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Susan Athey, Jonathan Levin

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The Value of Information in Monotone Decision Problems*

Susan Athey and Jonathan Levin[†]

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Abstract

We study the information preferences and information demand of decision-makers facing uncertainty. We focus on monotone decision problems in which the posterior beliefs induced by the decision-maker's information can be ordered so that higher actions are chosen in response to higher signal realizations. We provide necessary and sufficient conditions for decision makers with different classes of payoff functions to prefer one information structure to another. We also provide conditions under which two decision-makers in a given class can be ranked in terms of their information demand. Applications and examples are given.

JEL Classification: C44, C60, D81.

Keywords: Bayesian decision problems, uncertainty, value of information, stochastic dominance, stochastic orderings.

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[†]Athey and Levin are at the Stanford University Graduate School of Business, and NBER. Emails: athey@stanford.edu, jdlevin@stanford.edu.

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