Toward replicable research in the human sciences: How can we get from where we are, to where we want to be?

Andrew Gelman, Department of Statistics and Department of Political Science, Columbia University

We've heard a lot about the replication crisis in science. Now it's time to consider solutions from several directions including institutions (changing incentives in scientific practice and reporting), design and data collection (higher-quality measurement and within-person designs), and statistical analysis (multilevel modeling and Bayesian inference or regularization). We discuss examples from political science, economics, psychology, and medicine.

We also discuss some widely recommended ideas which we think would be useless or even counterproductive, ideas which are not as rigorous as one might think.