

Allan R. Wagner

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Yale University

William James Fellow Award

Allan Wagner has been a major innovator of powerful concepts that have revolutionized theories of habituation, classical conditioning, and instrumental conditioning. His proposals, in collaboration with University of Pennsylvania psychology professor Robert Rescorla, of the fundamental laws of conditioning provided significant hypotheses that have dominated and reshaped the understanding of associative processes.

The Rescorla-Wagner Model of Pavlovian conditioning assumes that learning is determined by the discrepancy between what is expected to happen and what actually happens. Subsequent models from Wagner's laboratory have broadened the framework for this conception. The "Sometime Opponent Process" (SOP) model provides a more general account of how the processing of any stimulus depends on the discrepancy between what is in active memory and what happens. The "Affective Extension of SOP" (AESOP) addresses the differences, and the interaction, between affective and sensory/perceptual stimulus processing. The recent "Replaced Elements Model" (REM) presents a conception of how stimuli are differentially represented in different context, to allow for a variety of phenomena that have been problematic for elemental associative theories, including the Rescorla-Wagner Model.

Much of Wagner's theory testing research has involved study of the conditioned eyeblink response of the rabbit — a very fruitful preparation that he helped to introduce to behavioral and neurobiological investigation. It is satisfying that the SOP and AESOP models appear to map gracefully onto what is known about the neural circuitry underlying the conditioned eyeblink.

Wagner's current research is largely devoted to human contingency learning, particularly as involved in the formation of causal judgments, to which the Rescorla-Wagner Model and SOP have frequently been applied.

He has set a stellar example for behavior researchers and theorists.