

mental philosophers are relatively recent.—Maurice A. Finocchiaro, *University of Nevada at Las Vegas*.

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GOOD, I. J. *Good Thinking: The Foundations of Probability and Its Applications*. Minneapolis: University of Minnesota Press, 1983. 332 pp. \$35.00—This is a collection of some two dozen articles on the philosophical, rather than mathematical, aspects of probability, by the well known statistician, I. J. Good. In the abstract of his article "The Bayesian Influence, or How to Sweep Subjectivism under the Carpet" (included here) Good announces that among the topics to be discussed are:

two types of rationality, twenty-seven "Priggish Principles," 46,656 varieties of Bayesians, the Black Box theory, consistency, the unobviousness of the obvious, probabilities of events that have never occurred (namely all events), the Device of Imaginary Results, graphing the likelihoods, the hierarchy of types of probability, Type II maximum likelihood and likelihood ratio, the statistician's utility versus the client's, the experimenter's intentions, quasi-utilities, tail-area probabilities, what is "more extreme"? "deciding in advance," the harmonic mean rule of thumb for significance tests in parallel, density estimation and roughness penalties, evolving probabilities and pseudorandom numbers and a connection with statistical mechanics.

That he does, in fact, proceed precisely as announced, finishes it all in about thirty pages, and still finds time to present something called "The Elevenfold Path of Doogianism" gives the reader a fairly accurate idea of the task that awaits.

Although I. J. Good is primarily a mathematician and statistician, he has made a number of contributions to the philosophy of statistical inference and the general philosophy of reasoning. Good admits to having called himself a "Bayesian" when that term was unambiguous, but now regards his position as a compromise between subjectivist and objectivist views. A long-time advocate of the need for personal, or subjective, probabilities in clear reasoning, Good repeatedly makes the point that the purpose of a subjective theory is to increase the objectivity of our own judgments. Fundamental to the subjective theory is the concept of subjective probabilities, which may be only partially ordered (interval-valued, for example), so that not every pair of probabilities is comparable.

The articles in the collection are divided into five sections: Bayesian Rationality; Probability; Corroboration, Hypothesis Testing, Induction, and Simplicity; Information and Surprise; and Causality and Explanation.

The first two sections deal with rational decisions, the principles on which such decisions are to be based, and the notion of personal, or subjective, probabilities, which plays a crucial role in the axiomatic

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development. The author makes the point that axioms of probability provide only the relationships between one probability and another; they cannot provide actual numbers, hence the need for subjective judgments. As the Bayesian L. J. Savage has noted, the Bayesian approach is a completion of the classical (frequentist) theory, in that it removes the separation between theorizing and doing.

The third section begins with an entertaining piece on Hempel's paradox of confirmation (a case of a hypothesis supports the hypothesis, so [the contrapositive of] the hypothesis 'All crows are black' is supported by the observation of a white shoe). Good shows neatly that it is simply false that a case of a hypothesis necessarily supports the hypothesis.

The final two sections are a bit more mathematical, focusing on information and a calculus for causality.

The field of statistical inference often resembles a battleground. In *Good Thinking* the battle is always joined.—Charles L. Byrne, *The Catholic University of America*.

INGARDEN, R. *Man and Value*. Translated by A. Szlewicz. Washington, D.C.: The Catholic University of America Press, 1983. 184 pp. \$54.95—*Man and Value* is a collection of essays, originally published in Polish and German, on the topics of philosophical anthropology and axiology. The book contains nine essays in all, eight of which are relatively brief, but one, entitled "On Responsibility: Its Ontic Foundation" is quite substantial. In this essay one finds an integrated discussion of themes which are dealt with separately (and somewhat sketchily) in the smaller essays. Because of space limitations I shall confine my attention to this essay though several of the smaller pieces, especially "Man and Time," are worthy of comment.

Ingarden's thesis in "On Responsibility" is that treating responsibility as simply a special problem of ethics is not philosophically adequate. An inquiry into certain factual matters is necessary if the conditions for the possibility of responsibility are to be disclosed.

Ingarden begins by examining the phenomenon of responsibility. The *burden* of responsibility is a factual state of affairs imposed on an agent as a result of that agent's doing certain kinds of things and it is passively borne, rather than actively acquired, by him. The *assumption* of responsibility, on the other hand, is a rather more active affair. Here we have a real psychic act and not a mere experience. Only human beings can be the bearers of responsibility but not just any human being in any situation. In addition to being human, an erstwhile bearer of responsibility must be aware of his action at the moment of the action, and he must be possessed of the faculties necessary to control it. What is the responsibly acting human being responsible for? A deed—which may not be purely passive though it does not have to be fully conscious or deliberate—and the results of that deed.

