include formative experiences fighting limited and even irregular war as an adolescent in the 1790s, and serving as a de facto chief of staff to a multinational corps in the little-known northwestern German theater in 1813. Readers will find of particular interest the chapter titled “The Road to Taurrogen (1812),” which serves as the median of the book. Stoker argues, correctly in this reviewer’s assessment, that Clausewitz’s greatest historical triumph was achieved as an officer in the Russian army at this obscure Lithuanian village where he served as an agent for the Prusso-German uprising against Napoleon in the wake of the disastrous Russian campaign.

It is, however, Clausewitz’s great intellectual triumph, *On War*, that permeates the book, as well it should. Stoker does a commendable job of interweaving and referring to the evolution of Clausewitz’s key ideas on war, including friction (48, 101), center of gravity (100), and defense, including the idea of “political defense” (97). All of this occurs against the backdrop of Clausewitz’s life as a professional soldier who, at the same time, was developing into an impressive military intellectual, historian, and theorist. For example, Stoker highlights Clausewitz’s early writing on the relationship between war and policy in his treatise Strategie in the period between Prussia’s wars with France from 1796 until 1806. The Clausewitz revealed here is the original ends-ways-means guru, and this emerges in spades in the writing that Stoker highlights. Furthermore, if a man is to be judged by the character and esteem of his closest friends, Clausewitz ranks high in this regard due to Gerhard von Scharnhorst and August Neidhardt von Gneisenau, two giants of German military history whom Stoker portrays as virtual foster fathers to Clausewitz.

With the end of the Napoleonic wars in 1815, Stoker moves into the endgame of the book, the lengthy penultimate chapter titled “The Sum of It All (1813–1831),” which provides readers an excellent precis of Clausewitz’s major ideas as outlined in *On War*. Stoker does this against the backdrop of the historical framework of Clausewitz as director of the Kriegsakademie (the Prussian military academy) in Berlin. Stoker suggests that Clausewitz, his life-long desire for a major accomplishment in war and combat stymied, turned to his *meisterwerk* as an outlet. Clausewitz, as one of the Prussian reformers, could do little else in the reactionary political environment that prevented him—and his mentor Gneisenau—from exerting real influence in the Prussian military and state. Stoker argues that this, in fact, resulted in a far greater and lasting triumph: “The fame Clausewitz hoped to win for himself—with sword in hand—he won with his pen” (287). Stoker also manages to skillfully avoid becoming mired in the major Clausewitz “controversies,” while still making the reader aware of them and adding value to those debates. For example, on the issue of just how finished *On War* really was, Stoker writes, “In reality we simply don’t know how complete *On War* truly is, and this is a question that cannot be definitively answered because we know that Clausewitz never finished the book” (264). Readers can draw their own conclusions. My own position is that had Clausewitz died at the ripe old age of 80, the manuscript would still have been sitting in his closet unpublished. Had he outlived his devoted wife, Marie, we might never have seen it.

Although a very well-written book, there are a number of discontinuities. For example, the larger historical narrative of the Napoleonic wars at times becomes desynchronized with Clausewitz’s role in those events. This is especially true later in the book when the reader is taken back in time as the allies prepared to drive on Paris in 1814, to the summer of 1813 when Clausewitz assumed the role of chief of staff to the corps of General Count Ludwig von Wallmoden-Gimborn observing Marshal Louis-Nicolas Davout in Hamburg. However, these problems fade when one considers the totality of what Stoker has accomplished in his book. For those readers who want a clear and up-to-date biography of Clausewitz as a soldier—without myth and without excuse—I can think of no better title to have on the bookshelf right next to *On War*, which is where it is on mine. This book is absolutely essential for military and security professionals, and deserves as broad an educated readership as possible. JFQ

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**Superforecasting: The Art and Science of Prediction**

By Philip Tetlock and Dan Gardner

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Reviewed by Michael J. Mazarr

Philip Tetlock has worked for decades on the problem of judgment in national security affairs. He became justly renowned for his book *Expert Political Judgment: How Good Is It? How Can We Know?* (Princeton University Press, 2006), which demonstrated, among other things, that foreign policy experts were no more accurate in their forecasts than...
“monkeys throwing darts.” Tetlock’s somewhat alarming finding led to a series of intriguing questions: Just how good can judgment become? Can we do better than the “experts”?

This innovative line of research laid the foundation for a new book, *Superforecasting: The Art and Science of Prediction*, co-authored with journalist Dan Gardner. It surveys techniques used by the most successful individuals and teams in Tetlock’s Good Judgment Project (GJP), a series of forecasting tournaments in which participating analysts, many from careers far removed from national security, make predictions on key issues: Will oil prices fall below $30 a barrel within a year? Will Japan decide to place troops on a disputed island in the next 6 months? The questions deal with discrete issues and are precise, asking about a particular event or choice. They also are framed within a specific period of time, from 1 month in advance to 1 year.

Tetlock has found that some people do in fact perform far better in such contests than others—repeatedly, reliably, and controlling for other variables. Top GJP forecasters beat a control group by 60 percent in the first year and by 78 percent in the second. As Tetlock states, they even “outperformed professional intelligence analysts with access to classified data.” One could quibble with the approach. The narrowest interpretation of these findings, for example, might not be that surprising. Confronted with precise questions dominated by a handful of known variables, forecasters who give exceptional care to facts and probabilistic guidelines such as base rates will surely do better than more casual dart throwers.

The project also risks equating forecasting with “judgment.” Tetlock himself admits that “foresight is one element of good judgment, but there are others.” Judgment ultimately is about what to do, and it is not guaranteed that people who excel at one will be good at the other. Someone who excels at using probabilistic methods to guess at the future price of corn might fail miserably at integrating the multiple strategic and political implications of a complex security choice.

This conflation speaks to a core assumption of the project—and a third possible objection. Tetlock is a numbers guy, interested in quantifiable results from probabilistic analysis. This is helpful to a certain extent. For complex, ambiguous national security decisions, however, it is not clear how far that is. Tetlock is explicit about this distinction—between linear or deterministic choices and thoroughly complex ones. He refers to the analytical challenges of “the butterfly dynamics of nonlinear systems” and uses the common metaphor of clouds and clocks to distinguish mechanisms whose variables and causal relationships are known from an unfolding complex system. He downplays the difference, however, describing the hard-and-fast distinctions as “false dichotomies.” Yet the problem of which strategy will best deal with Russia is a fundamentally cloud-like enterprise, and no forecasting-style probability exercise is likely to furnish an answer that is objectively better than others.

This is very likely one reason why senior leaders are so resistant to structured efforts to improve decisionmaking. At the end of the day, what they are doing is educated guesswork—and they know it. The most decisive factors in their choices are norms, values, political considerations, and bureaucratic constraints that cannot be assigned precise values. As a result, most such officials ascend to high office having built, usually over a long period of time, a well-honed, experience-based intuition that they trust more than any analytical method. (Tetlock recognizes this and cites research that demonstrates how in real decisionmaking settings, “these educated, accomplished people reverted to the intuitive.”)

Despite these concerns, Tetlock’s research—thoughtful, innovative, and arriving amid a tsunami of evidence about the risks to senior leaders of cognitive bias and thoughtless heuristics—demands to be taken seriously. More than that, it invites the U.S. Government to get more serious about the process of making national security decisions. Among other things, Tetlock’s research is one of the first large-scale empirical efforts to demonstrate the clear value of enhancing the rigor and quality of judgments. As his superforecasters suggest, exacting procedures do tend to improve results. They ask well-designed, critical questions and apply careful analytical methods. Furthermore, they ultimately find ways to understand issues more thoughtfully and accurately than people who ignore such methods on the way to a far more imprecise guess. Tetlock’s efforts have also demonstrated hopeful ways to put thinkers together in teams that self-correct their own analytical errors, rather than exacerbate them.

In this sense, Tetlock’s work complements the insight of such scholars as Daniel Kahneman, Paul Slovic, Robert Jervis, and many others who have been warning for decades about the risks of simplified and often biased cognitive patterns. And it is only a small leap from Tetlock’s findings to the context of complex national security judgments: An intuitive, emergent choice informed by and willing to take seriously the results of rigorous analysis will have a better batting average, even if the final judgment remains unavoidably subjective and impressionistic.

If we are to take seriously this line of thinking about thinking, it becomes clear that future U.S. administrations that are serious about the quality of their judgments no longer have any excuses. They ought to create more formalized decision analytical processes designed to maximize the rigor and accuracy of even complex choices.

This could involve, for example, an effort to build—probably on the base of a specialized unit in the National Security Council (NSC)—both the habits of mind and specific techniques and tools characteristic of superforecasting groups. Some questions or principles would be integrated into all interagency processes and policy documents, while some techniques would be applied to particular decisions, depending on their issue or character. Over time, paralleling Tetlock’s emphasis on outcomes, the effort could track the accuracy of various sub-judgments, that is, discovering where they were right and where wrong, and looking for consistent patterns.
This would be tremendously difficult to organize. Senior officials have little interest in being forced through analytical gymnastics to reach conclusions that can never be proved better than intuitive guesswork. Moreover, they will often lack the time needed to undertake anything more than a cursory process. A senior director for analytic methods at the NSC, however, could help shape the design of options papers, push groups to consistently ask the right questions, warn top decisionmakers about encroaching bias, and introduce more formalized decision techniques when time is available. The idea would not be to build an intricate, highly theoretical process, but to take elements likely to be present in any policy process—background papers, options papers, interagency dialogues, Cabinet-level meetings—and supercharge their analytical rigor.

There seems little doubt that formalizing such methods in the national security process, at least in slimmed-down versions appropriate to the pace of decisionmaking, would avoid the occasional disaster and create insights that generate new opportunities. At a minimum, now that research such as Tetlock’s has made clear the potential value of formally rigorous thinking, it would seem irresponsible not to find out. JFQ