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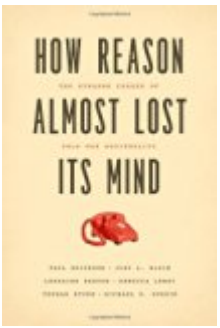

Paul Erickson, Judy L. Klein, Lorraine Daston, Rebecca Lemov, Thomas Sturm, Michael D. Gordin. *How Reason Almost Lost Its Mind: The Strange Career of Cold War Rationality.* Chicago: University of Chicago Press, 2013. Illustrations. 272 pp. $35.00, cloth, ISBN 978-0-226-04663-1.

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How Reason Almost Lost Its Mind: The Strange Career of Cold War Rationality is a masterful intellectual history of efforts to define rationality in ways that would be useful in coping with the unprecedented dangers in a world armed with atomic weapons. The time span of approximately four decades covered in this study begins with the nuclear attacks on Japan in August 1945 that ended World War II and runs through the mid-1980s, as the Cold War was running down. The six authors include four science historians (Paul Erickson, Lorraine Daston, Rebecca Lemov, and Michael D. Gordin); one economist (Judy L. Klein); and one philosopher (Thomas Sturm). They are listed on the cover and title page not by seniority or alphabetical order but by a random drawing of their names. The book emerged from The Strangelovian Sciences Workshop at the Berlin Max Planck Institute for the History of Sciences in March 2010, followed by six weeks of additional meetings that summer in Berlin to write, discuss, and revise the manuscript. The seminar took its name from Stanley Kubrick's 1964 cinematic farce, *Dr. Strangelove: Or How I Learned to Stop Worrying and Love the Bomb.*

The dramatis personae include five winners of the Nobel Prize in Economics: Thomas Schelling (2005), Herbert Simon (1978), Tjalling Koopmans (1975), Kenneth Arrow (1972), and Daniel Kahneman (2002). Amos Tversky, Kahneman's frequent collaborator, would surely have shared the Nobel had he not died in1996; Nobel Prizes are never awarded posthumously. Others who played important roles in the debates on rationality include Oskar Morgenstern, John von Neumann, Herman Kahn (reputedly the model for Dr. Strangelove), Anatol Rapoport, Robert Freed Bales, Morton Deutsch, Irving Janis, John C. Nash, Charles Hitch, Norbert Wiener, Merrill Flood, Charles Osgood, Philip Tetlock, Albert Wohlstetter, Bertrand Russell, Charles Babbage, Alan Turing, and Sidney Verba. Because the RAND Corporation, a think tank established by the U.S. Air Force, played a central role in the debates about rationality, the absence of Bernard Brodie in these pages is a bit surprising. In a major work, *Abso-*

lute Weapon: Atomic Power and World Order, he wrote, "Thus far the chief purpose of our military was to win wars. From now on its chief purpose must be to avert one. It can have almost no other useful purpose."[1] His later work focused on strategies to reduce the probability that any leaders could view a nuclear strike as a rational policy.

Schelling's assertion, "The point is that accidents do not cause war. ***Decisions*** cause war," sets the tone for this project. Following a useful introduction and overview of changes "in what it meant to be rational in an age of nuclear brinksmanship," the debates on the issue proceed in three clusters of chapters (pp. 1-2). The first two chapters describe algorithmic approaches wherein rationality is modeled on rules of calculation. Several of the key figures associated with the approach, including Hitch, Wohlstetter, and Schelling, were with RAND. Game theory, developed by von Neuman and Morgenstern, and computers came into play. The Berlin airlift (Operation Vittles), which was a response to the 1947 Soviet blockade of all land routes to that divided city, was an important application in one of the early Cold War confrontations between the superpowers. Project SCOOP (Project for Scientific Computation of Optimum Programs) provided vital algorithms for deployment of personnel and materials for Project Vittles. At about the same time, Simon was developing the concept of "bounded rationality." Owing to limits on the human ability to collect and process information, the goal of maximizing outcomes is more realistically replaced by "satisficing," a "good enough" result. That insight was an additional impetus for thinking about reasoning and problem solving.

The Cuban missile crisis of October 1962 is the focal point of chapter 3. By this time, the Soviet Union had acquired nuclear weapons and the American nuclear arsenal was so large that it far exceeded what would have been required for an attack on all the potential 3,560 Soviet targets identified in 1960. The key figures in the debates included Kahn, author of a massive tome, ***On Thermonuclear War*** (1960), which posited that everything about such conflicts could be understood by rational choice theory. Some of Kahn's most vocal critics included the British philosopher Russell, who decried the rationality of brinksmanship and the game of "chicken." Osgood, a distinguished psychologist, had severe doubts about rationality under conditions of high tensions. He developed Graduated and Reciprocated Initiatives in Tension Reduction (GRIT) as a way for leaders to take small but credible steps to reverse crisis escalation. Janis, also a psychologist, developed the concept of "groupthink" as a threat to rational decision making. Group dynamics may emphasize the value of group solidarity at the cost of judicious information processing. Still another psychologist, Leon Festinger, developed the concept of "cognitive dissonance" to explain why information processing may be biased in ways that deviate from rationality.

Chapter 4 centers on the situation. After a discussion of Micronesia, the site of many American nuclear tests, it describes "interaction process analysis" (***Interaction Process Analysis: A Model for the Study of Small Groups*** [1976]), developed and tested by Bales of Harvard, who also worked with RAND. Chapter 5 returns to game theory, with a focus on "the prisoner's dilemma," wherein an apparently irrational choice can become a rational strategy. It cites Richard Nixon's decisions intended to convey the image of a "madman" in order to persuade the North Vietnamese and their allies that he would do anything to win the war (p. 133). To critics, such as Rapoport and Deutsch, game theory did not provide a scientific calculus for solving the problem of rationality in a nuclear world.

Chapter 6 is entitled "The Collapse of Cold War Rationality." The lesson of developments in the world, including the Polish crisis that confronted the Soviet Union in the 1980s, as well as

the debates on rationality, "may be that we do not possess an account on which the relevant political expertise could be grounded." Thus, the hopes for a useful and unified concept "perished" (p. 161). Those who assisted in undermining a consensus on rationality included Kahneman and Tversky, cognitive scientists who presented a number of important studies raising serious doubts that people obeyed the rules of Bayesian statistics and expected utility theory. Their "heuristics and biases" research program reinforced the view that as information processors and decision makers, humans are susceptible to "follies and fallacies" (p. 170). These include tendencies to underuse base rate data, to believe in the "law of small numbers," to overweight low probabilities, and to underweight high probabilities. Research by psychologist Tetlock further reinforced the views of the doubters. His work revealed that even experts rarely do better than chance in political forecasting.

A short epilogue, "Cold War Rationality after the Cold War," describes the fragmentation of multidisciplinary efforts to define rationality. Whereas the project had earlier brought together political scientists, economists, psychologists, sociologists, anthropologists, philosophers, mathematicians, and computer scientists, now most of those with an interest in the concept of rationality have retreated into their own disciplinary homelands.

As recognized in chapter 3, the Cuban missile crisis of October 1962 was by far the most dangerous situation confronting decision makers in Washington and Moscow. The crisis provided a real world setting in which conceptions of rationality were put to a critical test. For this reason, the authors could have developed more fully how leaders in Washington and Moscow were able to avoid nuclear disaster. Earlier that year, the brilliant popular historian Barbara Tuchman had published ***The Guns of August***, an account of the European crisis triggered by the assassination in June 1914 of the Austrian Archduke Franz Ferdinand and his wife by Serbian terrorists. It revealed how leaders in Berlin, London, Paris, St. Petersburg, and Vienna managed to stumble into one of the most disastrous and consequential wars in history. Absent World War I, Adolf Hitler would have remained an unsuccessful painter in Vienna and Munich and Vladimir Lenin would have remained the author of obscure Marxist tracts in Switzerland.

In part because of the "cult of the offensive" in military planning, including Germany's Schlieffen Plan, European leaders placed themselves under intense time pressure so as not to allow their adversaries to gain even the slightest advantage. For example, the German and French mobilizations were ordered within hours of each other. The crisis situation thus placed European leaders under considerable stress arising from the pace of mobilizations and counter-mobilizations. Consequently the quality of decision making fell far short of even the loosest definition of rationality. Increasingly leaders perceived that they had few if any policy alternatives, whereas only their adversaries could readily take steps to reverse the escalation into war; their failure to do so only proved their malign intentions. In a frantic last minute message, German Kaiser Wilhelm II wrote Russian tsar Nicholas II, "The responsibility for the disaster which is now threatening the whole civilized world will not be laid at my door. In this moment it still lies in your power to avert it." When asked later why diplomacy had failed to avert war, German Chancellor Theobald Bethmann-Hollweg replied, "Oh--if I only knew."[2]

President John F. Kennedy read ***The Guns of August*** and was sufficiently impressed that he ordered members of his administration, including military advisers, to read it. After U-2 flights over Cuba revealed the existence of Soviet missile sites on that island, Kennedy took a number of steps that seemed designed to reduce the dangers of a 1914-like scenario. To encourage a frank discus-

sion of alternatives, he absented himself from some key meetings of the decision-making "Ex Com." After his speech of October 22 made public the existence of the Soviet missiles and the American naval blockade to prevent further shipments of military equipment to Cuba, Kennedy was under intense domestic pressure to act more quickly and forcefully. Even such level-headed and experienced American leaders as Senator J. William Fulbright dismissed the blockade of Cuba as inadequate, urging American air strikes to destroy the missile sites. The president's brother, Attorney General Robert Kennedy, wrote later that Kennedy would probably face impeachment unless he succeeded in removal of the missiles.

Recognizing that the 1914 leaders had felt under intense pressure to act quickly in order to get a jump on their adversaries should war break out, thereby hastening the process of escalation, Kennedy took a number of steps aimed at slowing down the pace of events. By choosing a naval blockade as the initial American response, he not only selected an option relatively low on the ladder of escalation but also was buying time. To give Nikita Khrushchev and his Kremlin colleagues more time to decide whether to attack the ships in the American blockade, as they had threatened to do, he ordered the ships to retreat back toward Cuba, delaying the point at which the U.S. Navy would interdict the Soviet ships. He had the order sent "in the clear" rather than in code so that the Soviets would be sure to intercept it. Soviet leaders would presumably give greater credibility to information gained by their own intelligence efforts than to a direct message from Washington. He also made sure that the crews on the American ships included Russian speakers to reduce the possibility of errors arising from miscommunication should they intercept and board a Russian ship.[3]

Among the many virtues of this fine study is the extensive documentation. The book's 502 endnotes encompassing thirty-eight pages provide an excellent roadmap for readers wishing to pursue further any aspect of the vast range of the interesting issues under discussion. In addition, there are twenty-three pages of bibliography.

Notes

[1]. Bernard Brodie, ***Absolute Weapon: Atomic Power and World Order*** (New York: Harcourt, Brace and Co.), 76.

[2]. Max Montgelas and Walther Schucking, eds. ***Outbreak of World War I: German Documents Collected by Karl Kautsky*** (New York: Oxford University Press, 1924), 48; and Bernhard von Bulow, ***Memoirs of Prince von Bulow*** (Boston: Little, Brown 1932), 166.

[3]. A more detailed analysis of the impact of stress on decision making in the 1914 and Cuban missile crises appears in Ole R. Holsti, ***Crisis, Escalation, War*** (Montreal: McGill-Queen's University Press, 1972).

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