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The Effects of Disruptive Events & Response Cost on Time-Place Learning in Rats

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Poster Presentation P33

THE EFFECTS OF DISRUPTIVE EVENTS & RESPONSE COST ON TIME-PLACE LEARNING IN RATS

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Traditional behavior analysis has long emphasized the relationship between responding and local reinforcement effects. This is typified by testing animals in a constrained environment (the operant chamber) for during brief sessions. With some notable exceptions, relatively little research has examined reinforcement effects in larger, more open environments across longer time intervals. The present experiment examines time-place learning, in which reinforcement is available in certain locations only during certain times of an experimental session. Rats were trained to press bars for food reinforcement in a large, open environment with two different feeding stations (half trained in a low response-cost condition, the other half in a higher response-cost condition). At any one time, only one feeding station was operative, with time of the session, the only cue signaling which station was active. During baseline, rats learned to visit the appropriate station based on the time of session. They were then exposed to "disruptive" event to determine how the disruption would alter their time-place responding. Additionally, the impact of response-cost upon ability was assessed. The results have implications for theories of timing as well as for theories of operant behavior. The results may also have implications for how experiments are to be properly conducted.