Getting Off the Gold Standard for Causal Inference

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I argue that social scientific practice would be improved if we abandoned the notion that a gold standard for causal inference exists. Instead, we should consider adopting three silver standards relating to distinct theories of causation: experimental approaches with the counterfactual theory, large-N observational studies with Humean causation, and qualitative process-tracing with mechanistic causation. Under ideal conditions, any of these three theories provide strong evidence of an important part of what we mean by causality. I also present the use of statistical entropy, or information theory, as a possible yardstick for evaluating research designs across the silver standards. The concept of entropy formalizes commonly-held intuitions about the relative reduction in our uncertainty of a causal system for a given research design.[[1]](#footnote-1)

1. I thank David Waldner, Michael Poznansky, Kevin Munger, Andrew Gelman and Kosuke Imai for helpful comments on this manuscript. [↑](#footnote-ref-1)