

Foundational Issues in Psychology
Psychology 150
Fall Semester 2005

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Office Hours: MTh 2:00 – 4:00, Tues. 1:00 – 3:00, or by appointment.

Psychology 150 is an introductory course designed to introduce students to a variety of theories and concepts which have been found to help explain human behavior. Students should focus on acquiring a knowledge base from which to better understand his or her experiences in the future, as well as to prepare the student for more focused courses in the discipline.

The discipline of psychology is firmly rooted in the scientific method, and thus an integral part of the course will be to expose the student to how this methodology affects the questions which are pursued. The professor intends to make this exploration relevant to the lives of students by connecting the concepts, principles and research methods to a familiar topic, stress. To help organize a large number of psychological concepts we will organize our semester's learning around five major theoretical approaches: *biological, learning theory, cognitive, socio-cultural, and psychodynamic*.

I. Course Objectives

- A. The course will expose students to factual knowledge of the area of psychology including terminology, major theoretical approaches, and methodology. The student should focus on building a knowledge base of psychological concepts.
- B. The course will focus on recurring themes and underlying principles that emerge in various areas of psychology. The student should focus on connecting and integrating the concepts, relating them to experiences, and generally attempting to build usable framework for understanding his or her own behavior, thinking and learning, as well as relationships and other social behavior.

II. Course Requirements

A. Reading Assignments

There is one text and 5 journal articles which are required reading, which must be read by class time on the day they are listed in the schedule below. The text describes the five major approaches to the field of psychology and presents major themes. The research articles are on the topic of stress, representing the five theoretical approaches. These particular articles were chosen because they are either classics or else they represent fairly straightforward (and short!) experiments.

Text

Tavris, C. & Wade, C. (1997). *Psychology in perspective*, 2nd Ed. Addison-Wesley. (TW)

Articles:

Baum, A., Grunberg, N.E., & Singer, J.E. (1982). The use of physiological and neuroendocrinological measurements in the study of stress. *Health Psychology, 1*, 217-236.

Stout, D., Thorton, B., & Russell, H. (1980). Effect of relaxation training on student persistence and academic performance. *Psychological Reports, 47*, 189-190.

Jemmott, J.B., III, & Magloire, K. (1988). Academic stress, social support, and secretory immunoglobulin A. *Journal of Personality and Social Psychology, 55*, 803-810.

Valliant, G.E. (1944). Ego mechanisms of defense and personality psychopathology. *Journal of Abnormal Psychology, 103*, 44-50

One additional article from the cognitive perspective, TBA.

The following book is required for all psychology majors and it is recommended that students purchase a copy in their first course. It includes helpful information about using the library and about writing paper in the professional style required in all psychology courses.

Rosnow, R. L., & Rosnow, M. (1992). *Writing Papers in Psychology, 2nd Edition*. Belmont, Ca.: Wadsworth.

B. Examinations

1. In-class exams. Five objective, multiple choice and short-answer tests will be given during the term. These will cover material from assigned readings, class lectures, and discussions. Each test will count 10% of the final course grade. Students should notify the instructor before scheduled exam date if exam is to be missed, otherwise students will receive a 0 for that exam grade.
2. Final Examination. A comprehensive final examination will cover all course work. The exam will be similar in format to the in-class examination and will count 15% of the final course grade.

C. Student Investigations

Students will complete three Student Investigations (SIs) and will turn in reports of their work on the dates listed in the schedule (worth 30% of the final). Student Investigation assignments involve collecting data and must be done in accordance with the *Ethical Guidelines for Research with Human Subjects* published by the American Psychological Association and kept on reserve in the Atkinson Reading Room (Clough 111a). All projects must be typed and prepared in the format described below. SIs turned in later than 4:30 p.m. of the day due will suffer a full letter grade penalty. Those not prepared according to these specifications will be returned and must be redone; they will suffer the late penalty. No late work will be accepted after the last class day.

Use the following form to report SIs. Remember that you are reporting on work which you have completed, so the report should be written in past-tense.

1. Description and Explanation of Research Question.
Describe your research question, the hypothesis you are testing (note: there isn't a hypothesis for SI 1), and the purpose of the project. Report previous research or background theory that is relevant to the study. At the very least you should provide sufficient background to allow the reader to understand why the work was carried out.
2. Description of Method.
 - a. Subjects: Detail the number and relevant characteristics of your subjects (e.g. age, education, etc.). Do not identify research participants by name or by other traits that uniquely identify them.
 - b. Procedure: Carefully and clearly describe your research procedure.
3. Results.
Give a clear and orderly description of your results. Present numerical data in tables and/or graphs. Always attach all raw data to the end of the report.
4. Discussion.
Explain your research results in light of what was expected, based on previous research and theory. If your results do not support your expectations or corroborate previous research, discuss why you think this happened. You may be able to come up with reasons why your data lead to different conclusions than you initially expected. Consider the flaws and/or limitations in the procedure you used. How might the procedures used in this investigation be changed to address some of the criticisms you make?

D. Experiment Participation.

Students are encouraged to participate in ongoing research in the department by volunteering for three hours (not three experiments!) to be subjects in experiments conducted by students in advanced psychology classes. All such research will be approved first by the Human Subjects Review Committee and participants will be given an opportunity to learn about the findings of the research at the end of the project. We believe that participation as a subject is an excellent way to gain first-hand knowledge and deeper understanding about how psychological research is conducted. Students will complete a "research collaboration form" passed out in class for each experiment that they complete. The form requires the following information: 1) experiment title or the names of the researchers, 2) minutes/hours credit, 3) brief statement of the research hypothesis, 4) statement of the IVs & DVs, 5) problems or flaws in the experiment, and 6) personal reaction to the experiment.

An alternative to the experiment participation requirement is offered to those students who do not wish to be a research subject or are unable to schedule participation. This will involve a comparable amount of writing about research that the student will read. A handout will be distributed in class which fully describes what it to be done.

III. Use of the Honor Code in Psychology 150

As in all courses at Rhodes, students are expected to act honorably in pursuit of our mutual educational objectives. Because exam questions are often used by multiple professors, copies of Psych. 150 exams are kept by the professors. It is considered a violation of the honor code to possess a copy of a 150 exam, or to be aware of copies in the possession of others. For other work, collaboration is encouraged in all out-of-class assignments. Therefore students are free to study together, to share notes, to discuss all assignments with one another or with others outside

the class, to proofread and edit one another's work, and to give each other as much helpful feedback as possible.

IV. Schedule of Assignment and Reading Due Dates)

| | Day | Date | Reading | Topic | Assignment Due |
|---------------------|-----|---------------------|--|----------------------------------|---|
| 1 | W | August 24 | | Introducing Psychology | |
| 2 | F | 26 | TW1 | Themes Within Psychology | |
| 3 | M | 29 | TW2 | Research Issues | |
| 4 | W | 31 | | | |
| 5 | F | September 2 | Baum et al. | | |
| | | <i>Labor Day</i> | | | |
| 6 | W | 7 | | Biological Perspective | Exam 1 , part 1 (TW chpts 1&2) |
| 7 | F | 9 | TW3 | Heredity | |
| 8 | M | 12 | | | SI 1 Due:Operational Defs |
| 9 | W | 14 | TW4 | Physiology | |
| 10 | F | 16 | | | |
| 11 | M | 19 | | | |
| 12 | W | 21 | | Drug action | |
| 13 | F | 23 | TW Essay 1 Baum et al. | | |
| 14 | M | 26 | | | Exam 2 (chpts3&4) |
| 15 | W | 28 | TW5 | Learning Perspective | Begin SI #2 |
| 16 | F | 30 | | Classical Conditioning | <i>Begin Initial baseline for SI</i> |
| 17 | M | October 3 | | Operant Conditioning | <i>data collection for SI 2</i> |
| 18 | W | 5 | | Real World Applications | <i>data collection for SI 2</i> |
| 19 | F | 7 | | Class Cancelled | <i>data collection for SI 2</i> |
| 20 | M | 10 | TW6 | Social Learning Theory | <i>Begin concluding baseline for SI</i> |
| 21 | W | 12 | TW Essay 2 Stout et al. | | |
| 22 | F | 14 | | | Exam 3 (chpts 5&6) |
| | | <i>Fall Break</i> | | | |
| 23 | W | 19 | TW7 | Cognitive Perspective | |
| 24 | F | 21 | | Piaget | |
| 25 | M | 24 | | | SI #2 Due: Behavior Mod. |
| 26 | W | 26 | | | |
| 27 | F | 28 | TW8 | Memory | |
| 28 | M | 31 | | | |
| 29 | W | November 2 | TW Essay 3 article TBA. | | Data due for SI #3 |
| 30 | F | 4 | | | Exam 4 (chpts 7&8) |
| 31 | M | 7 | TW9 | Sociocultural Perspective | |
| 32 | W | 9 | | Social Context | |
| 33 | F | 11 | | | SI #3 Maze Learning Due |
| 34 | M | 14 | | | |
| 35 | W | 16 | TW10 | Cultural Context | |
| 36 | F | 18 | TW Essay 4 Jemmott et al. | | |
| 37 | M | 21 | | | Exam 5 (chpts 9&10) |
| | | <i>Thanksgiving</i> | | | |
| 38 | M | 28 | TW11 | Psychodynamic Perspective | |
| 39 | W | 30 | Essay 5 | Personality & Freud | |
| 40 | F | December 1 | Valient et al. | | |
| 41 | M | 5 | | Health Psychology | |
| 42 | W | 7 | TW12 & Essay 6 | Themes and Issues | |
| Sat, Dec 10@5:30 pm | | | Exam1, Part 2 (chpts 11&12) & Final Exam | | |

**Student Investigation #1:
Operational Definitions**
due 9/12/05

Many of the attributes or traits of interest to psychology can be measured in many ways; biological/physiological, self-report questionnaires, report-by others. For example, if I am interested in depression, I could perhaps assay blood looking for a particular substance correlated with depression. Or, I might ask questions about how someone is feeling, etc.

Often our first assessments regarding others are made as a function of observing their behavior. The purpose of this exercise is to have you some first-hand experiences with the construction of operational definitions, and assessing the data generated from observations based on these definitions in terms of reliability and validity.

I will assign you into groups of 4. Each group needs to create two different operational definitions of stress based on observable behavior, observer public behavior applying the two definitions, and then assessing the data to determine which definition had higher validity, and which had higher reliability (one definition could have been better according to both criteria).

1. Make up two operational definition of *stress* based on observable behavior. Constrain yourself to a measurement that can be made after only a few minutes of observation.
2. Designate roles/identities to each member as Observer 1, 2, 3, & 4.
3. Choose a setting in which you can observe two individuals involved in some public behavior (such as the library, the Rat, etc). Make sure that you choose an observation setting in compliance with the APA Ethical Guidelines, and with your own ethical principles.
4. First, all observers should observe the Subject One for five minutes using the first definition of stress, Definition A. Each of you will then have a score for Subject One based on Definition A, based on observing the same individual for the same five minutes.
5. Next, all observers should observe the same subject, again for five minutes, but this time using the operational Definition B. Now each observer will each have two scores for Subject One.
6. Repeat steps 4 & 5, observing a different subject, Subject Two, in the same setting as was used for Subject One, again using Definition A for five minutes, and then Definition B for another 5 minutes.

| | Subject One | Subject Two |
|---------------------|---------------|---------------|
| Definition A | Obs. 1. _____ | Obs. 1. _____ |
| | Obs. 2. _____ | Obs. 2. _____ |
| | Obs. 3. _____ | Obs. 3. _____ |
| | Obs. 4. _____ | Obs. 4. _____ |
| Definition B | Obs. 1. _____ | Obs. 1. _____ |
| | Obs. 2. _____ | Obs. 2. _____ |
| | Obs. 3. _____ | Obs. 3. _____ |
| | Obs. 4. _____ | Obs. 4. _____ |

Compare your friendliness scores to your partners'. Compute the mean and standard deviation for each data box. What is important is the congruence/agreement within each of the data boxes. In other words, there is no reason why one subject's scores on different definitions should be similar or related, nor would we expect different subjects to have scores that are similar even if they are both based on the same definition.

In the conclusion of your paper, discuss the reliability of your measurements by comparing the congruence of the four observers for each subject and definition. Then discuss the validity of your definitions by comparing the two operational definitions. What are the strengths and weaknesses of each of these methods for assessing *stress*? Note, unless you have definitions that are established as both reliable and valid you cannot make statements about the stress level of an individual, so limit your statements to judgments about the Definitions, not about the stress level of the subjects.

Please turn in one paper for the group. I expect that each of you will work on editing the final paper as a whole—part of your grade will be determined by how well the entire paper flows.

Student Investigation #2
Behavior Modification
due 10/24/05

1. Select a behavior that you wish to modify. You will probably want to choose a fairly simple behavior whose frequency you wish to increase or decrease. You may select one of your own behaviors or a behavior of someone with whom you spend a great deal of time. If you choose to modify someone else's behavior, you must get his or her permission first. It is important to select a behavior that occurs with considerable frequency every day, because this project covers so short a time span.
2. Define your behavior explicitly. (Remember earlier comments & criticisms about operational definitions.)
3. Design an operant conditioning program to increase or decrease the frequency of the behavior. Will you use reward, punishment, or extinction? Carefully select and describe your reward or punishment contingencies.

For example, if I wanted to decrease my consumption of sodas I clearly need to use punishment. I could either remove some pleasant stimulus contingent on my drinking sodas (ie no ice-cream at dinner = negative punishment) or, I could apply an aversive stimulus (positive punishment) such as drinking only warm sodas (which I hate) or putting a bitter/unpleasant substance into each soda I drink. These two contingencies will result in very different outcomes, at least theoretically, so think about these when you chose your behavior modification program.

Select a schedule of reinforcement. Ratio or interval? Variable or fixed? Describe carefully and be clear as to the long term implications of continuous versus intermittent contingencies.

4. Keep a baseline record of your behavior for at least 2 weekdays.
5. Implement your conditioning program for the next 5 weekdays.
6. Return to baseline observation for the next 2 weekdays. (You should be very clear as to the purpose of the two baselines & what comparisons can be gained from them.)
7. Your conclusions should describe your program and your results. Show your results in a computer generated line graph. In the results, provide means for the behavior for each of the three time periods. Were there any external factors which affected the frequency of the behavior which accounted for some of the variability within each of the time periods? Discuss what you have learned about operant conditioning. Why did or didn't your program work? Consider you choice of schedules & contingencies. Did your schedule of contingencies affect the outcome? Did you have a delay in contingencies? In retrospect, what changes would you have made in your conditioning program?

Student Investigation #3 Maze Learning

data due 11/2, paper due 11/11

The attached experiment provides a way of testing two alternative theoretical explanations--learning theory Vs cognitive-- for what is being learned when one solves a printed maze. With repeated trials, performance shows a steady decrease in completion times and errors, thus demonstrating the usual learning acquisition curve. The test of the two explanations comes when two special trials are run, one in which the maze is worked backwards, and one in which the maze is worked when the most of the maze is masked, or hidden from view.

You should work the 6 copies of the maze I have attached according to the instructions in the experimental description. Be sure you understand the instructions thoroughly before you begin and that you follow these instructions carefully. It is especially important that you do not count errors until all 6 copies of the maze have been completed.

You should provide me with your completion times and errors using the form on the bottom of this sheet. (It is imperative that you report your time in seconds rather than in minutes!) These data should be returned to me by Thursday, March 26. I will take all the class data and enter it into a spreadsheet. I will then generate the learning acquisition curve derived from the class data, as well as the mean (average) completion time for each of the 6 trials. I will run the appropriate statistics (t-tests) to determine which means are significantly faster than others. Of particular importance will be the two special conditions, Backwards and Masked, compared to Trial 1 and Trial 4. I will present these statistics to you on April 2, and you will have until April 12 to complete your SI paper.

Be clear about this-->the purpose of this study is to compare two alternative explanations about what is being learned. The data will actually allow you to draw the appropriate conclusions. But you should be very clear as to how the two special trials, Backwards and Masked, actually test the theoretical explanations. Thus, you need to read the description of the experiment several times until you are sure you can articulate what each explanation expects to occur on the special conditions.

For example, which of the following describes the completion times predicted by learning theory, and which from cognitive?

Trial 1 > Trial4

Trial 1 = Masked

Trial 1 = Backwards

Backwards > Masked

Trial 4 ≥ Masked

Trial4 ≥ Backwards

Backwards < Masked

-----↓ due 11/2 -----

Name _____

| Trial | Time in Seconds | # Errors |
|-----------|------------------------|----------|
| 1 | _____ | _____ |
| 2 | _____ | _____ |
| 3 | _____ | _____ |
| 4 | _____ | _____ |
| Backwards | _____ | _____ |
| Masked | _____ | _____ |