Arutz Sheva - IsraelNationalNews.com

Send to printer 🖨

Israel´s Prof. Aumann Wins Nobel Prize in Economics
Monday, October 10, 2005 / 7 Tishrei 5766

Prof. Robert J. Aumann of Heb. U. is a co-winner of this year's Nobel Prize in Economics, for "enhancing our understanding of conflict and cooperation through game-theory analysis."

Aumann, a religious Jew who grew up in New York City and currently resides in Jerusalem, won the prestigious prize together with Prof. Thomas C. Schelling of the University of Maryland. The two established game theory as the dominant approach towards understanding conflict and cooperation between countries, individuals and organizations. They will share the $1.3 million prize.

The official name of the prize, which will be awarded in Stockholm on Dec. 10, is The Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel. Nobel himself established awards for physics, chemistry, medicine, peace and literature, and Sweden's central bank added economics to the list in 1968.

Aumann's research is not easily understood by the layman. It involves concepts such as neo-Walrasian theory, core equivalence in a "continuum" economy, the "perfectly competitive" scenario and approximate purification of mixed strategies. His six books include " Values of Non-Atomic Games," "Game Theory" (in Hebrew), and "Repeated Games with Incomplete Information." He has written and delivered papers entitled "Game-Theoretic Analysis of a Bankruptcy Problem from the Talmud," "Asphericity of Alternating Knots," and dozens more.

Prof. Yisrael Aharoni, head of the Mathematics Department of the Jerusalem College of Technology (Machon Lev) in Jerusalem, studied briefly under Prof. Aumann. Expressing satisfaction at Aumann's Nobel recognition, Aharoni told Arutz-7, "Three years ago, another Israeli professor, Daniel Kahneman, won the Economics prize, and he basically said that economics is all psychology. What's interesting is that this winner, Prof. Aumann, says basically the opposite, that economics is all mathematical and logical."

Prof. Aharoni said that a famous article by Prof. Aumann, in which he applies his theories to explain a difficult Mishna in Tractate Ketubot and another Mishna in Tractate Baba Metzia "caused economists and mathematicians around the world to take an interest in Talmudic texts and see how they deal with economic/legal issues."

"It's gratifying to see," Aharoni said, "that the Nobel Prize committee recognized the contribution of mathematics to economics, as it has done in the past regarding similar contributions to medicine, chemistry and other areas."

Prof. Aharoni said that Aumann showed how "the results of all sorts of competitions and arguments between people or entities can be analyzed mathematically. For instance, a seller

has various options, such as selling less for a higher price or more for a lower price. The buyer also has various options. The relevant data can be analyzed and a level can be found such that both sides will end up as satisfied as possible under the given circumstances."

Another example of the application of game theory is in the area of "repeated games." If a situation is faced once, Prof. Aharoni explained, "the best strategy is used, but if it is encountered many times, it is likely that one strategy will be used a certain amount of the time, and another strategy for the remainder - given the advantages and disadvantages of each. This is so because of the very fact of the repetition. For instance, if you buy bread every single day, some of the times you will be willing to travel further to pay a lower price - but not all the time, because then the seller will raise the price."

Previous Israeli Nobel Prize winners include Shmuel Yosef Agnon (Literature, 1966), Daniel Kahneman (Economics, 2002), and Avraham Hershko and Aharon Ciechanover (Chemistry, 2004). Yitzchak Rabin and Shimon Peres won a controversial Peace Prize in 1994.