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[Book Review of] *Reasoning in Medicine: An Introduction to Clinical Inference*, by Daniel A. Albert, Ronald Munson, and Michael D. Resnik

Barry F. Brown

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and Grisez's response to Joseph A. Komonchak, whose article appeared in the same issue of *Theological Studies* as theirs. Komonchak does not mention their article by name, but he asserts, according to Ford and Grisez, "that unless one engaged in a study similar to Noonan's [the reference is to John T. Noonan, Jr.'s important study: *Contraception: A History of Its Treatment by the Catholic Theologians and Canonists*], it would be simply dogmatic to disagree with Noonan's view, namely, that the approval of contraception could be a legitimate development of the tradition." (15) An index would readily lead the reader to Ford and Grisez's rejection of Noonan's thesis.

Ford and Grisez's response appears in note 73 on page 182, where they point out that Noonan's — and Komonchak's — argument "would be sound only if Noonan's conclusion were entailed deductively by the premises. It is not; it follows as a hypothesis from an inductive argument."

This book is characterized by an uncommon scholarly integrity and by an equally admirable restraint in judging scholars who disagree with their conclusions. However, no one should misinterpret this restraint. True, the authors are not zealots, but they are steadfast in their opposition to unsound arguments and policies that produce or perpetuate "moral schism". (31)

— Dr. John H. Walsh
Professor of Philosophy
California University of Pennsylvania

Reasoning in Medicine: An Introduction to Clinical Inference

Daniel A. Albert, Ronald Munson, and Michael D. Resnik

Baltimore and London: The Johns Hopkins University Press, 1988 (268 p.).

Several years ago, Robert Veatch, addressing a group of physicians in Toronto, struggled to convince them that making a defensible ethical decision is a result of a reasoning process which involves appeal to rules and fundamental principles. Several in his audience insisted that rules were quite useless in medical ethics, and that ethical judgments were basically intuitive, "just like clinical judgments". It occurred to this reader that even apparently intuitive clinical judgments and diagnoses were likely also the conclusion of complicated reasoning processes, although carried out so quickly by the experienced clinician as to appear intuitive. *Reasoning in Medicine* thoroughly confirms the hunch that appeal to basic concepts, rules of inference and principles are common to both ethical and clinical decision-making, at least if the conclusions are challenged and justification of them is called for.

The authors (physician, philosopher of science and logician) begin with the clinical case of a Mrs. Halprin, who presents a number of symptoms defying quick diagnosis. A very detailed analysis of her case follows, resulting in the end in a diagnosis of *systemic lupus erythematosus*, and her eventual death from a related infection. The steps taken to arrive at this conclusion on the basis of the patient's history, clinical tests, and available knowledge are laid out painstakingly. There follow several chapters devoted to theoretical aspects of the reasoning used, with frequent illustrative references made back to the initial case.

They address the collection of data: the accuracy/precision distinction, the patient's own estimate, the nature of uncontrolled studies, randomized clinical trials, correlations, and causal connections. Next is a treatment of inductive inference: probability and statistics; logical, statistical, propensity and subjective concepts of probability, a "compromise view"

consisting of a subjective estimate with constraints placed upon it by objective propensities derived from statistics; Bayes's theorem; the distinction between the sensitivity and specificity of tests; false positives and negatives. Analogical inference and enumerative induction are treated briefly, as is deductive inference and some of its major forms.

Chapter six is devoted to hypotheses, laws and theories, with a discussion of nomological-deductive explanation, nomological statistical explanation, the nature of prediction and explanation generally, and the testing, confirmation and rejection of theories. The authors present several objections to their "standard (accumulative) view" of the nature of scientific theories, as well as the position of Thomas Kuhn. In the end, they suggest a synthesis of the two, although its nature is as yet known (p. 147).

A chapter is devoted to the concept of disease. After several different concepts (disease nominalism, relativism, sociocultural and statistical views, idealism and realism) are discussed, the authors declare their preference for a concept of disease as "a functional failure of a programmed biological process", which they claim supports the view that diseases have a real existence, and account for the relevance of basic research and statistics in medicine. An analysis of disease classification, discovery and identification is offered.

Chapter eight presents diagnosis in general and as applied to Mrs. Halprin. Three models of the diagnostician — the deductive detective, the statistician-gambler and the intuitionist-artist — are examined and rejected for their shortcomings in favor of a "cyclical model", a repeating process incorporating the elements of gathering data, diagnoses and management plan, but with the influence of background assumptions and simplifying assumptions.

Chapter nine offers an analysis of medical decision-making supported by contemporary decision theory: decisions made under risk; probabilities, utility theory; decision made in ignorance, the maximin rule, validation and group decision-making.

The final chapter recapitulates the clinical case with which the book began, this time in the light of the various theoretical and formal aspects which have been dealt with in the intervening chapters.

A traditionalist might find fault with a few assumptions of the authors. One is the contemporary dogma that causal explanations *always* involve reference to laws or else the correlation must be purely accidental (p. 118). This may be true at the level of the entities studied by the hard sciences. But on the next page, they implicitly admit that a person can be the cause of an explosion. This is especially relevant in the investigation of explosions caused by terrorists, and the spread of diseases such as AIDS by individuals, studied by medical epidemiologists. Such connections are not accidental at all; they are causal, although not law-like. A second assumption is ontological. In their discussion of "disease realism" they refer to a disease having a "real, substantial existence" (pp. 158, 165). Perhaps "substantial" is simply meant as a synonym of "real", in which case the term adds nothing to the description. But a disease is certainly not a substance. The authors view it as functional *failure*; but failure is a privation or lack in a substance (Mrs. Halprin), not a positive entity which exists *per se*. They may be reluctant to use the term "privation" because of the contemporary misunderstanding of the medieval contention that privations (such as evil) do not have existence in reality; a misunderstanding because it seems to deny the reality of evil. But the contention was simply that evil is not a substance; it is real, and not simply a product of the mind, but its reality consists in a serious lack *in* a substance. So too, disease (itself an evil) as a functional failure is a privation of function in a human being that normally has that function. Even if a disease is not a privation, at most it can be conceptualized as a quality.

Albert, Munson and Resnik are very much aware that several aspects of inductive reasoning, including the roles of statistics, the nature of scientific theories, and the value of utility and decision theory are at an early stage of development, unsettled, and subject to limitations and shortcomings. Nevertheless, they convey a strong conviction that as medicine becomes more scientifically based, fuller development of, and use of these methodologies by physicians is essential. In the end, the authors do not describe *how* clinicians actually reason, but how they *ought* to reason if their diagnostic processes are

to be logically sound and scientifically based.

Reasoning in Medicine strikes a good balance between the theoretical and the practical, between the abstract and the concrete. It continually illustrates the various conceptual aspects by reference back to the individual case study: Mrs. Halprin, her disease, her relating of symptoms to her physicians and their response to this. To the "artist-diagnostician" who believes that his judgment is essentially based on intuition and experience alone, elements never denied by the authors, the book will have little to say. But to all those physicians and philosophers who believe that beneath the surface of such judgments lie extraordinarily complex, if implicit, patterns of reasoning, the book is a commendable effort to unpack and elucidate those patterns.

— Barry F. Brown
Philosophy Department
St. Michael's College
University of Toronto

Beyond the New Morality: The Responsibilities of Freedom

Germain Grisez and Russell Shaw

Third, Revised Edition, Notre Dame, U. of Notre Dame Press, 1988, xi & 256 pp., Index, Paper

Beyond the New Morality: the Responsibilities of Freedom by Germain Grisez and Russell Shaw first appeared in 1974 and underwent a first revision in 1980. This third edition retains, with some important exceptions noted below, the same chapter structure of the earlier editions. The normative ethical theory developed in the new edition will also be familiar to readers of the 1974 and 1980 editions. It is a revised natural law theory that seeks to take into consideration the human agent as practically rational, the human act as free and the human person as end. However, the 1988 edition contains an amplification and clarification and, in one instance, an almost complete re-working of earlier views.¹ This is the result, in part, of the authors' willingness to take into account various criticisms, especially those originating from ethicists who think of themselves as belonging to the Thomistic natural law tradition.²

The partial restructuring of the earlier editions to be found here represents more than a mere cosmetic change. The title changes of Chapter 7 (from "Purposes-Ulterior and Otherwise" to "Human Goods: Reasons for Choices") and of chapter 9 (from "Two Ways of Choosing" to "The First Principle of Morality") signify subtle philosophical developments in the authors' understanding of the psychological elements involved in morally right and wrong action as well as in human action *tout court*. Chapter 12 of the 1980 edition entitled "Duties: Responsibilities in Community", is now chapter 14 and is treated after the chapter entitled "Persons, Means, and Ends" (changed from chapter 13 to chapter 12) and "When Action is Ambiguous" (changed from chapter 14 to chapter 13). I believe that this is a very important structural change. It is well-known that contemporary applied ethics, in its treatment of ethical dilemmas, tends to assimilate our fundamental moral obligations and our duties as members of various communities.³ Conflicts between basic moral obligations are thought to be resolvable in the same way that conflicts between