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The Impacts of Reward Salience on Rate of Learning & Extinction

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The Impacts of Reward Salience on Rate of Learning & Extinction:

Sarah Headapohl, Elise Crause, Lindsey Matthews, Davis Eddleman & Mykayla Spurlin

Salience of rewards is a critical component to learning and motivation, without salience, motivation would be insubstantial (Berridge, 2012). This study aims to investigate the relationship between reward salience and rate of learning. Rate of learning will be measured by the number of correct lever presses within twenty-to-twenty-five-minute periods. Extinction will additionally be measured to further examine the impact reward salience has on learning. Using standard operant chambers, six female food-restricted rats were trained to lever press the left front lever to obtain a food reward. Rats were separated into two groups, (n=3 per group), an experimental group of rats was trained using sucrose pellets as a reinforcement for pressing the left lever whereas the control group was given standard food pellets as a reinforcement. Rewards were dispensed on variable ratio, VR-2, as this schedule elicits high and steady rates of responding (Ward-Robinson & Honey, 2000). We hypothesized the experimental group would produce significantly more lever presses and result in enhanced rate of learning due to the salience of the sucrose reward. Contrary to what was originally hypothesized, this study showed rodents conditioned to left lever press given a normal food reward not only learned quicker, requiring less shaping, but additionally demonstrated processes of extinction. While qualitative data regarding behavior was collected, sucrose pellets did not clearly demonstrate enhanced rate of learning or elongated extinction processes.