Pre-read for Tuesday, Sept 8:
Predicting geopolitical events, part 1

Matthew J. Salganik

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What if we could systematically study political judgement?
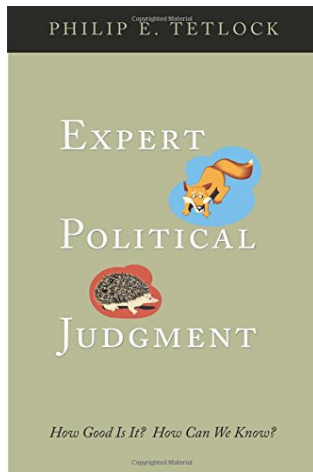
20 years in the making

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Reading notes:

- ▶ Preface
- ▶ Chapter 1, Quantifying the Unquantifiable
- ▶ Chapter 2, The Ego-deflating Challenge of Radical Skepticism
- ▶ Methodological Appendix, Section I: Regional Forecasting Exercises, Chapters 2 and 3
- ▶ Technical Appendix, Part A: Correspondence Indicators of Good Judgement
- ▶ Preface to the 2017 edition

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- ▶ How might this strategy be related to the projects that you will do in this class? What are the risks and benefits of this strategy for finding research topics?
- ▶ If many academics follow this strategy (and I think they do) and if researchers do not match broader populations, what implications might there be for the kinds of questions that get studied and those that don't?

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- ▶ Beyond chapter 2 (which we won't read) has one of the most famous findings. You might ask what separates the more accurate forecasters from the less accurate. It turns out that it is not background or political outlook, it is cognitive style. He shows "foxes" who know lots of little things are better forecasters than "hedgehogs" who know one big thing. Foxes and hedgehogs are on the cover of the book.

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▶ Tetlock pays a lot of attention to which types of errors occur (eg, Fig 2.6 over-predict low probability events and under-predict high probability events). Think a bit about how this teaches us something important beyond just accuracy. This is a theme we will see again.

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- ▶ I recommend you flip back and forth between Methodological and Technical appendix. Otherwise the empirical results are hard to understand.

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- ▶ If I give you some predictions you should be able to calculate what Tetlock calls "probability score" and "variability, calibration, and discrimination".
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- ▶ For our class, key part is page 273 - 283
- ▶ If I give you some predictions you should be able to calculate what Tetlock calls "probability score" and "variability, calibration, and discrimination".
- ▶ A theme we will see often is expert vs. simple algorithm vs. complex algorithm. Note how Tetlock creates simple and complex algorithms.
- ▶ Pay less attention (unless you are interested) to section "Adjustments of probability scores to address conceptual objections" except section "Controversy-adjusted probability scores" where he points out that 15% of the outcomes are unclear.

Preface to the 2017 edition:

- ▶ It is neat to see how people reflect on their work after it has been out in the world

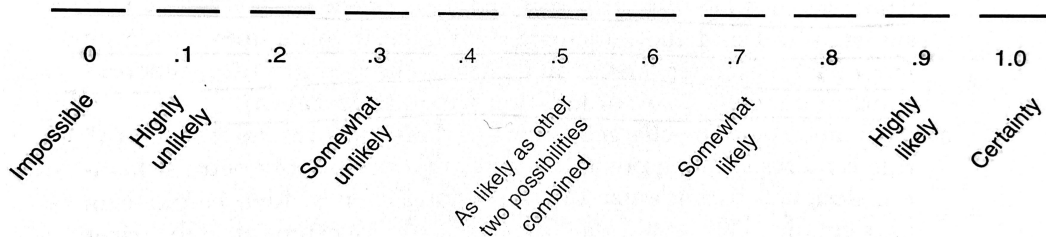Additional material

Possible Futures Study

"Although political forecasting is obviously an inexact science, educated guesswork is still critical for setting priorities and making contingency plans. Your answers to the forecasting questions posed here will not be traceable either to you personally or to any institution with which you may be affiliated. Our goal is not to proclaim 'winners' and 'losers' in a forecasting contest but rather to study how highly trained professionals reason about complex real-world processes under conditions of uncertainty."

Part 1: Questions about your professional background, preferred style of thinking, and ideological and theoretical commitments.

Part 2: Questions inside your area of expertise

For Vietnam:

▶ Should we expect—over the next 2 years—increases, decreases, or essentially no changes in the marginal tax rate?

| 0 | .1 | .2 | .3 | .4 | .5 | .6 | .7 | .8 | .9 | 1.0 |

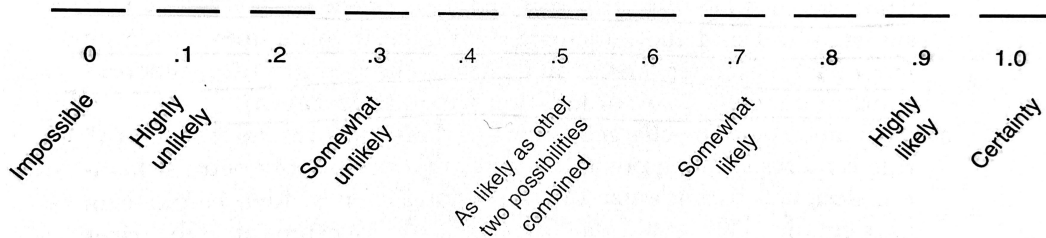Impossible Highly unlikely Somewhat unlikely As likely as other two possibilities combined Somewhat likely Highly likely Certainty

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► Think of spreading probability over three buckets, not making a point prediction
► Option to select "maximum uncertainty", which put 0.33 weight in each category (dart throwing chimp)

For Vietnam:

- ▶ Should we expect—over the next 2 years—increases, decreases, or essentially no changes in the marginal tax rate?
- ▶ Should we expect—over the next 5 years—increases, decreases, or essentially no changes in the marginal tax rate?
- ▶ Should we expect—over the next 5 years—defense spending as a percentage of central government expenditure to rise, fall, or stay the same?
- ▶ Should we expect—over the next 10 years—defense spending as a percentage of central government expenditure to rise, fall, or stay the same?

Part 3: Questions outside your area of expertise

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These questions were given at many different times to many different people so I don't think there is a single questionnaire.

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- ▶ Outcomes generally split into three groups: increase, stay the same (± 1 standard deviation), or down. I'm not sure why it was set up that way.
- ▶ There were many different exercises at different times so it is probably better to think of this as a collection of related studies rather than a single study

What to read next?

- ▶ Readings for class on Thursday
- ▶ More work by Tetlock and colleagues: `https://www.sas.upenn.edu/tetlock/`
- ▶ Watch Tetlock's book talk at Google
- ▶ Murphy (1973) A New Vector Partition of the Probability Score
- ▶ Blattenberg and Lad (1985) Separating the Brier Score into Calibration and Refinement Components: A Graphical Exposition
- ▶ Murphy and Winkler (1987) A General Framework for Forecast Verification

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COS 597E/SOC 555 Limits to prediction
Fall 2020, Princeton University