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Behavioral Theory of Timing Applied to a DRL Limited-Hold Procedure

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THE JOHN WESLEY POWELL STUDENT RESEARCH CONFERENCE - APRIL 2004

Poster Presentation P45

BEHAVIORAL THEORY OF TIMING APPLIED TO A DRL LIMITED-HOLD PROCEDURE

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In recent years, the study of timing behavior has become an increasingly important part of behavior analysis. A number of theories have been proposed to account for an animal's ability to time short intervals. One such theory, The Behavioral Theory of Timing (BeT, Killeen and Fetterman, 1988) argues that the timing of short intervals is mediated by collateral/adjunctive behavior. While numerous studies have supported the predictions of BeT, the majority of those have been correlational, measuring a statistical relationship between adjunctive behavior and timing performance. The present experiments take an experimental approach, by manipulating the availability and probability of adjunctive behavior. Rats responded on a series of DRL limited-hold procedures in which subjects must wait a certain time interval before responding - early responses are not reinforced and reset the clock. The opportunity for adjunctive behavior was manipulated by providing a chewblock in some conditions but not in others. The results relate to previous studies from our lab, which found that the presence of a chewblock may interfere with timing behavior by causing the rat to wait too long and thus invoke the limited hold contingency.