



RISK REGULATION SEMINARS

SPRING 2008

Tuesday March 25, 2008
4:30 - 6:00 PM, G 50, Jon Huntsman Hall

EVOLVED ALTRUISM, STRONG RECIPROCITY, AND PERCEPTION OF RISK

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Humans are endowed with specific physiological and psychological adaptations that respond well to risks that have recurred over our evolutionary history. However, the mind appears structured to use a mental calculus for reckoning uncertainty and making decisions that can be substantially different from probability theory, propositional calculus (logic), or economic rationality (utility maximization). Experts relying on these normative concepts have documented many instances of patterned deviation; however, reliable predictions of public perception and effective communication techniques remain elusive. In this seminar, Dr. Tucker will argue that significant progress towards predicting perception and communicating risk requires an explanatory framework explicitly informed by evolutionary theory. This approach expects mismatches between normative predictions and lay perception when evolved mental mechanisms encounter novel elements of the modern environment. However, when evolved mental mechanisms are functioning properly, lay-expert disagreement exposes the weaknesses of normative models and can provide a means to improve the fit between expert risk assessment and real risk.

W. Troy Tucker is a human ecologist and anthropologist. He received a B.A. from the University of Utah and an M.S. and Ph.D. from the University of New Mexico. At Applied Biomathematics he is a research scientist and project manager. His research has spanned many areas in risk analysis, uncertainty propagation, and human perception of risks and uncertainties, including work in human and ecological risk assessments for the U.S. Environmental Protection Agency, developing extreme engineering uncertainty propagation tools for NASA, and uncertainty visualization and analysis technology for the pharmaceutical industry. He organized a National Science Foundation workshop on risk perception and communication and is editing the forthcoming proceedings for the New York Academy of Sciences.

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