

Reflections, Elaborations, and Discussions with Readers

*As X-rays are to the surgeon,
graphs are for causation.*

The author

11.1 CAUSAL, STATISTICAL, AND GRAPHICAL VOCABULARY

11.1.1 Is the Causal–Statistical Dichotomy Necessary?

Question to Author (from many readers)

Chapter 1 (Section 1.5) insists on a sharp distinction between statistical and causal concepts; the former are definable in terms of a joint distribution function (of observed variables), the latter are not. Considering that many concepts which the book classifies as “causal” (e.g., “randomization,” “confounding,” and “instrumental variables”) are commonly discussed in the statistical literature, is this distinction crisp? Is it necessary? Is it useful?

Author Answer

The distinction is crisp,¹ necessary, and useful, and, as I tell audiences in all my lectures: “If you get nothing out of this lecture except the importance of keeping statistical and causal concepts apart, I would consider it a success.” Here, I would dare go even further:

¹ The basic distinction has been given a variety of other nomenclatures, e.g., descriptive vs. etiological, associational vs. causal, empirical vs. theoretical, observational vs. experimental, and many others. I am not satisfied with any of these surrogates, partly because they were not as crisply defined, partly because their boundaries got blurred through the years, and partly because the concatenation “nonstatistical” triggers openness to new perspectives.