PSYCHOLOGY 268 - Fall 2000
FINAL EXAM

(95)

No Name Please Alt code for Posting: _____   Enter 4-digit ID # 8451 ____ (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 <u>percent time</u> 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 <u>one example for each person</u> of a contingency arrangement between two activities that would yield a reinforcement effect. Your example should should satisfy Premack's time-based account of reinforcer value <u>and</u> also meet the response deprivation criterion for an effective contingency. Your examples should identify the activities, the <u>contingency</u> 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.

instrumental

Anna (mar) If do 20 TV, then get 30 music. I suppose that the music will be the reinforcer for watching more TV. Anna will want to increase her amount of 'work' to increase her amount of contingent or prefered (music). B/c she is being deprived of music, she will respond by increasing TV to meet her equilibrium of music

(10)

Andrew (Home) If does car work for 15, then get computer time for 30. Here, Andrew is being deprived of computer and so will increase his amount of car work over equilibrium to achieve his desired computer time. Response deprivation is seen b/c computer is lower and so then will reinforce him to do car work (being reinforced)

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 <u>and</u> also meet the response deprivation criterion for an effective contingency.

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

Anna (mar) If Anna does 25 reading, then get 30 music
        If Anna does 10 sewing, then get 15 reading - reinforcer

In this case, Anna's reading time can both be a reinforcer or be reinforced. In #1, because music is deprived or lower than desired, Anna will be reinforced to do more reading to get her prefered music. In case # 2, roles are changed and reading is deprived. Because of this deprivation, Anna will respond by increasing sewing to achieve the desired reading. #1: reading is reinforced (instrumental) and #2: reading is doing the reinforcing (contigent)

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) If do sewing for 5, then get [exercise for 10]

Andrew (Camp) If do cooking for 5, then get [exercise for 30]

As one can see, the amount prefered of exercise differs in the begining for both Anna + Andrew (20 + 40 respectively) but still, they both can act as reinforcers for other activities even though their preference levels differ.

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.

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.

For this situation, I would first survey the kids to see which activities they prefered the most. For sake of simplicity, these are "mock results" I found to set up my contingency program:

activity	value
arithmetic	5
reading + discuss	10
exploring geo.	5
internet search	25
handwriting	15
recess	45
Fine arts time	30

I would set up a contingency that would match the lower in pref values (activities) with those prefered. For example, the students must...

If do arithmetic for 5, then get internet s. for 15.

If do reading+d. for 10, then get Fine arts for 20.

If do exploring g. for 5, then get Recess for 20

If do handwriting for 15, then get Recess for 20.

At this point, the students would be reinforced by their prefered or contigent activities (internet, F. arts, Recess) to increase their amount of "work" or instrumental activities (arithmetic, read, exp. geography, handwriting). To test this contigency, I would run a baseline to first note the levels at which the students do the activities (as seen above). Then, I would add in the intervention program. Only if they performed their required, could they get their desired. To evaluate, after baseline + intervention, I could see if my contigent changed the behavior by dropping back to baseline. I suppose "confidently" that this contigency schedule will work to motivate the school kids to do their 'less prefered' (but essential to education) work. Costs may include more material to do increased amount of math (paper, problems) or time to make worksheets or learning tools to do the math, reading (more books), maps for geo, etc. Or even more time to actually give the kids for their prefered when they achieve this. Benifits would include a more motivated classroom w/ an increased skill in essentials off all activees, especially those being reinforced. I definitely recommend this proceedure for ANY class → it could be charged to even work for older kids !!

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 learned by direct instruction and imitation and therefore, established a rule-based learning or mind set. Group B learned more independently and weren't given the exact formulas for ♡ rate vs. movement. During task #1 (create new routine →15 min ↑♡rate...) group B will be able to adapt quicker to this situation because they must create the routine (which they are familiar w/) and get ↑♡rate (which they observed independently in the begining) Group A will not catch on as fast b/c they have specific "rules" of motion" stuck in their heads & will keep returning to that. For situation #2, Group A will learn the routine and perfect the movements faster then group B, for the movements are similar to their begining training of instruction + practice. All in all, both Groups will be able to achieve both tasks, but the rates about which they do this will differ due to their method of learning + instruction.

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 of the three test procedures for an intact adult human.

[continue your answer on the next page if needed)

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?

When a child is learning about cars + dangerous streets, they must learn to look out for cars before crossing the street in a Rule-based (governed) method. It would be detrimental to send a young kid out into rushing traffic (defective contingency) to let them learn that watching out for cars is essential (to survival)! Instead, a rule of "looking both ways before crossing the street." must be implemented for safety. We must use the rule-governed contingency to teach kids safety w/ their actions in order to have a positive (survival) outcome

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

intense
immediate
consistant
reward.

*I would post a sign saying
"No pedestrian crossing" first
to let them know it was inappropr-
iate

268 Final ExaM fl 00   p. 6

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 <u>punishment</u> program to eliminate this problem before someone is hurt. What context for <u>crossing outside of the marked safe zone</u> 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.

In order to keep people from walking across a specific set of railroad tracks, I would first find out what context or why they choose to do this. Perhaps it is because it is a short-cut to the nearby supermarket.* If so, I would set up a system of video cameras that would be working CONSTANTLY all week, weekend, day + night to see who crosses the tracks. In the high-tech world this is taking place in, the camera would know by registered cornea color + size WHO the person is (for all people in this town must be registered by eye characteristics). Then, when a person is caught by the (various) cameras, they will receive an IMMEDIATE FINE within 6 hrs. to their home saying they have 4 hours to pay a fine of $100. which is an obvious INTENSE punishment. Due to this design, hopefully less people will cross the tracks to get to the supermarket quicker. In order to maximize this plan, I will set up a contingency stating, "If aren't ticketed in 3 weeks for crossing tracks, then get a book of supermarket coupons the forth week!" In addition, I would reward those who reported others crossing (in addition to the camera recording it.)

(18)

target correct crossing?