, you will be relating independent variables to dependent variables:

<u>Independent variables</u> are procedures or attributes that produce effects you are interested in observing, e.g., a loud noise that startles someone or which is a signal for a subsequent event.

<u>Dependent variables</u> are the events that result from the action of independent variables or are influenced by them in some way (e.g., the startle in the above example is the dependent variable because it depended on the loud noise). Your study may also examine the relationship between two or more variables that you do not manipulate, e.g., the relation between gender and some other variable.

- 2. <u>Methods</u>: The purpose of research is to provide a public demonstration of a result. It is public in the sense that the reader should be able to go out and by following the same method and procedures, find similar results. In order to allow for this, the description of the method you followed should be detailed and <u>very clear</u>. In describing the method, you will report these features:
- a. <u>Subjects</u>: description of the number of subjects, how they were selected, relevant characteristics, such as age, sex, occupation, etc.
- b. <u>Procedure</u>: description of measures and of exactly what was done in making your observations or collecting your measures. In addition, information about how the measures were treated after their collection to allow you to describe

the relationship between one variable and another, i.e., what you did with the numbers or other recorded data in order to test your hypothesis or answer your research question. When you have completed this section, ask yourself: "Can the reader determine <u>exactly</u> how the research was conducted? Could another person carry out this study by following directions from the <u>Methods</u> section?"

- 3. Results: The results are a straightforward presentation of what you found when you examined the measures. It often contains graphs or tables of the numerical results of the project in addition to a description in writing of what you found. You may perform statistical tests on the data, but this is optional.
- 4. <u>Discussion</u>: In this section your results are restated (in their operationalized form) and translated back to the construct level. What do your results mean? Was the hypothesis verified or not verified? How was your question answered on the basis of the results you found? Were there any problems with the methods you followed that may have influenced the results? If there is more than one possible interpretation of what you found, write it down. What might be done to test other interpretations or improve the measurement procedures in the future?
- 5. <u>Summary and Conclusions</u>: This is a brief review of what you were looking at, what you did and what you found; you should be able to write it in 3 or 4 sentences.
- 6. References: Your reference list cites fully the work of others referred to in the report so that others can consult it. References are given in alphabetical order and a standard bibliographic form so that readers of the report can consult them if they wish. You can use the reference list in the text as a model for your References list.
- 7. Appendix: One member of your group should include in an appendix all of the data you collected in its original form, including a copy of all measuring instruments.

Research Projects for Psy 212:

- 1. Do people's moods vary with the weather?
- 2. Are women more obedient to the law than men (e.g., obeying traffic signals)?
- 3. Are people more confident of their predictions if they make them <u>before</u> an event rather than after?
- 4. When people know the outcome of an event, do they tend to overestimate the degree to which they "knew it would happen"?
- 5. Do people attribute different personality characteristics to an infant if they believe it is a girl than if they believe it is a boy?
- 6. Are gender stereotypes reflected in ads for children's TV (Saturday mornings)?
- 7. Are students more likely to identify with the university in wearing clothing connected with the University of Oregon after the basketball team has won than if it has lost? Are they more likely to say "we" won and "they" lost with respect to the team?
- 8. Are people who are in a negative mood more pessimistic about the future than those in a positive mood?
- 9. Are more empathic people and/or people with high affiliative motives more likely to major in the humanities and social sciences than in the sciences and business?
- 10. Is empathy related to individual differences in emotionality?
- 11. Is shyness related to loneliness?
- 12. Are there gender differences in personal space?