speak for themselves." The preface does contain some tantalizing questions that could have been applied to the body of the text with great profit and insight, and indeed are reflected in some of the questions posed to the interviewees. But as the text stands, the interviews are separate from the preface and introduction. Thus although we are presented with a potentially useful and worthwhile body of raw data, without any synthesis or guidance by the compilers, it cannot be considered a finished product, especially for a general audience. Nor can it be considered a serious effort at oral history, since such documents are considered by historians only as a means to an end, not as an end to themselves.

After reading the interviews in this book, referring both to the glossary and to the introduction, the nonscientific reader will come away with the impression that cosmologists are far from being of one mind. This is correct. But without summary or explanation, without an expansion of the ideas that style and opinion do exist in science and that authority in science is socially constructed out of individual diversity, none but seasoned social historians or sensitized scientists will get the point.

On the other hand, those converted to the social view of scientific change will be concerned that, although the interviews presented provide such insights—displaying as they do many intriguing individual, social and intellectual factors that make science the rich complex of serendipity and change that it is—the introduction presents cosmology prior to 1975 as if it were merely a connected series of steps leading logically and inexorably to the present picture. Astronomical history seems shortchanged; little or no controversy apparently existed prior to the contemporary excitement. The respectability issue raised by Hoyle is developed and better defined by other interviewees, and indeed, both astronomical observers and physical theorists provide helpful and refined explanations for why what Hoyle asserts is the view today. The compilers had the responsibility to point out things like this and to provide connective commentary. At the very least, they could have provided a subject or "issue" index.

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Philip Morrison's Long Look at the Literature: His Reviews of a Hundred Memorable Books

Philip Morrison
Freeman, New York, 1990.
351 pp. $24.95 hc
ISBN 0-7167-2107-4

The book review is a literary form with its own proud heritage. In our time few writers (and no other physicists) have practiced this art with quite the style, grace and wit of theorist Philip Morrison of MIT. For a quarter century he has been virtually a solo act as book reviewer for *Scientific American*, following a tradition established by the late James Newman.

Each month's mail brings him upwards of 200 books, from which he must select as many as half a dozen to read and review. With assistance from his wife and creative partner,

Phyllis, this spate culminates annually in a December blizzard of science books for children. Since this prodigious output represents only one facet of Morrison's active life in science and the arts, it betokens a facility of eye and pen that most of us can scarcely imagine. This volume collects reviews of 100 of his favorite works.

A Morrison review is no mere *précis*. He reads with an active mind, searching for the key phrase that epitomizes the author's vision. If it is not to be found, he will supply it in his own words, and his reviews offer turns of phrase that would be at home in any book of scientific quotations. The first item in this collection explains the persisting success of frauds and charlatans: "There is no canon of logic or inference from common sense or use of past experience that can speak more strongly to the mind than the simple will to believe." Renaissance improvements in representational painting evoke the observation that "the plenitude of the world lies still uncaught by art or by science." And a review of a book on modern gyroscope technology closes with the chilling reminder that "no matching wisdom in saving these gems of gyroscopes from being vaporized someday, along with our cities, is to be found in any current text."

Though remarks such as these reveal him to be a man of strong convictions, Morrison eschews the lamentable (but all too common) practice of using a book review primarily as a sounding board for his own opinions. He does not conceal his concern for social justice and world peace, forged in the crucibles of the Great Depression and the Manhattan District. Nonetheless, he accepts his obligation to serve as an intermediary between his readers and what the author has put on the page. Morrison's values are of course reflected in what he deems worthy of review, but the catholicity of his interests thwarts any attempt to categorize his selections.

It is clear, however, that Morrison retains a fascination with the power of the visual image, evident in his reviews of a poster map of the Earth at night and of Cyril S. Smith's selection of 72 artifacts to illustrate the nature of discovery. At the opposite pole, he fearlessly tackles Thomas Pynchon's epic novel *Gravity's Rainbow*, a formidably difficult read. He brings life to a reference work as dry as the *Dictionary of Scientific Biography* and to the story of the creation and spread of the metric system of units. He can celebrate America's truck drivers, who "... roam the concrete ribbons of the Interstates as the merchantmen from Tyre roamed the wine-dark sea 3000 years ago," with the same enthusiasm he brings to a review of Richard Feynman's *QED: The Strange Story of Light and Matter*.

Though written for a nonspecialized audience, these reviews often manage to stay abreast of the latest developments in science. Hence a review of a work in French by Benoit Mandelbrot offers the hope that its carefully reasoned insights would soon be available in English. It appeared in 1975, well before "chaos" became the fashionable buzzword that it is today.

Book reviews serve a variety of functions, from whetting the reader's appetite to compensating for the sad reality that few of us can actually find the time to read everything we would like to. Above all, Philip Morrison's

reviews are animated by the passionate conviction that books exist, in the final analysis, for the sheer joy of reading, and are written with an art that enables him to share that joy with us.

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