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THE OUTLOOK

A Nobel Economist Analyzes the Strategies Of the Deadly Serious Games Nations Play

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Years before he wrote the "Wealth of Nations," Adam Smith, the intellectual father of capitalism, wrote a lesser-known text called "The Theory of Moral Sentiments," which sought to explain why self-interested individuals might have feelings like pity or compassion for others.

Ever since, economists have been trying to predict and explain how individuals interact. To understand markets, they recognized, they needed to understand what lay hidden in the minds and motivations of people. Game theory, which became popular 200 years after Adam Smith, was an example. It sought to explain how individuals plot strategies against each other in simple games like chess and deadly games like the nuclear-arms race. As an indication of game theory's importance, the Royal Swedish Academy of Sciences last month awarded the Nobel Prize for economics to trailblazers in the field, Thomas Schelling and Robert Aumann.

NOBEL PRIZE WINNERS

Read [excerpts from an additional interview](#)¹ with Prof. Aumann.

- [Commentary: The Nuclear Taboo](#)²
Thomas C. Schelling

Their work has been applied to everything from business strategy to bankruptcy. But it was in the geopolitical realm where the theorists made some of their biggest marks. Both came of age during the Cold War, when the arms race posed the most important strategic questions of the time. Geopolitics also is where their insights are especially valuable today, as political and business


leaders try to understand how their decisions about terror, North Korea's nuclear ambitions and global warming could affect the economic landscape in decades to come.

In an interview, Prof. Schelling said terrorism isn't a big threat, but global warming might be. He also advocated U.S. participation in black markets for nuclear-fissile material. (Read [excerpts from an additional interview](#)³ with Prof. Aumann.)

Q: How have the rules of the game of nuclear deterrence changed now that the players are countries like Iran and North Korea, instead of the Soviet Union a generation ago?

Prof. Schelling: I think if Iran or North Korea gets nuclear weapons, they will think of them as deterrent weapons. They won't want to get into any kind of nuclear war. They won't want to use those weapons. They will want to use them to keep Russia or the U.S. from intervening militarily,

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and we will learn what it is like being deterred not by a highly qualified adversary, but by a couple of small inimical countries. We may have to get used to that.

Q: There's also this concern that North Korea or Iran could become involved in illicit trade in nuclear weapons?

Prof. Schelling: I have a hunch that if there ever appeared to be a black market in fissile material or in actual bombs, that the U.S. would have the good sense and the cleverness and the ability to enter the black market and engage in what we used to call preclusive purchases. During World War II there were a lot of natural resources, mostly minerals, that the Germans badly needed, and the U.S. had a program of buying up those materials, not because we wanted them but because we wanted to keep them out of the hands of the Germans. I would think that we would be able to outbid anybody that wanted to buy a nuclear weapon. If North Korea thinks it can sell a nuclear weapon for \$1 billion, we ought to be in there offering \$5 billion so nobody could top that bid.

Q: That sounds like a slippery slope. How is the Bush administration doing managing the changing nuclear threat?

Prof. Schelling: It's perfectly clear that it's had no success in Iran, and it's had no success in North Korea. Whether that's because it's doing it badly or because it's an impossible task, I don't know. I tend to think that it is not being very pragmatic about North Korea. We really ought to give North Korea some kind of nonaggression assurance... We should volunteer it, on grounds that the primary motivation for North Korea to get a nuclear weapon is to make sure the U.S. can never attack. If they were to take seriously a nonaggression treaty, they might feel less need to have a nuclear weapon.

Q: Doesn't that just invite other players into the game?

Prof. Schelling: I don't think so. Who? Brazil? Argentina? Bangladesh? Who wants to get into the game? It is not a good game to get into.

Q: In the case of terrorism more broadly, we're dealing with an enemy that doesn't seem to be bound by the same sense of self-preservation that we're accustomed to from an enemy.

Prof. Schelling: It is important for us, the potential victims, to recognize that with the exception of the Twin Towers in New York, terrorism is an almost minuscule problem. [John] Mueller, at Ohio State University, estimates that the number of people who die from terrorist attacks is smaller than the number of people who die in their bathtubs. If you take the Trade Towers, we lost about 3,000 people. Three thousand people is about 3½ weeks of automobile fatalities in the U.S. If you rank all of the causes of death in the U.S. or around the world, different kinds of accidents, drowning, falling down stairs, automobile accidents, struck by lightning, heart attacks, infections acquired during hospital surgery, terrorism is way down at the bottom.

Q: Then what are the biggest issues globally that need to be attacked?

Prof. Schelling: A big problem is going to be climate change. We're going to spend a long time trying to figure out what to do about it. I don't think we have any idea yet what to do about it. In the second half of the 20th century, arms control was the most demanding diplomatic issue there was. In the 21st century, greenhouse-gas emissions, global warming and climate change is going to be the biggest diplomatic issue there is.

Q: But you've also said that you don't expect global warming to severely impact the developed economies because agriculture is such a small portion of our output?

Prof. Schelling: It's a very severe threat to a lot of developing countries. For many of them, 30% of their gross product is agriculture or fisheries or forestry. In many countries half the people depend on agriculture for subsistence. In this country, so few people depend on agriculture for their living that the Census Bureau no longer counts farmers. So I think even if in this country global warming doubles the cost of growing food, that would reduce [gross domestic product] by between 1% and 2%, and that would happen over a period of years in which GDP would double. So instead of doubling by 2060, you would double by 2061 or 2062. You would never notice a difference.

Q: Why is it such a big threat then?

Prof. Schelling: In the U.S., if you don't worry about ecological damage, species extinction and things of that sort; if you don't worry about what happens in Bangladesh or Indonesia or Brazil; if you figure air conditioning will always take care of your weather problems; then I would say with one or two exceptions, you probably don't have to get too scared. One exception is there is a body of ice in Antarctica called the West Antarctic ice sheet. It is anchored by some islands, but warming the water surrounding it might cause it to slide into the ocean. The estimate is that that would raise sea level by as much as 20 feet. That means to go from the White House to the Capitol, you go by boat. It would be a huge calamity.

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