Book Reviews

Judgment

The Oppenheimer Case. Security on Trial. PHILIP M. STERN, with the collaboration of Harold P. Green. Special commentary by Lloyd K. Garrison. Harper and Row, New York, 1969. xiv + 594 pp. $10.

Philip Stern has taken one of the great dramatic events of our time, studied it with care, patience, concern, and respect, and reported it out in a massive, cleanly written book. For those of us who lived through the Oppenheimer case and are not likely to have forgotten it, Stern has provided a complete history, enabling us to relive the anguish; for the generation that has grown into citizenship since 1954, he has provided full exposure to a page of American history they should not be allowed to skip. And for even the expert reader, Stern has come up with all sorts of new data, data on what might be called the unheroic side of J. Robert Oppenheimer, data on the details of the H-bomb controversy, on the drafting of the charges, on the degree of steady surveillance Oppenheimer was under during his *entire* career in government, on the intransigent hostility to him of the United States Air Force, on the procedural shortcomings of the hearing before the Gray Board (on which he supplies a special statement from Oppenheimer's counsel, Lloyd Garrison, answering questions Stern put to him about the procedure and about his tactics during the hearing), and on the personal background of the many dramatis personae.

Amidst so much decency, effort, and utility, one hesitates to sound a note of disappointment. Yet in Stern's hands the event has somehow dwindled. The book is only a modest success, and the reasons are worth exploring.

In part, difficulties arise because the story is complex—the Gray Board transcript alone occupies a thousand closely printed pages; Oppenheimer was, of course, an extraordinary man, and the case focuses on 11 years in a busy, complex life. There was a genuine problem posed for Stern of how best to domesticate this mass of detail for the ordinary reader. I suspect Stern's strategy for dealing with the complexity was ill-advised. He decided to proceed on strictly chronological lines, so that the book moves step by step through Oppenheimer's life before 1954, to the drafting of the charges against him, to the four-week hearing before the Gray Board (which is retold a week at a time), to the board's decision, to General Nichols's recommendations to the Atomic Energy Commission, to the final decision by the commission, and then, in a kind of epilogue, to what has happened to the various participants since.

There are several negative consequences. The book becomes enormously episodic, a mosaic of discrete events reported often in a page or less, with the result that one loses the forest. Moreover, there is a tendency toward repetition as a given event first appears as part of the story of Oppenheimer's prior life, then reappears in the hearings, and sometimes reappears once more in the opinions. Finally, and most important, there is a loss of energy as the book approaches what should be the climax—the final official judgment of Oppenheimer's loyalty-security status. Thus, in a book of more than 500 pages only 20 pages are in the end devoted to the AEC decision and opinions. One senses that somewhere in the course of Stern's painstaking history the scale of the book went awry.

A second source of difficulty is more interesting. It is that Stern is simply not angry enough. He has attempted, as the canons would dictate, to remain impartial and report the history, leaving the reader to form his own judgments. He is, of course, not altogether successful in keeping his feelings to himself, and every once in a while there are flashes which serve to emphasize the colorless neutrality of most of the writing. For most topics his stance would doubtless be the only correct one, but he has selected a topic where, paradoxically, neutrality is not a virtue. The durable significance of the Oppenheimer case resides in the circumstance that it involved quite possibly the single most stupid and inglorious official action in the history of the United States. It provided one of those rare flashes of lightning which for a moment shows what the landscape is really like. Even after a 15-year interlude one finds the old sense of incredulity coming back that men of affairs, men of substance, ability, and achievement could have acted with so little judgment, so little courage, so little gallantry. Stern's palette is too weak for the picture he is painting.

For me, one further source of difficulty is found in Stern's view of the crucial flaw in the case. He tends to emphasize the weaknesses of the *procedures* followed, and, as noted, makes a contribution by his detailed inventory of procedural irregularities. It is indeed astonishing to learn of the active role played in the drafting of the charges by General Nichols, who was to act as one of the appellate reviewers of the case, or to be told that the Gray Board spent the week before the hearing opened reviewing the files, including a mass of confidential material never presented at the hearing, and insisted on doing so without Oppenheimer's counsel's being present; it is dispiriting to watch with what an uneven hand so excellent a man as Gordon Gray chairs the hearings and how ineffectual he is in curbing the prosecutorial excesses of Roger Robb, the special counsel to the board. The procedures were, to be sure, full of defects. But to emphasize this point, as Stern tends to do, is to suggest that the case might have been all right if the procedures had been better. This is perhaps the politic way to criticize it. But it serves to obscure the fatal vice, which was the quality of the *substantive* judgment involved.

When all the details are in and the dust has settled, there remain two extraordinary aspects to the Oppenheimer case: first, that charges were brought at all, a matter which remains inexplicable despite the detail Stern has added to our knowledge of the circumstances; and second that, charges having been brought and the data solemnly evaluated, so foolish and shabby a conclusion was reached, a conclusion that cannot be rationalized no matter how hard Oppenheimer's "judges" try to avoid the staleness of the security data (on which he had been cleared on three prior occasions) by shifting to the H-bomb

controversy, and to avoid the idiocy of treating opinions on policy as evidence of security risk by shifting to "defects of character," documented in the specularly trivial examples cited by the AEC majority opinion.

Revisiting the affair through Stern's book suggests that the Oppenheimer case poses a true dilemma. There will be occasions again when prudence will dictate some serious screening of highly placed government personnel. And again there may be no way of controlling the paranoia of a loyalty-security quest once it is institutionalized. Eisenhower, Hoover, Strauss, Nichols, Gray, and Borden were not evil or incompetent men. Yet their performance in the Oppenheimer case has left an unnerving record of self-righteousness, insensitivity, and provincialism that should remain a matter of permanent interest and study for students of government.

HARRY KALVEN, JR.
Law School,
University of Chicago,
Chicago, Illinois

Data for Earth Scientists

Handbook of Geochemistry. K. H. WEDEPOHL, executive editor. C. W. Correns, D. M. Shaw, K. K. Turekian, and J. Zemann, editorial board. Springer-Verlag, New York, 1969. Vol. 1, xvi + 444 pp., illus.; vol. 2, part 1, unpaged, illus., in loose-leaf binder. $56.

The literature of environmental science now doubles every five or so years, and the retrieval time of important data can be long. As a remedy to this situation, Wedepohl has assembled a group of about 70 collaborators to extract the existing data of geochemistry from the publications of science. Each chemical element has been accorded a chapter, with the exceptions of the noble gases, platinum metals, and lanthanides, which are treated as groups, and of some short-lived members of the natural radioactive series which will not be considered at all. The following characteristics of the chemical elements in naturally occurring substances are treated: crystal chemistry; isotopic chemistry; behavior in igneous, metamorphic, and sedimentary processes; abundance in extraterrestrial materials, minerals, rocks, the atmosphere, and natural waters; biogeochemistry; and economics.

The first installment appears in volume 2, in which 22 elements are presented. Nearly all the chapters have sections missing; additions will be issued at yearly intervals. A loose-leaf format allows for ready insertion of supplementary pages. Many of the data are set forth in tables and graphs. The use of the narrative style in the chapters also permits critical presentation, and some of the authors perform a most needed service in evaluating and interpreting the material in their sections.

The volume is going to be much used and perhaps will have an impact upon the community of earth scientists similar to that of *Data of Geochemistry* by Frank W. Clarke. The contributors have been appropriately chosen. The magnitude of the venture tends to dwarf the typical inadequacies of the many-authored volume: the unevenness in writing, often resulting from some contributors' using languages other than their native tongues; the time delays of publication (the article on rhenium was received in October 1965); the omissions, errors, and misprints. One hopes that users will point out amendable parts to the executive editor.

Volume 1 contains, according to Wedepohl, the fundamental facts of geochemistry, geophysics, and cosmochemistry. Its 12 chapters by 11 authors cover such topics as crystal chemistry, thermodynamics, meteorite composition, cosmic abundances, geophysics, composition and abundance of different types of rocks, the atmosphere and hydrosphere, and data evaluation. The permanent binding suggests that this volume is expected to survive the results of future investigations more successfully than its loose-leaf counterpart. Its contents indicate that this may not be the case, however. The chapter on geophysics would be markedly enhanced with addition of the recent studies of plate tectonics, magnetic reversals, and sea floor spreading. The chapters on sedimentary rocks and extraterrestrial materials will be in need of alterations as the results of the present intensive studies of deep-sea drillings and of moon samples are published.

There are some curious omissions. The volume lacks chapters on geochronology, stable-isotope geochemistry, and organic geochemistry, clearly most active and basic parts of the discipline.

Most of the chapters reflect the high degree of competence of their authors, yet their utility for reference or as class texts suffers from their brevity. For example, the chapters on crystal chemistry and thermodynamics contain 24 and 40 pages respectively. Although this book may have been conceived as a basic reference in geochemistry, the end result is a rather unsatisfying collection of overly digested material.

EDWARD D. GOLDBERG
Scripps Institution of Oceanography,
La Jolla, California

The 1964–65 Solar Minimum

Solar-Terrestrial Physics: Solar Aspects. Proceedings of a Joint IQSY/COSPAR Symposium, London, July 1967, Part 1. A. C. STRICKLAND, Ed. M.I.T. Press, Cambridge, Mass., 1969. x + 414 pp., illus. $19.50. Annals of the IQSY, vol. 4.

Solar-terrestrial physics, a discipline that not long ago consisted principally of studies of sunspot numbers and of sea-level geophysical phenomena, now has matured to encompass all the phenomena relating sun and earth. The circumstance that has brought this about is, of course, the possibility of spacecraft-based *in situ* measurement of the many parameters of the interplanetary medium. That possibility has been exploited in two major undertakings: the International Geophysical Year, devoted to investigation of solar activity in general, and, more recently, the International Years of the Quiet Sun, specializing in the phenomena of the one solar minimum that has occurred since such observations could be made.

This book is one of seven volumes planned by the IQSY Committee to chronicle the initial results of the many scientific investigations of that 1964–65 minimum. It is one of two on solar-terrestrial relations which, along with another devoted to the first widely studied prototype particle flare of the new cycle, that of 7 July 1966, form the scientific-analysis complement. The other volumes are concerned with measurement techniques, list the activity, and catalog the available data and the relevant publications.

In this volume we have 25 papers by an impressive array of the experts. There are several articles each on solar activity, interplanetary space, cosmic rays, the radiation belts, and the aurora and airglow. There is no doubt that anyone concerned with these subjects will find the book useful for some time,