

Conditioned inhibition is observed after training in which a stimulus signals the absence of an otherwise expected outcome. For example, in Pavlov's (1927) procedure for conditioned inhibition, A+ trials are interspersed with AX- trials, where (+) indicates reinforcement and (-) notes non-reinforcement. Most models of learning assume that the surprisingness of the outcome is important for learning. Such models predict weaker terminal responding to a previous inhibitor than to a previously neutral stimulus after cue-outcome pairings. Such models also predict that learning about the inhibitor will be faster than learning about the neutral stimulus because the inhibitor is more surprising. To empirically test these different predictions, a 2 (Inhibitor vs. Neutral stimulus) X 3 (Number of Trials [Zero vs. One vs. Two] mixed design was conducted in a human contingency learning procedure. Our experiment revealed faster excitatory learning for a previously neutral stimulus than for a previous inhibitory stimulus, which is inconsistent with the view that surprise drives learning.