



**Calhoun: The NPS Institutional Archive**  
**DSpace Repository**

---

Faculty and Researchers

Faculty and Researchers' Publications

---

2005

## The Great Game

Henderson, David R.

Wall Street Journal

---

Henderson, D. The Great Game. Wall Street Journal, 2005.  
<http://hdl.handle.net/10945/61565>

---

This publication is a work of the U.S. Government as defined in Title 17, United States Code, Section 101. Copyright protection is not available for this work in the United States.

*Downloaded from NPS Archive: Calhoun*



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

**Dudley Knox Library / Naval Postgraduate School**  
**411 Dyer Road / 1 University Circle**  
**Monterey, California USA 93943**

<http://www.nps.edu/library>

# The Great Game

Henderson, David R . Wall Street Journal , Eastern edition; New York, N.Y. [New York, N.Y]11 Oct 2005: A.16.

---

## ABSTRACT (ABSTRACT)

Mr. [Thomas C. Schelling] did it as a true social scientist, with spectacular results. His thinking led to important insights in areas ranging from nuclear war to figuring out meeting places to traffic jams to racial segregation. His specialty was understanding the behavior of real humans, and game theory was one of his tools. But it was just that – a tool. Instead of using formal proofs, Mr. Schelling first told illustrative stories and then, using words, showed why things happened the way they did. As Harvard economist Richard Zeckhauser wrote in a 1989 tribute, Mr. Schelling "stayed away from the Journal of Advanced Economic Gobbledygook" and played "his games in a world that is richer than most game theory analyses."

Mr. Schelling's early work was on the most important issue of the Cold War: preventing it from becoming a Hot War. In his classic 1960 book "The Strategy of Conflict," Mr. Schelling, who had spent a year at the RAND Corporation, laid out some important applications of game theory to the issue of nuclear war. In one passage, he discussed the U.S.-Soviet conflict in terms anyone could relate to: a hypothetical duel. He wrote that "if both [duelists] were assured of living long enough to shoot back with unimpaired aim, there would be no advantage in jumping the gun and little reason to fear that the other would try it." Therefore, he wrote, "schemes to avert surprise attack have as their most immediate objective the safety of weapons rather than the safety of people." In other words, to have a credible deterrent against a Soviet first strike that would destroy many of its people, the U.S. government needed to defend its weapons.

This way of thinking about tacit communication is so associated with Mr. Schelling that the focal point is often called a "Schelling point." Fellow Nobel laureate James Tobin, talking about such a coordination game conducted by Mr. Schelling, remarked, "Game theory has never been as much fun or as relevant."

Mr. [Thomas C. Schelling] did it as a true social scientist, with spectacular results. His thinking led to important insights in areas ranging from nuclear war to figuring out meeting places to traffic jams to racial segregation. His specialty was understanding the behavior of real humans, and game theory was one of his tools. But it was just that – a tool. Instead of using formal proofs, Mr. Schelling first told illustrative stories and then, using words, showed why things happened the way they did. As Harvard economist Richard Zeckhauser wrote in a 1989 tribute, Mr. Schelling "stayed away from the Journal of Advanced Economic Gobbledygook" and played "his games in a world that is richer than most game theory analyses."

Mr. Schelling's early work was on the most important issue of the Cold War: preventing it from becoming a Hot War. In his classic 1960 book "The Strategy of Conflict," Mr. Schelling, who had spent a year at the RAND Corporation, laid out some important applications of game theory to the issue of nuclear war. In one passage, he discussed the U.S.-Soviet conflict in terms anyone could relate to: a hypothetical duel. He wrote that "if both [duelists] were assured of living long enough to shoot back with unimpaired aim, there would be no advantage in jumping the gun and little reason to fear that the other would try it." Therefore, he wrote, "schemes to avert surprise attack have as their most immediate objective the safety of weapons rather than the safety of people." In other words, to have a credible deterrent against a Soviet first strike that would destroy many of its people, the U.S. government needed to defend its weapons.

This way of thinking about tacit communication is so associated with Mr. Schelling that the focal point is often called a "Schelling point." Fellow Nobel laureate James Tobin, talking about such a coordination game conducted by Mr. Schelling, remarked, "Game theory has never been as much fun or as relevant."

## FULL TEXT

Yesterday, the Royal Swedish Academy of Sciences announced the winners of the 2005 Nobel Prize in economic sciences: Robert J. Aumann of the Hebrew University of Jerusalem and Thomas C. Schelling of the University of Maryland. They earned the prizes "for having enhanced our understanding of conflict and cooperation through game-theory analysis." This is the second time the award has gone to game theorists; the first time was 1994, when the winners were John Harsanyi, John Nash and Reinhard Selten.

Mr. Aumann is a highly technical mathematical game theorist who many thought should have won the prize in 1994. As the Royal Swedish Academy put it, "Aumann demonstrated that long-run social interaction could be comprehensively analyzed using formal non-cooperative game theory."

Mr. Schelling did it as a true social scientist, with spectacular results. His thinking led to important insights in areas ranging from nuclear war to figuring out meeting places to traffic jams to racial segregation. His specialty was understanding the behavior of real humans, and game theory was one of his tools. But it was just that – a tool. Instead of using formal proofs, Mr. Schelling first told illustrative stories and then, using words, showed why things happened the way they did. As Harvard economist Richard Zeckhauser wrote in a 1989 tribute, Mr. Schelling "stayed away from the Journal of Advanced Economic Gobbledygook" and played "his games in a world that is richer than most game theory analyses."

—

Mr. Schelling's early work was on the most important issue of the Cold War: preventing it from becoming a Hot War. In his classic 1960 book "The Strategy of Conflict," Mr. Schelling, who had spent a year at the RAND Corporation, laid out some important applications of game theory to the issue of nuclear war. In one passage, he discussed the U.S.-Soviet conflict in terms anyone could relate to: a hypothetical duel. He wrote that "if both [duelists] were assured of living long enough to shoot back with unimpaired aim, there would be no advantage in jumping the gun and little reason to fear that the other would try it." Therefore, he wrote, "schemes to avert surprise attack have as their most immediate objective the safety of weapons rather than the safety of people." In other words, to have a credible deterrent against a Soviet first strike that would destroy many of its people, the U.S. government needed to defend its weapons.

And vice-versa: The Soviets had the same interest. I mention this because one of the most important principles in game theory – indeed, in life – is that to handle any interactive situation well, you must put yourself in the shoes of the person you're interacting with. All game theorists recognize this, of course, but Thomas Schelling breathes it. This other-people's-shoes approach is often thought to be soft-hearted. When I recommended it as a way of thinking about terrorism in a 1996 talk to some Department of Defense officials, game theorist Martin Shubik accused me of suggesting that "we all love one another." But even if you hate your opponent, and especially if he hates you, it's a good idea to know what pushes his button.

Another Schelling analogy was his discussion of where you would meet someone if you both knew you were meeting in New York on a particular day but hadn't thought to set a time and place. This led to his concept of the

"focal point." You would put yourself in the shoes of the person you were meeting and figure out a time and place that might be obvious to him and that he might think you would think of. I am told that one focal point many people came up with when playing the Schelling game is under the big clock in Grand Central Station at noon.

This way of thinking about tacit communication is so associated with Mr. Schelling that the focal point is often called a "Schelling point." Fellow Nobel laureate James Tobin, talking about such a coordination game conducted by Mr. Schelling, remarked, "Game theory has never been as much fun or as relevant."

Mr. Schelling also explained the economics of the traffic jam on the inbound lane, even though the accident occurred in the outbound lane. Each person inbound slows down a few seconds to look, but these few seconds each for a few hundred drivers turn into a 10-minute delay. Even though each person knows this, that doesn't make the problem diminish. Indeed, when I've paid my 10 minutes, I want the "reward" of satisfying my curiosity by seeing what happened. Mr. Schelling was probably not the first person to realize this, but it is of a piece with the kinds of puzzles he has spent his career thinking about.

One such puzzle is why so many neighborhoods end up being racially segregated, even though the people in the neighborhoods, black or white, don't seem particularly racist. In his book "Micromotives and Macrobehavior," Mr. Schelling lays out an exercise using coins, showing how an integrated neighborhood can become quite segregated as long as each person wants at least one third of the neighbors to be like him. When one person moves to get a preferred set of neighbors, Mr. Schelling explains, it causes a chain reaction that settles down only when the neighborhood is fairly segregated. This might sound implausible, which is why Mr. Schelling, always the empiricist, recommends that the reader carry out his own simulation.

Mr. Schelling's point with these games, thought experiments and exercises is not that things ultimately fail or ultimately work. It is, rather, that one can understand the interactive behavior of groups of people and see when they are likely to work – that is, lead to results that the group wants – and when they are likely to fail. He points out that exchange transactions, which much of economics is about, are simply a subset of interactions that tend to work very well because participants are exchanging a particular item voluntarily rather than interacting in a more complex way, such as in traffic.

Many of the problems he discusses occur, he notes, because it's too difficult to enter an exchange. Mr. Schelling put it beautifully: "Small children learn to trade stamps with an acumen that the real estate fraternity can only envy, but their parents can travel incommunicado behind a slow truck on a mountain grade without finding a way to make it worth the truck driver's time to pull off the road for 15 seconds."

—

A discussion of Mr. Schelling's work should mention his important contributions to the economics of global warming. In his 1991 presidential address to the American Economics Association, Mr. Schelling, always the iconoclast, pointed out that even if the earth warmed by as much as 4.5 degrees Centigrade (climatologists now think it will be less), the effect on developed countries would hardly be noticeable and might be good: He pointed out that when people retire, they typically move to warmer climates. Although the effects on poor countries would be more serious, he noted, compensating them would be cheaper than investing \$200 billion a year (\$300 billion in today's dollars) to slow global warming.

Nobel laureate Paul Samuelson put it best when he wrote, "In Japan Thomas Schelling would be named a national treasure."

--

Mr. Henderson is a research fellow with the Hoover Institution, an economics professor at the Naval Postgraduate School, and co-author of "Making Great Decisions in Business and Life" (Chicago Park Press, 2006).

(See related letters: "Letters to the Editor: Play the Game, Wind Up Under Grand Central Clock" – WSJ Oct. 24, 2005)