Breiman vs. Shmueli

- Leo Breiman's "Statistical Modeling: The Two Cultures" (2001) critiques the dominance of traditional data modeling, which relies on parametric assumptions, and advocates for algorithmic modeling (machine learning) that prioritizes predictive accuracy. He argues that statistics should embrace prediction over strict explanatory modeling.
- Galit Shmueli's "To Explain or To Predict?" (2010) refines this discussion by distinguishing explanatory modeling, which focuses on understanding causal relationships, from predictive modeling, which aims for future accuracy. She emphasizes that many researchers misuse explanatory techniques for prediction, leading to ineffective results.

Breiman vs. Shmueli

- While Breiman pushes for machine learning adoption, Shmueli stresses the need to align modeling approaches with research goals.
- Breiman focuses on the paradigm shift from data modeling to algorithmic modeling, where Shmueli highlights the methodological distinction between explanation and prediction.
- Both papers highlight the underappreciation of predictive modeling in traditional statistics and advocate for a broader perspective in statistical practice.