



Apr 13th, 9:00 AM - 10:30 AM

Rats in Bliss: A Minimum-Deviation Model of Ratio Schedule Performance

Jennifer Bredthau
Illinois Wesleyan University

Adrienne Parkhurst
Illinois Wesleyan University

James Dougan, Faculty Advisor
Illinois Wesleyan University

Follow this and additional works at: <https://digitalcommons.iwu.edu/jwprc>

Bredthau, Jennifer; Parkhurst, Adrienne; and Dougan, Faculty Advisor, James, "Rats in Bliss: A Minimum-Deviation Model of Ratio Schedule Performance" (1996). *John Wesley Powell Student Research Conference*. 17.

<https://digitalcommons.iwu.edu/jwprc/1996/posters/17>

This is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

Poster Presentation 15

**RATS IN BLISS: A MINIMUM-DEVIATION MODEL OF RATIO
SCHEDULE PERFORMANCE**

Jennifer Bredthauer, Adrienne Parkhurst and James Dougan*,
Department of Psychology, IWU

The minimum-deviation theory predicts that an organism will seek to minimize the relative behavioral distance between an unconstrained baseline condition and the constrained condition caused by reinforcement schedules (Staddon, 1979). According to the minimum-deviation model proposed by Allison (1983), behavior under scheduled constraint will come as close as possible to an unconstrained "bliss point" or behavioral ideal. The present experiment examined applications of these models to fixed ratio (FR) schedules. In a previous study conducted in our lab, Witte (1994) examined the use of a minimum-deviation bliss point model for response prediction on a simple interval schedule of reinforcement. The model failed to predict the rate of responding; rats pressed a bar consistently more often than predicted by a minimum-deviation model. Although variable interval and variable ratio schedules of reinforcement have not been directly compared within the performance models, the minimum distance-models have proven successful for predicting responding on simple ratio schedules (Allison, 1983). The present study sought to substantiate the findings of previous experiments. Fixed ratio schedules such as those used in earlier research by Allison (1983) were used in conjunction with the apparatus and parameters employed by Witte (1994). Six rats were first exposed to a paired baseline procedure to establish their individual bliss points. Each rat was then exposed to a series of three variable ratio schedules: VR 10, VR 20 and VR 40. The results have implications for minimum-distance models of learning and performance.