

On the attached cards will be found records for the third day of the experiment for the four experimental birds. These are cumulative response curves taken on an electrical recording machine. Each response moves the pen up one notch. The height of the ordinate thus represents number of responses, i. e., pellets eaten in this case. The base line represents time in minutes. Reinforcements have not been recorded, but the vertical lines divide the record into sections according to the ratios of pellets to reinforcements required. The numbers under each section indicate these ratios. Thus in the sections labeled "1", the chicken received one reinforcement for each response or pellet swallowed; in the sections labeled "2" the chicken received one reinforcement for each 2 responses, etc. The circled figures give the chicken's band number.

We will not know until the conclusion of the experiment what interpretation must be put these first records. They are remarkably uniform in shape. A stable rate of response emission appears during ratios of 1 and 2 responses or pellets per reinforcement. When the ratio is pushed to 3 pellets per reinforcement, the rate falls off in a fashion typical of response extinction. The extinction process (if that is indeed what has occurred here) was carried on for different periods for the four birds before an attempt was made to recondition the response. When we returned to a ratio of one response per reinforcement, some recovery in rate and regularity seems to occur. One would not expect immediate resumption of the original rate in a response which had just been extinguished.

The extinction curves observed here may be compounded with satiation (which also yields a curve of the negative growth type) but several things make it seem unlikely that this is an important complication: (1) the birds consumed less than an ounce in the 25 minutes experimental period; (2) when returned to their home cage they ate pellets almost immediately when the hopper was uncovered; (3) behavior typical of extinction appeared--random exploratory behavior, scratching at the automatic hopper, approximate responses such as pecking and tossing the pellets which were occasionally reinforced by accident and in turn had to be extinguished before the complete swallowing act could be elicited.

We will of course take satiation or simple ingestion curves from control birds and study the whole process in much greater detail before any definite conclusions will be drawn.