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Technion

The Max-Wertheimer Minerva Center for Cognitive Processes and Human Performance

אנו שמחים לארח את

דר' רחל ברקן
מאוניברסיטת אינדיאנה

ההרצאה תהיה בנושא:

Decreasing Risk – Taking: The Reinforcement Value of Non – Payoff Information in Accident Preventing Tasks

ההרצאה תתקיים ביום ג' 5 לינואר **1999 בשעה 12:30**
בחדר ההרצאות במעמק"ה.

נשמח לראותכם בין אורחנו.

הזמנה זו <u>אינה</u> מהווה אישור כניסה לאוניברסיטה. הבאים ברכב מוזמנים להשתמש בחניון פארק הכרמל הנמצא מול הכניסה הדרומית לאוניברסיטה

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להלן תמצית ההרצאה:

Decreasing Risk – Taking: The Reinforcement Value of Non – Payoff Information in Accident Preventing Tasks

An early study (Heinrich, 1931) implies that most industrial accidents can be characterized as a combination of unsafe state, risky act and a chance event. Barkan, Zohar and Erev (1998) quantified this observation utilizing Signal Detection Theory (Green & Swets, 1966) with an adjustment of probabilistic penalty for Miss error. This Adjustment defined the Miss outcome as a gamble with a frequent sub-result of Near – Accident that was not penalized, and a rare sub – result of an accident (reflected with penalty). Barkan et al showed that a decrease in the probability for penalty resulted with an increase in risk - taking and impaired the learning process.

The present paper studies further the effect of probabilistic penalty on learning in safety – like tasks. Three experiments show that different kinds of non – payoff feedback for the non - penalized error (i.e. Near – accident), modify the effect of the probabilistic penalty and restore learning towards optimal safer behavior. The results suggest that non – payoff information eliminates the reinforcement associated with risk – taking, and operates as an internal negative reinforcement by itself. It seems that experience enables subjects to learn the concept of probabilistic penalty, using this feedback as an intuitive estimator of the Expected Value of the Miss gamble.