ROBERT AXELROD
Walgreen Professor for the Study of Human Understanding, University of Michigan

Robert Axelrod is the Walgreen Professor for the Study of Human Understanding at the University of Michigan. He has appointments in the Department of Political Science and the Gerald R. Ford School of Public Policy. He holds a BA in mathematics from the University of Chicago (1964), and a PhD in political science from Yale (1969).

He is best known for his interdisciplinary work on the evolution of cooperation that has has a Google citation count over 20,000. His current research interests include political psychology and international security. Among his honors and awards are membership in the National Academy of Sciences, a five year MacArthur Prize Fellowship, the Newcomb Cleveland Prize of the American Association for the Advancement of Sciences for an outstanding contribution to science, and the National Academy of Sciences Award for Behavioral Research Relevant to the Prevention of Nuclear War. He served as President of the American Political Science Association (2006-07).

Axelrod has consulted and lectured on promoting cooperation and harnessing complexity for the United Nations, the World Bank, the U.S. Department of Defense, and various organizations serving health care professionals, business leaders, and K-12 educators.

A Theory of Meaning

Making sense of a novel situation is an important part of human and machine intelligence. This talk will present a Theory of Meaning that helps account for how sense making is done and how it might be optimized. The theory uses the concept of a schema, such as the balance schema that represents a bi-polar world. In the balance schema friends of friends are friends, and friends of enemies are enemies, and enemies of enemies are friends. The theory is based on an extension of information theory, and states that prior beliefs about the structure of relationships (schemas) and prior knowledge about some of these relationships often allows one to infer substantial additional knowledge based on only limited additional information. Put simply, schemas and prior beliefs allow one to give meaning to new information. The presentation will include some mathematical results about the statics and dynamics of sense making, and will raise a number of questions for future research on the Theory of Meaning.