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SENSITIVITY TO CONFOUNDING IN A WORLD OF IMPERFECT IDENTIFICATION

When attempting to make causal claims from observational data, investigators often find they cannot rule out all unobserved confounding with certainty. Sensitivity analyses can be very useful in these cases, quantifying “how much confounding it would take to change the substantive research conclusion”, or equivalently, “what we must be prepared to believe (about the maximum strength of confounding) to defend a research conclusion”. While this approach has long been advocated, formal sensitivity analyses remain rare in practice. In this talk I describe a simple tool that aims to improve the adoption and usability of sensitivity analysis for linear regression results. These tools enable researchers to consider any number of unobserved confounders acting together, possibly non-linearly. We also propose two easily computable and interpretable sensitivity statistics that researchers can add to standard regression tables to routinely convey a coefficient’s fragility in the face of unobserved confounding. To aid interpretation, we provide tools that translate the user’s expert knowledge and professed assumptions into bounds on the strength of confounding that such assumptions logically imply. I demonstrate these tools by applying them to study the effects of exposure to violence on attitudes towards peace. I also briefly show its extension to the case of instrumental variables, and conclude by placing this work in the context of my broader research program on feasible approaches to causal inference under imperfect conditions.

TIME

**Monday, Oct. 16, 2023
12:00PM-1:20PM**

LOCATION

SSC 216

ZOOM DETAILS

**Meeting ID: 922 0667 4316
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