

PSYCHOLOGY 268 - Fall 2000
FINAL EXAM

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No Name Please Alt code for Posting: 7995 Enter 4-digit ID # 7995 (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		Andrew August Home	Andrew August Camp
Reading	25	25	Exercise	10	40
TV	20	20	Read	15	25
Exercise	0	20	Cooking	20	5
Music	45	35	Computer	40	30
Sewing	10	0	Car work	15	0

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.

Anna March Home: Say for Anna to be able to do 40 music she has to do 5 exercising. I expect Anna do more exercising to be able to get to do her 40 music. Your depriving her music to get exercising.

10

Andrew August Home: Tell Andrew that to do 30 Computer he needs to do 20 Exercise. I expect Andrew to do 20 exercise to be able to get his 30 Computer time. I'm depriving him of the computer to get him to exercise more.

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.

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.

Anna August home using exercise as the reward. Say she can do 15 exercise if she does 5 sewing depriving her of Exercise to get her to sew.

Andrew August home using exercise as reward. If he does 10 exercise he can read 15. You can't do this because his exercise is the lowest and you can't use exercise as a reward. Making exercise at home in August idiosyncratic for Anna and Andrew because it depends on their values, so one plan won't work for both.

10

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.

Anna Home March: If she exercises 10 then she gets 35 music. This will work for Anna Home March but not Anna Home August because she already exercises 20 in August and spends 35 on music in August, so that's specific to its time.

10

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.

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.

First I would take a survey from the kids to see what their favorite activities were. I would put those activities on a list and tell them to rate them. Here are the results

arithmetic probs: 10
 reading/discuss: 35
 Geography: 0
 internet searching: 50
 handwriting: 10
 recess: 70
 Art: 40

15

I would then see that recess is the highest and Geography is the lowest. To get the students to improve their work I would say to get 60 recess they had to do 10 Geography, therefore depriving them of recess in order to get them to spend more time on Geography. I would expect the kids to spend more time on Geography a subject they didn't like in order to get access to their favorite recess. I would evaluate this by comparing their time spent on Geography after I implemented this with the pre-assessment.

Cost and benefits are the kids are getting better grades in Geography because more time is being spent on that subject. But kids are losing recess time.

It should be implemented cause the cost outweighs the benefits.

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. Second they were asked to learn a set routine that was to be taped for a local TV commercial for the fitness center. 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 would learn fastest on the first task because their learning history was by demonstration. They knew this is how you do it and would learn faster than B's opportunity Group B was. On the second task Group A would learn slower than B because of their learning history. They have a set way of doing a routine and would take them longer to learn.

Group B on the first task would learn slower because they were encouraged to mix it up and didn't learn a set way. But on the second task they would learn the fastest, because they are learning a new routine and since they could mix up their routine they will be more open to learning a new set routine.

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.

First we would show them the two words separately with no puff of air in the eye to get a baseline. Then when we show them the word speed we puff them in the eye but we would not puff them when shown the word dig. I would expect the subject to start blinking whenever he saw the word speed in anticipation of the puff but have no reaction to dig. After he is trained to blink at the word speed. To test for physical mediated generalization I would show him the word Sued. I would expect him to blink since the words look so much alike. To test for semantically mediated generalization I would show him a picture of the cartoon Speed Racer, (assume he knows what it is) and I would expect him to blink because he knows Speed Racer and he says it →

(continue your answer on the next page if needed)

(2)

in his head and therefore blinks

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.

First we need to figure out why people are still walking across. It may be they are late for class. What I would do is have watch dogs ^{now} waiting for them to cross that intersection. When they reached the other side the guard will be waiting. As soon as they get across the guard would whip them in the back making it them punished as soon as they did it but also making it severe. They would do this with every person who did this so its consistent. This would work because no one wants to get whipp. everyday. An additional element would be if they used the proper crossings and not the "bad" one then they will be given a candybar.

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