

# Giving the Muse a Helping Hand

*A series of memoirs sponsored by the Sloan Foundation offers scientists' first person perspective on research*

**B**OOKS written on grants from private foundations are intended to be in the the public interest, but may not necessarily interest the public. The Alfred P. Sloan Foundation for more than a decade has been commissioning books by scientists meant also to offer a good read.

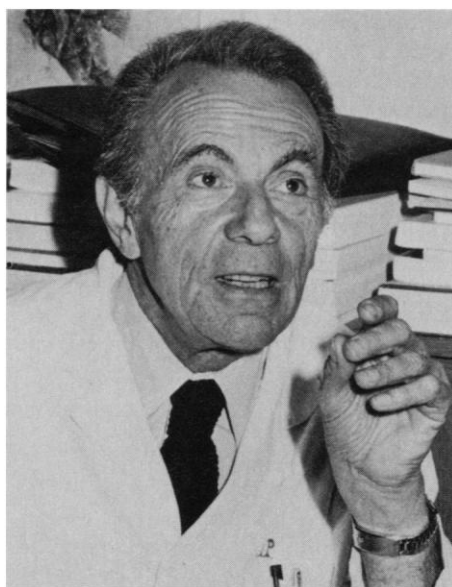
Currently meeting that standard, according to the reviewers, is *The Statue Within*, a memoir by biologist and Nobel Prize winner François Jacob, that became a best seller in France and has earned favorable notice here. As the reviewers invariably point out, the book is not the usual scientist's autobiography. A medical student in Paris when World War II began, Jacob escaped at the fall of France, joined the Free French, campaigned through Africa in a medical company in Leclerc's division, and was seriously wounded after the Normandy invasion. All of this and how he discovered a vocation in the new biology is recounted with uncommon verve and literary skill.

Not every scientist, of course, has as a life as interesting or a literary gift as vital as Jacob's, and not all the dozen books in the series have been as well received. But the foundation is sufficiently satisfied with the series\* to continue the experiment. Just out is *In Praise of Imperfection* by Nobel neurobiologist Rita Levi-Montalcini, the first woman scientist in the list. In the offing is Francis Crick's promisingly titled *Mad Pursuit*.

The biggest sellers so far have been the books published early in the series by authors with established reputations as men of letters as well as of science. Freeman Dyson's *Disturbing the Universe*, the first in the series, at 20,000 hard-cover copies and Lewis Thomas's *The Youngest Science*, the third, at 65,000, top the list. The sales of other books in the series range from a few thousand

upward, putting the series average sales in the medium range for nonfiction books. The subjects and interest in the university market are expected to give the books a longer-than-usual shelf life. All the books in the series remain in print except for B. G. Casimir's, and all made it into paperback.

The idea for the Sloan series was broached in the mid-1970s by two of the foundation's officers, Arthur L. Singer, Jr., and Stephen White, as a way to convey the excitement of



**François Jacob.** *Not the usual scientist's life or autobiography.*

scientific work to the general reader. The foundation has a special interest in science and technology and the series fits under the rubric of promoting the public understanding of science.

Scientists become authors in the Sloan series by invitation only. For expert advice on whom to invite the foundation relies on an advisory committee for the series made up mostly of distinguished academics from a range of disciplines. Its first chairman was Robert Sinsheimer, chancellor emeritus of the University of California, Santa Cruz; the current one is Michael Bessie, a publisher with his own imprint at Harper & Row, also the parent company of Basic Books, publisher of the series. The job of the advisory

committee is to nominate and help recruit prospective authors judged to have something valuable to communicate and the ability to write for a general audience.

Along with the compliment of being asked, the foundation provides \$5000 to the candidate to make a start on the project. The next step is taken when enough of a manuscript is available—usually a few chapters and an outline—for the committee and the publisher to agree that a standard book contract is warranted.

In cases where a contract is signed—efforts not infrequently founder at the preliminary stage—the foundation plays the Maecenas role in a more major way. It puts up \$50,000 that it regards not as an advance but as a research grant to support the writing effort. The authors can use this sum as they see fit.

Sloan has an exclusive publication arrangement for the series with Basic Books, a trade publisher hospitable to scholarly books. Basic Books became the publisher for the series starting with the Luis W. Alvarez, I. I. Rabi, and Herbert F. York books, all published in 1987. The earlier volumes in the series were all published by Harper & Row except one; Viking put out the Thom- as book.

Once a contract is signed, the series editor at Basic Books, Richard Liebmann-Smith, takes the reins. Advisory committee members read the manuscripts and make comments but these are transmitted to the author by Liebmann-Smith.

The agreement does not guarantee publication. Basic Books may decide not to exercise its rights to a book if it concludes that it is not a good bet commercially or for other reasons. Sloan and the committee, for their part, may decide a book does not fit into the series. At least three completed manuscripts have not cleared the final hurdle.

The authors published so far have typically been members of the generation that spent their formative years before and during World War II and played prominent parts in the transformation of science afterwards. Rabi, the oldest of the subjects, who became the archetypal insider of postwar science, grew up as a Jewish immigrant on New York's East Side and bears witness in the book to prejudice and insularity in American science in his youth. Luis W. Alvarez came of age as a scientist as one of Ernest O. Lawrence's bright young men who helped to invent the first of the big machines in physics and then to build the bomb. An inventor as well as a researcher, Alvarez kept on accruing honors after the war and crossed disciplinary boundaries to produce a novel mass extinction theory. Herb York went from first director of the

\*Books in the series in order of publication are *Disturbing the Universe* by Freeman Dyson; *Advice to a Young Scientist* by Peter Medawar; *The Youngest Science* by Lewis Thomas; *Haphazard Reality* by Hendrik B. G. Casimir; *In Search of Mind* by Jerome Bruner; *A Slot Machine, a Broken Test Tube* by S. E. Luria; *Enigmas of Chance* by Mark Kac; *Rabi: Scientist and Citizen* by John Rigden; *Alvarez: Adventures of a Physicist* by Luis W. Alvarez; and *Making Weapons, Talking Peace* by Herbert F. York.

Livermore weapons lab to being an effective arms control advocate and along the way seems to have sat on all the key advisory committees during a stretch of the Cold War when scientists were probably more influential in national policy matters than at any time before or since.

The only exception in the series to first-person authorship is *Rabi*. In his case, the committee was eager to have the book and agreed to a biography. The author is John Rigden, professor of physics at the University of Missouri–St. Louis and editor of the *American Journal of Physics*. He worked closely with Rabi and the book was completed not long before Rabi's death.

The writing process for the others has varied widely. Luis W. Alvarez, for example, gives ample credit for assistance. Transcriptions of an extensive set of tapes made by Alvarez provided the basis for a lengthy manuscript by Alvarez and a young colleague, Peter Trower. The long form was then edited into shape by Richard Rhodes, whose own book, *The Making of the Atom Bomb*, won a Pulitzer Prize for 1987.

Those associated with the program bridle at the label scientific autobiography for the series. Most of the books, in fact, are not conventional autobiographies in the sense of full geneological, chronological coverage. They differ widely in form and in the proportions devoted to the life and to the work, but generally emphasize the professional rather than the confessional.

Several of the advisory committee members have been involved with the series over a considerable period and the experience has enabled them to draw some conclusions about the genre. Columbia's Robert Merton, who has had a major hand in shaping the sociology of science in this country, has

served on the advisory committee from the start. Merton describes the term scientific autobiography as "shorthand" adopted by reviewers. "Autobiography, although an established form, is rarely practiced with distinction," says Merton. "I think of the books as an occasion for reflection by scientists of the first rank on their lifelong experience of doing science."

From his special perspective, Merton says he has been obsessed by the rigorous form of the scientific paper. "It has evolved over centuries into a circumscribed kind of writing. What that means is that editors screen out all accounts of what scientific work is actually like. The essentially personal aspect of the experience gets lost." He says he sees the Sloan volumes as "an opportunity for scientists of some consequence to reflect in that way."

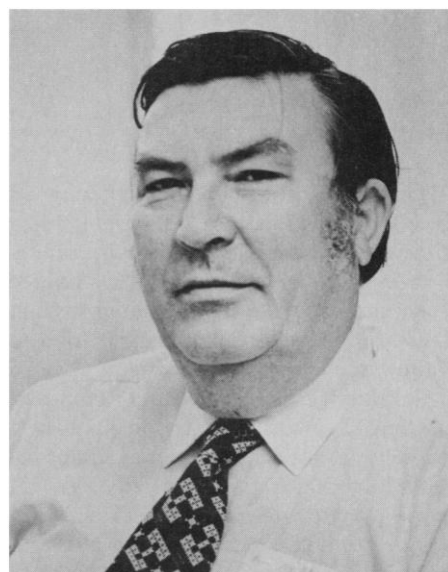
Another charter member of the advisory committee, Harvard Medical School professor Howard Hiatt recalls that the committee at the outset was acutely aware that scientific literature was limited largely to bare statements of research results and discussed James Watson's *Double Helix* as a notable exception. Watson's description of the race to describe the structure of DNA published in 1968 still stands in contrast to other scientific memoirs both for its candor and in being a best seller.

Hiatt says that the committee viewed the Sloan series as an opportunity to capture the "perceptions of the individual who did the science—of how it was done." The committee thought this was "important for nonscientists and even more important for the next generation of scientists in high school and college."

Liebmann-Smith sees the dual aim of the series being "to humanize scientific experience and explain scientific experience." As an editor, he recognizes a phenomenon that makes achieving that aim difficult. "The ability to evoke time, place, and people is a literary gift. The ability to explain science is different." He says he usually finds that an author "may be able to do the former, but is not a great science writer," or the reverse. It is rare to find both abilities in the same person.

Until last year, the publication rate for the series averaged a book a year. In 1987, four books appeared and a similar total is scheduled this year. Books in the series seem to be in the pipeline longer than is the norm for other books. Those involved say this is because most of the authors are not professional writers and are busy with other things. Hiatt comments that "Given the persuasion required to get these people to write books," the lag time is not surprising.

Several of those who have been involved



**Herbert F. York.** *A physicist's odyssey through the Cold War.*

with the series suggest that an aid to recruiting is that many of the potential authors are at a point—"the reflective stage of life"—when engaging in a summing up is appealing. However, one person noted a psychological factor that may slow these books down—a feeling that "Finishing the book means finishing your life."

Daniel J. Kevles, professor of history at Caltech, thinks that scientists' reluctance to write autobiography is attributable in part to a kind of professional "schizophrenia." He says that "On the one hand, scientists fight ferociously for credit, priority in publishing results. On the other, they feel that they are part of an anonymous enterprise, the greater search for truth." They may resist writing autobiography "as too open an act of the ego."

Kevles sees the Sloan series as "establishing role models for scientific autobiography." By providing examples enabling scientists "to see that there are different ways to do it, that they are in good company," he hopes that the series will make it "easier to get scientists to assent."

In a sense, the Sloan Foundation has filled the role of the gentlemen publishers of legend who by the exercise of persuasion and judicious use of the checkbook acted as creative literary brokers. To what extent the series has achieved its aim of inducing authors to produce books that would otherwise not have been written is obviously difficult to gauge. At the least, the series is helping to build a firsthand record of an extraordinary time in science by some of the major participants. And the scientists have made a respectable showing in an arena where the index of success is not citations but sales. ■ JOHN WALSH



**Rita Levi-Montalcini.** *The first woman scientist in the series.*