

Preface

*If you want to go fast, go alone.
If you want to go far, go together.*

African Proverb

This monograph has two main aims: to make precise a distinction between the concepts of confirmation and evidence and to argue that failure to make it, in our terms, is the source of certain otherwise intractable epistemological problems. Confirmation has to do with the adjustment of our beliefs in light of the data we accumulate, and is therefore “in the head” and in this sense “subjective;” evidence, however, has to do with the relationship between hypotheses or models and data, accumulated or not, and is “in the world” or “objective.” A subsidiary aim is to demonstrate to philosophers the fundamental importance of probabilistic and statistical methods not simply to inferential practice in the various sciences, where they are now standard, but to epistemic inference in other contexts as well.

The argument for the main aim depends in turn on three others:

1. That the best-known attempts to characterize a satisfactory concept of evidence in terms of Bayesian or other non-Bayesian confirmation theories fail;
2. That the standard error-statistical, “bootstrap,” and “veridical evidence” accounts of hypothesis testing are not as successful as the one developed in this monograph;
3. That some traditional epistemological puzzles are solved in a clear and straightforward way once the confirmation/evidence distinction is made along our lines.

Although the argument is rigorous, it is also accessible. No technical knowledge beyond the rudiments of probability theory, arithmetic, and algebra is presupposed, symbols are kept to a minimum, otherwise unfamiliar terms are always defined, and a number of concrete examples are given. More specialized material has been placed in Appendices to several of the chapters. That our line of argument is at least

initially somewhat counterintuitive should make it all the more interesting and important to philosophers and the philosophically-minded.

The first part of the African proverb above can be taken to promote single authorship of a monograph for expeditious publication. It could have been written much more quickly by any one of us. But “going it alone,” we would not have been able to go as far as we have collectively. We each brought ideas from our varying specializations and created a synergy that propelled the work to what we hope are far-reaching ends. We envision that it will spur subsequent discussion of statistical and epistemic reasoning by philosophers, as well as their consideration by scientists interested in a larger view of their own inferential techniques.

Belief, Evidence, and Uncertainty

Problems of Epistemic Inference

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2016, XIII, 178 p. 9 illus. in color., Softcover

ISBN: 978-3-319-27770-7