

20 HUMAN OPERANT CONDITIONING

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This activity does not require prior knowledge of psychology. There is little advance preparation, and it is suitable for classes of virtually any size. You will need to give some thought to how you will instruct the "experimenter(s)" in the procedures without informing the learner(s) during this in-class exercise.

CONCEPT

Human operant conditioning is often demonstrated by asking the subject to say nouns and then reinforcing the plural but not the singular form. Another technique is to ask the subject to say numbers and then reinforce those numbers divisible by 2. The shortcoming of these procedures is that the subject is limited by the instructions to two classes of responses, whereas the animal in the typical Skinner box can make many more different responses even if the space is limited. In addition, the procedures do not display shaping of the response by successive approximation, and as a consequence, there are no changes in the criteria for reinforcement that are present in shaping. Moreover, during extinction, one cannot watch the behavior revert to previously rewarded responses. These shortcomings can be minimized by doing the activity outlined here.

MATERIALS NEEDED

No materials are required except pencil and paper. Score sheets must be constructed by those doing the reinforcing.

INSTRUCTIONS

Twelve words are shown to the subject, and his or her instructions are simply to try to get as many points as possible. He or she is to say the word, and following the word the experimenter will say either "Point" or "No point." The experimenter should record which word was given and whether a reinforcement was given for each trial. The words to be used are *underfed*, *misread*, *understand*, *understudy*, *mistake*, *misread*, *understanding*, *mistaken*, *underpaid*, *understandingly*, *misinform*, and *mistakenly*.

The experimenter first reinforces any word that begins with "mis," by saying "Point." Once the subject has picked three words in succession that begin with the syllable "mis" and received three reinforcements in succession, the experimenter should change the criterion so that reinforcement is received only if the first two syllables "mistake . . ." are chosen. Again, after the subject has received three reinforcements in succession, the criterion is changed so that only the word with the three syllables "mistaken . . ." is reinforced. After three more successive reinforcements, only the word "mistakenly" is reinforced. After five correct responses in succession, the reinforcement is no longer given for any word, thus beginning the extinction process. The extinction session should last at least three minutes.

The students can work in pairs, with one as the subject and one as the experimenter, or one student can be used to demonstrate the phenomena. Ask the subject to pick his or her words by number, because that will facilitate recording the responses. In order to draw a cumulative response curve, it is necessary to have someone record how many correct responses occur in each 3-minute period.

DISCUSSION

Once the cumulative response curves for acquisition and extinction have been drawn, have students make observations on the rate of responding (indicated by the slope). You might ask them to try to specify what a reacquisition curve might look like or a curve showing spontaneous recovery. If a number of subjects are conditioned, then individual differences in rate will occur, so you may wish to ask what is it about the behavior in the situation that might account for such individual differences. The regression back through previously reinforced responses that is often observed in animals may also occur. Ask the class how such behavior—going back through previously reinforced responses—might be adaptive for an animal in its natural environment.

SUGGESTED READING

Gleitman, H. (1986). *Psychology* (2nd ed., pp. 101–113). New York: Norton. Nearly any introductory text will discuss operant or instrumental conditioning. See Gleitman's small section on shaping in pp. 107–108.