

PSYCHOLOGY 268 - Fall 2000
FINAL EXAM

(75)

No Name Please Alt code for Posting: _____

Enter 4-digit ID # 0457 (last 4 of Student ID#)

1. (total 30 points) Please answer part a, and then ANY TWO of the remaining parts. The percent time data apply to all versions of the question. Consider the following data collected on percent time spent on activities by two people:

	Anna Mar Home	Anna August Home <i>time</i>		Andrew August Home	Andrew August Camp <i>context</i>
Reading	25 ²⁰	25 ¹⁵	Exercise	10 ⁵	40 ³⁵
TV	20	20	Read	15	25
Exercise	0	20	Cooking	20	5
Music	45	35	Computer	40	30
Sewing	10 ¹⁵	0 ⁵	Car work	15 ²⁰	0 ⁵

a. (10 points) Give one example for each person of a contingency arrangement between two activities that would yield a reinforcement effect. Your example should satisfy Premack's time-based account of reinforcer value and also meet the response deprivation criterion for an effective contingency. Your examples should identify the activities, the contingency relation, and the exact scheduled values to be used. You should specify which of the four hierarchies of value you are using. You should also describe what you expect to be the result of each contingency.

if Ana in March at home exercises for 5, then she can do music for 40.

if Andrew in August at camp does ~~car~~ work for 5, then he can exercise for 35.

In both contingencies, Ana + Andrew must do more of the less preferred activity in order to get the more preferred. The result would be that they will continue to do more of the less preferred to get the more preferred.

Answer ANY TWO of the following four questions (10 points each). Your answers to all of these questions should specify for each contingency the time/context of the hierarchies used, both activities, the contingency relation, and the exact amounts of the schedules. Each answer should satisfy Premack's time-based account of reinforcer value and also meet the response deprivation criterion for an effective contingency.

b. Give two contingencies from a single person (please specify a single time and context) that demonstrate that the reinforcement value of a single activity is relative to others, not an absolute or fixed functional role. Explain how your examples demonstrate the relativity of reinforcement.

if Ana in March at home exercises for 5, then she can read for 20.

if Ana in August at home sews for 5, then she can exercise for 15.

this shows that exercising is not a fixed-functional role because it can be used as a reinforcer for an activity (sewing) and can also be used as the activity needing reinforcement -- less preferred -- in this case where reading reinforces exercising more.

c. Give two contingencies using the same activity as a reward that demonstrate that the reinforcement value of that activity is idiosyncratic (unique to each person's hierarchy of value). Explain how your answer accomplishes the demonstration. This can be done either by having two identical contingencies, only one of which would be effective, or by having two effective contingencies that must have different schedule values to be effective.

d. Give two contingencies that demonstrate that the reinforcement value of a single activity is specific to its time. Be sure to describe which kind of example you are giving and explain why your example is a demonstration. This can be done either by having two identical contingencies, only one of which would be effective, or by having two effective contingencies that must have different schedule values to be effective.

If Ana in March at home sews for 15, then she can read for 20.
If Ana in August at home sews for 5, then she can read for 15.

In both contingencies the same activity is the less preferred but at different times, the reinforcer is reading b/c it is the more preferred activity. Although the contingencies have different schedule values, I used Ana because she is specific to time differences. (Andrew is both in August.)

e. Give two contingencies that demonstrate that the reinforcement value of a single activity is specific to its context. Be sure to describe which kind of example you are giving and explain why your example is a demonstration. This can be done either by having two identical contingencies, only one of which would be effective, or by having two effective contingencies that must have different schedule values to be effective.

If Andrew in August at home does carwork for 20, then he can exercise for 5.

If Andrew in August at camp does carwork for 5, then he can exercise for 35.

In both contingencies the same activity is used for the less preferred but at different contexts (places). The reinforcer is exercising b/c it is the more preferred activity in both instances, although the contingencies have diff. schedule values. This makes it effective. I used Andrew b/c he is specific to context. (Ana is both at home)

2. (20 points) Suppose you were asked to implement a motivational program in a third grade class. It is a regular school that meets six hours a day, including the following activities: arithmetic problems, reading and discussing stories, exploring geography, internet searching, handwriting, recess, and fine arts time. Based on your understanding of the study of the fast food restaurant, how would you proceed to improve the quality of the students' work by using access to activities as a motivator? Your answer should include the assessment of the relative values of activities, the establishment of contingencies (be sure to give a specific example), and a simple design for evaluating the project. Finally, describe the costs and benefits of the program for the teachers and make a recommendation about whether or not it should be implemented.

I would first start out by administering a survey for the 3rd graders to mark by number 1-7 being the most preferred (1) to 7-being the less preferred activity. Then, I would put the children into groups according to the order of activities & have a set time of 30 minutes at each session they hate + 5 min. of those they like. For example: If one group hates internet, they must do it for 30, then they get 5 minutes of recess (enjoy this the most)

arithmetic problems
reading stories
geography
internet
handwriting
recess
fine arts.

Throughout the 6 hour day, eventually all the children have done the less preferred activities to get the more preferred.

(1-4 is less preferred on survey
5-7 is more preferred.)

The costs of doing this would be that they must 1st do the less preferred activity + more of it to get the more preferred one.

The benefits would be that they are getting to do some of the more preferred activity (reinforcer), but at the same time they are learning all of the activities (and doing all of them throughout the day.)

I think this should be implemented to see if it works, I bet it would b/c the children will do the less preferred activities to get the more preferred one. -- over time the teacher could monitor results & adjust the time accordingly (to task + learning)

Please answer ANY TWO of the following THREE questions (3, 4, and 5), worth 15 points each:

3. (15 points) Suppose you were working at a fitness center with two sets of aerobic exercisers, helping them acquire basic skills in getting a decent aerobic workout. With group A you gave them set sequences of 4 movements and durations, occasionally changing the order and gradually increasing the duration. At all points you showed them exactly how to move and counted out the sequences, often leading them by loudly counting the movements over a public address system. With group B you demonstrated to them a couple of times the same set of 4 movements that when repeated would result in elevated heart and respiration rates. After that first day you encouraged them to do those exercises in whatever sequences they liked, and you suggested that they pay attention to changes in their own pulse and breathing rates. Two months later both groups were able to do all 4 exercises acceptably, and you asked them to do two things. First they were asked to create a new routine that would yield 15 minutes of elevated heart and respiration rates. - B Second they were asked to learn a set routine that was to be taped for a local TV commercial for the fitness center. - A Describe how each group would do on each new task and justify your answer based on the effects of their different learning histories.

Group A: instruction & imitation group. - increase duration.
Group B: contingency shaped group. - elevated hr.

Group A would not do well with learning a set routine, because of the learning history from before. They were instructed exactly how to do the movements & were also shown how to do them correctly. Acquisition of a new routine would be slower and adaptation to a new routine that would yield 15 minutes of elevated heart rates would also be slower - they were not focusing on breathing rate - even though they were told to pay attention to it.

Group B would do very well on a new routine that yields 15 minutes of elevated hr rate b/c they recognized it at the beginning - from learning history. The learning of the routine would also be faster b/c they shaped themselves to →

4. (15 points) Generate your own example of classical conditioning using the neutral stimuli of the printed words dig and speed along with the eliciting relation (like a reflex) between a puff of air in the eye and an eyeblink (blowing air in the eye results in a clear blink). Your example should include all of the following components: a description of a conditioning procedure that would produce different reactions to the two stimuli, a description of a procedure (a trial) that tests for the direct effects of successful conditioning, a description of a procedure that would test for physically mediated generalization, a description of a procedure that would test for semantically mediated generalization, and the likely results of the three test procedures for an intact adult human.

You could use the card (printed word) dig to elicit a puff in the eye resulting in an eyeblink. The word speed would not get a puff in the eye causing an eyeblink. This should create successful conditioning. -

(dig → puff of air → blink / speed → no response.)

Then you must make a test trial where no puffs of air is administered. When shown the word dig, the subject should blink & when shown the word

(continue your answer on the next page if needed) speed no response should result.
(Direct Effects) →

5. (15 points) Give an example of a form of rule governed behavior that would be useful in the face of an ineffective ("defective") contingency. Your answer would include both an original example of a defective contingency and the specific rule-based procedure to support the appropriate behavior that you think should occur. How would this rule-governed performance be useful or productive in dealing successfully with the natural relation between actions and their outcomes that you have described?

***** [end of the set of three questions, choose two of them]*****

6. 20 points) Suppose it is your task to find a way to decrease the frequency of people walking across a set of railroad tracks in an area that has no marked crossing zone with warning devices. There is real risk of injury because there are multiple tracks that are used frequently for moving cars. You have been asked to set up a punishment program to eliminate this problem before someone is hurt. What context for crossing outside of the marked safe zone would you identify first as part of your plan? What punishing consequence would you use? What characteristics would you include in your punishment system to maximize the likelihood that it would be effective? What additional element would you need to include to make the plan maximally effective? Be sure that your answer is specific to this context.

The context for crossing outside of marked safe zone would be that it is a shortcut for people -- rather than to walk to a nearby crossing zone. The punishing consequence would be to eliminate walking across unmarked crossing zone railroad tracks altogether. If people did do this, railroad tracks would be designed to create a mild shock if people crossed in unmarked zones. So, everytime someone did not obey the railroad crossing "law" they would receive a shock. Also, if caught by police (which may not be very often) they would be ticketed with a very big fine.

The additional element would be to reward people when they did walk in designated crossing zones. At first reward everytime, over time slowly remove rewarding everytime b/c people would get used to walking to the crossing zone. As maintenance then, reinforce everyone in awhile. Also, there could be a mandatory "law" that requires more crossing zones for people to cross -- (1 every 2 blocks)

learn the movements before, so learning new movements would be faster + easier. The learning history for Group B influenced their ability to learn a new routine quicker.

To show physically mediated results would be to show a word wig for dig + show the word weed for speed. Since humans do not react well to physical characteristics, there should be no blinking when shown either word (wig + weed.) To test for semantically mediated results would be to show a word hole for dig and show a word car for speed. Humans react well to things that show meaning, so there should be no response for hole (b/c there was no puff of air at beginning) + the subject should blink when seen the word car. b/c it expressed meaning to the word speed.