

CyberRat Exercise 3:

OBJECTIVES

To extinguish the lever press response by withholding reinforcement.

To examine the pattern of responding across multiple extinction sessions.

MATERIALS

Lab Report 3 form: This is the form on which you'll report on your efforts to extinguish the lever press response.

INSTRUCTIONS

1. If you were successful in getting your rat from CyberRat Exercise 1 to press the lever, if that rat then pressed the lever a large number of times in the two fast-run reinforcement sessions, and if you haven't done anything else with that rat since then, you can use the same rat for this exercise. Otherwise you should choose a new rat that is Bar Press Trained-CRF. In either case you'll be using a rat in this exercise that has a well-established lever press response.
2. If you chose a new rat from the colony that was Bar Press Trained-CRF, your first session in this exercise will be a 60-minute fast-run reinforcement session in which the parameters are identical to those used for the fast-run sessions in Exercise 1. Save the session so that its graph can be included in the graph set described below.
3. If you're using a new rat, your second session in this exercise will be a fast-run extinction session, as described immediately following. If you're using your rat from Exercise 1, the fast-run extinction session described below will be your first session in this exercise.
4. Set experimental parameters.
5. Reinforcement Schedule: Extinction
6. Simulation Mode: Fast Simulation (No Video).
7. Session's Duration: 30 minutes
8. Start the experiment. It will only take a few seconds to finish. Save the file but answer "No" when asked if you want to mark it "Assignment Completed."
9. Run a second extinction session with the identical parameters.
10. Run a third extinction session with the identical parameters. Save the file and mark "Assignment Completed."
11. Create a graph set. If you used your rat from Exercise 1, the first graph will be from the second fast-run reinforcement session from that exercise. If you used a new rat, the first graph will be the 60-minute fast-run reinforcement session described in #2 above. The next three graphs will be from the three extinction sessions that you just conducted. You'll use this graph set to answer the questions on the Lab Report 3 form.
12. Complete the Lab Report 3 Form

CyberRat – Exercise #3

LAB REPORT

YOUR NAME:

RAT'S NAME: Circe 314

SECOND 60-MINUTE FAST-RUN REINFORCEMENT SESSION
FOLLOWING BEHAVIOR CHAIN TRAINING 60 Min

DATE OF SESSION: 8/10/16

SESSION NUMBER: 9

NUMBER OF LEVER PRESSES/REINFORCERS: 196

★ FIRST EXTINCTION SESSION

DATE OF EXTINCTION SESSIONS: 8/10/16

SESSION NUMBER: 10

NUMBER OF LEVER PRESSES: 68

★ SECOND EXTINCTION SESSION

SESSION NUMBER: 11

NUMBER OF LEVER PRESSES: 31

★ THIRD EXTINCTION SESSION

SESSION NUMBER: 12

NUMBER OF LEVER PRESSES: 9

QUESTIONS

(1) Compare the graphs for the four sessions and describe any differences in the following:

(a) Onset of responding as indicated by how much time passed before the first response:

(b) Rate of responding as indicated by the slopes of the lines. A steeper slope indicates a higher rate of responding:

(c) Pattern of responding as indicated by the shapes of the curves, including number and duration of pauses between responses, point at which responding ceases, etc.

(2) Describe any evidence of extinction bursts that you may see.

(3) Describe any evidence of spontaneous recovery that you may see.

CyberRat Exercise 5:

OBJECTIVES

To examine the process and effects of discrimination training.

MATERIALS

Lab Report 5 form: This is the form on which you'll report on the results of this exercise.

INSTRUCTIONS

1. In this experiment you'll train a rat to press the lever only when the chamber light is on and not to press the lever when the light is off. Light On will function as an S^D signalling that lever pressing will be reinforced, and Light Off will function as an S^A signalling that lever pressing will not be reinforced. In CyberRat, the S^D is called the S+ and the S^A is called the S-. During each 60-minute session, S+ (light on) intervals will alternate with S- (light off) intervals. Your goal will be for your rat to press the lever only during S+ intervals and to never press the lever during S- intervals.
2. Use a new rat that's Bar Press Trained-CRF.
3. Set experimental parameters.
4. Reinforcement Schedule: CRF (Continuous Reinforcement)
5. Stimulus Control: Check the Stimulus Control box in the upper center area of the screen.
6. Intervals: You'll choose EITHER Regular S+ & S- Intervals OR Irregular S+ & S- Intervals. Regular intervals means that every S+ interval will be the same length and every S- interval will be the same length. CyberRat allows you to choose different lengths for the S+ and S- intervals, but for the purposes of this assignment, you should make your S+ and S- intervals the same length. Irregular intervals means that the S+ and S- intervals will not be of consistent lengths, but they will be the same length ON AVERAGE. If you choose Regular, choose a length for S+ intervals between 5 and 120 seconds and use the same length for the S- intervals. If you choose Irregular, choose an average length that will apply both to S+ and S- intervals.
7. Simulation Mode: Fast Simulation (No Video)
8. Session's Duration: 60 minutes
9. Start the experiment and when it's finished, examine the graph for the session. The information you'll receive will include the discrimination index, which is calculated by dividing the number of lever presses during S+ intervals by the total number of lever presses during the session. In other words, it's the percentage of lever presses that were performed during the S+ sessions. When discrimination is perfect, 100% of lever presses are performed during the S+ intervals and the discrimination index is 1.00.
10. Conduct the experiment again, with all of the parameters unchanged. When it's finished, examine the graph and the discrimination index.
11. Repeat the experiment as many times as necessary to raise the discrimination index to 0.90 (90% of lever presses during the S+ intervals). If you're not getting close to 0.90 with the interval lengths you chose, you may choose to start over again using different interval lengths. After your final session, mark it "Assignment Completed."
12. Complete the Lab Report 5 Form.

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CyberRat – Exercise #5

LAB REPORT

YOUR NAME:

RAT'S NAME: Digital334

DATE OF DISCRIMINATION TRAINING SESSIONS: 8/10/16

CLICK HERE TO INDICATE TYPE OF SCHEDULE Regular S- and Sx

LENGTH OF S+ INTERVALS: 60 seconds

LENGTH OF S- INTERVALS: 60 seconds

BEST DISCRIMINATION INDEX ACHIEVED: 91%

NUMBER OF SESSIONS REQUIRED TO ACHIEVE BEST DISCRIMINATION INDEX: 4

SESSION NUMBER OF BEST DISCRIMINATION INDEX: 13

DISCUSSION

What did you learn about the best way to train a rat to discriminate between stimulus conditions?

If you were to do this again, what would you do differently?

How could you apply what you've learned about discrimination training in a real world setting?