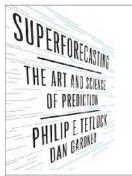
## **Scoring Forecast Accuracy**



Superforecasting: The Art and Science of Prediction

By Philip Tetlock and Dan Gardner Published: September 29, 2015

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## Review by Leland R. Beaumont

Summarizing 20 years of research on forecasting accuracy conducted from 1984 through 2004, Philip Tetlock concluded "the average expert was roughly as accurate as a dart-throwing chimpanzee." More worrisome is the *inverse* correlation between fame and accuracy—the more famous a forecasting expert was, the less accurate he was. This book describes what was learned as Tetlock set out to improve forecasting accuracy with the Good Judgement Project.

Largely in response to colossal US intelligence errors, the Intelligence Advanced Research Projects Activity (IARPA) was created in 2006. The goal was to fund cutting-edge research with the potential to make the intelligence community smarter and more effective. Acting on recommendations of a research report the IARPA sponsored a massive tournament to see who could invent the best methods of making the sorts of forecasts that intelligence analysis make every day. This tournament provided the experimental basis for rigorously testing the effectiveness of many diverse approaches to forecasting.

And learn they did! Thousands of ordinary citizen volunteers applied, approximately 3,200 were invited to participate, and 2,800 eventually joined the project. "Over four years, nearly five hundred questions about international affairs were asked of thousands of Good Judgment Project's forecasters, generating well over one million judgments about the future." Because fuzzy thinking can never be proven wrong, questions and forecasts were specific enough that the correctness of each forecast could be clearly judged. These results were used to compute a *Brier score*—a quantitative assessment of the accuracy of each forecast— for each forecaster.

In the first year 58 forecasters scored extraordinary well; they outperformed regular forecasters in the tournament by 60%. Remarkably these amateur superforecasters "performed about 30 percent better than the average for intelligence community analysts who could read intercepts and other secret data." This is not just luck; the superforecasters as a whole *increased* their lead over all other forecasters in subsequent years.

Superforecasters share several traits that set them apart, but more importantly they use many techniques that we can all learn. Superforecasters have above average intelligence, are numerically literate, pay attention to emerging world events, and continually learn from their successes and failures. But perhaps more importantly, they approach forecasting problems using a particular philosophic outlook, thinking style, and methods, combined with a growth mindset and grit. The specific skills they apply can be taught and learned by anyone who wants to improve their forecasting accuracy.

This is an important book. Forecasting accuracy matters and the track record has been miserable. Public policy, diplomacy, military action, and financial decisions often depend on forecast accuracy. Getting it wrong, as so often happens, is very costly. The detailed results presented in this book can improve intelligence forecasts, economic forecasts, and other consequential forecasts if we are willing to learn from them.

This is as close to a page-turner as a nonfiction book can get. The book is well-written and clearly presented. The many rigorous arguments presented throughout the book are remarkably accessible. Sophisticated quantitative reasoning is well presented using examples, diagrams, and only a bare minimum of elementary mathematical formulas. Representative evidence from the tournament results support the clearly-argued conclusions presented. Personal accounts of individual superforecasters add interest and help create an entertaining narrative. An appendix summarizes "Ten Commandments for Aspiring Superforecasters". Extensive notes allow further investigation, however the advanced reader edition lacks an index.

Applying the insights presented in this book can help anyone evaluate and improve forecast accuracy. "Evidence-based policy is a movement modeled on evidence-based medicine." The book ends with simple advice and a call to action: "All we have to do is get serious about keeping score."