Pre-read for Tuesday Sept 22: Armed conflict, part 1

Matthew J. Salganik

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

Two themes:

- prediction vs causation

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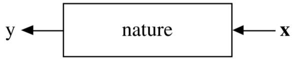
- prediction vs causation
- algorithmic modeling vs data modeling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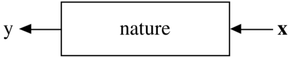
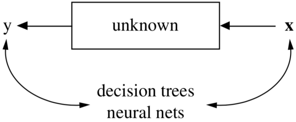
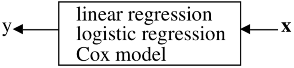




Algorithmic modeling



Data modeling

Breiman (2001)

Predicting armed conflict: Time to adjust our expectations?

Lars-Erik Cederman[1*] and Nils B. Weidmann[2*]

Reading notes:

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- Response to crazy claims about the magic of big data and machine learning
- Lumpers vs splitters, they are splitters
- Critical of the idea that big data and machine learning will revolutionize conflict prediction. Why?

War Is in the Error Term

Erik Gartzke

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- “rationalist theory” more often called “rational choice theory”
- The key thing to notice in this paper is how he tries to make an model that leads to inherent unpredictability that cannot be eliminated by more research or more data or more machine learning. Focus on the broad structure of that model.
- Notice the he then talks about how to test the predictions from that model, not the model itself

Testing War in the Error Term

Damon Coletta and Erik Gartzke

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- Beware that not all proofs are right
- (Speculation) Many models that purport to show inherent unpredictability may prove hard to test empirically because they involve hard to measure parameters

The perils of policy by p-value: Predicting civil conflicts

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jpr.sagepub.com

Michael D Ward

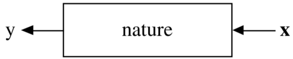
Department of Political Science, Duke University

Brian D Greenhill

Department of Political Science, University of Washington

Kristin M Bakke

Department of Political Science, University College London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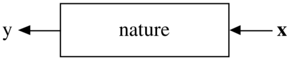

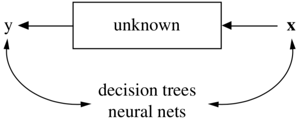

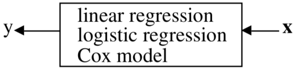

Algorithmic modeling

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- Ward and colleagues argue that we should bring in predictive performance as a way to evaluate these models.
- If you are from a data modeling tradition, try to see how your approach misses that can be provided by the algorithmic modeling tradition. If you are from an algorithmic modeling tradition, try to see what your approach misses that can be provided by the data modeling tradition.

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