

# REASONING ABOUT KNOWLEDGE IN ECONOMICS

Robert J. Aumann  
The Hebrew University of Jerusalem  
Givat Ram, 91904 Jerusalem

## SUMMARY

Reasoning about other people's reasoning and knowledge about other people's knowledge lie at the heart of game theory and economic theory. Each person affects everybody else. You cannot decide what to do without some knowledge or belief about what others will do; and this must be based on an estimate of their knowledge and beliefs, about substantive matters as well as about what they think about each others' beliefs and about your beliefs. A coherent framework for analyzing these interactions is thus of the essence for these disciplines.

This lecture will survey some of the aspects of game and economic theory that are particularly closely related to knowledge about knowledge. Topics that may be touched upon include common knowledge, the evolution of beliefs in repeated games, universal models for beliefs about beliefs, correlated and independent equilibrium, and games played by automata.