Money Questions

The Financing of Biomedical Research. ELI GINZBERG and ANNA B. DUTKA. Johns Hopkins University Press. Baltimore, 1989. xii, 144 pp. $18.50.

This slim volume assays "the changing trends and patterns in the financing of biomedical research in the more than four decades since the end of World War II," an issue of continuing national policy and of intense interest to medical scientists. The authors devote three chapters to charting relations between supporters and performers of biomedical research, examining the "critical ratios" of such research to other activities such as federal research and development and national health expenditures and raising, if not answering, the question "How many dollars are enough?" Two chapters address the current and potential support of biomedical research by private philanthropy, a frequently neglected subject that is highlighted here, in part, because of the sponsorship of the book by the Lucille P. Markey Charitable Trust. Academic health centers, the primary performers of medical research regardless of sponsorship, receive explicit attention in one chapter. The book concludes by examining several "open issues" on the national biomedical research agenda, mainly as they relate to financing.

Ginzberg and Dutka pack a great deal of factual information into these few pages, a sufficient reason for many individuals to own the book. Not surprisingly, the National Institutes of Health (NIH) receive a good deal of attention as the primary source of federal government support for medical research. Other federal agencies that made important historical contributions to medical science, such as the Office of Naval Research, the National Science Foundation, and the Atomic Energy Commission (now part of the Department of Energy), receive scant attention.

About the NIH, however, Ginzberg and Dutka convey a useful, if sobering, perspective on the past and future. Financing, they argue, has moved through three stages: rapid growth (1950–65); slow growth (1966–82); and renewed growth (1983–87). Political support has flowed through the Congress from disease-oriented individuals and organizations. The internal architecture of allocating resources along the most promising scientific lines, however, was shaped mainly by James Shannon, director from 1955 to 1968.

Those seeking a presumably more rational basis of support than politics are forced by this analysis to confront several troubling realities. First, although economic theory provides a conceptual rationale for resource allocation—spend for medical research as long as the economic return on the marginal dollar exceeds that of alternative uses of the funds—it provides basically no practical guidance in determining what the budget level ought to be. Various "critical ratios" may suggest rules of thumb, but no more. Second, economic research by Mushkin on medical research and by Griliches and others (Mansfield might have been cited here) on scientific research in general strongly suggests that the social rate of return exceeds the private rate of return, thus justifying a continued and substantial public investment. Precisely what the optimal total national investment in medical research should be and what is the right balance of public and private shares remains unknown. Third, medical research benefited from the Reagan years in two ways—increased funding for science and the renewed emphasis on basic research. But fourth, the fiscal legacy of the Reagan years—substantial annual budget deficits, a massive increase in the national debt, and the consequent growth in federal debt service costs (currently over $240 billion annually)—now severely restricts the likelihood that any major increase of funds might flow from this source.

Does private philanthropy hold much promise as an offset to the federal fiscal fortunes of medical research? Not much. The authors examine the donors of private funds—individuals, bequests, foundations, and corporations—and conclude that medical research will benefit modestly, in part from donations that give institutions program flexibility and that help refurbish the research infrastructure. These benefits will increase, however, only as philanthropy increases overall. The authors identify just two institutions—the Howard Hughes Medical Institute (which is not a private foundation) and the Markey Charitable Trust (which must spend all of its assets by 1997)—as major private sources of medical research funds.

Ginzberg and Dutka review the central role of medical schools in biomedical research, the dependence of medical schools on research funds and their vulnerability to the vicissitudes of research funding, the offset provided by physician education support in the 1970s and the impact of its subsequent phase-out, the emergence of Medicare and Medicaid as a funding source for the combined functions of patient care, education, and research and the impact of cost containment in reducing cross subsidies, and the development of practice plans as a major source of income for the clinical faculty and source of research support. They find that the research-oriented academic health centers are becoming increasingly sophisticated in seeking private funds and, at the margin, will find such sources extremely useful for initiating new innovative programs and meeting new and existing capital needs.

Ginzberg and Dutka have written a book that is more descriptive than prescriptive, more historical than future-oriented, but one that will contribute strongly to both public and private responses to the issues they address.

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Responses to Climate Change

Greenhouse Warming. Abatement and Adaptation. NORMAN J. ROSENBERG, WILLIAM E. EASTERLING III, PIERRE R. CROSSON, and JOEL DARMSTADTER, Eds. Resources for the Future, Washington, DC, 1989. xiv, 182 pp., illus. Paper, $18.95. From a workshop, Washington, DC, June 1988.

This book, like the many overlapping volumes published recently on climate change, arises not from a great surge in understanding of the climate but from the need expressed by the press, the public, and the government to know more and perhaps "do something" about possible damaging shifts in our environment. The book thus needs to be judged less on its scientific content, which is bound to be largely repetitious of other recent publications, and more on the insights it provides for incorporating the present, slowly changing and far from complete, understanding of the science appropriately into the discussion of public policy. This focus on interaction with the policy process is signaled by the subtitle, which lists the two possible paths of living with a changing climate—abatement and adaptation.