

Books

The American High School Today

A First Report to Interested Citizens

by James B. Conant

McGraw-Hill \$1.00
(Clothbound \$2.75)

Caltech got a preview of James B. Conant's report on American high schools when the distinguished educator and diplomat visited the campus for three days in January as a guest of the Caltech YMCA's Leaders of America program. Now, here is Dr. Conant's complete report, published after a two-year study of high schools in 26 states, financed by a grant from the Carnegie Corporation of New York.

In some hands this report might have turned into another controversial blast at public secondary education in the United States. In Dr. Conant's hands it becomes a defense of the American comprehensive high school, and an impressive list of specific suggestions (21 in all) for improving public secondary education in this country. Because these suggestions are, for the most part, practical, and possible, and irrefutable, the report should get thoughtful consideration from citizens representing *all* points of view on the question of public education.

Education and Freedom

by H. G. Rickover, Vice-Admiral, USN

E. P. Dutton Co., N.Y. \$3.50

Reviewed by Paul C. Eaton

Admiral Rickover is already something of a national hero, the popular image of him being that of a stormy petrel furiously buzzing about the heads of conservative and complacent battleship admirals dedicated to resisting the application of nuclear power to ship propulsion, much as the cavalry generals of a generation ago refused to listen to Billy Mitchell's equally furious contention that the airplane was here to stay.

Whatever the nature and the realities of the opposition to Admiral Rickover in the Navy and in the

Atomic Energy Commission, the north polar transits of the nuclear-powered submarines, *Nautilus* and *Skate*, have been accomplished and the Shippingport, Pa., central station power plant is a reality. Buzzing which can bring about such results should be heeded, in any field.

In *Education and Freedom* the field is public elementary and secondary education in this country today, and the attack on the status quo is vigorous, well-directed, and all along the line. The book consists of eleven chapters and three appendices. The greater part of the material in the first nine chapters is based upon addresses which the author has delivered before various civilian groups during the past two years.

The general tone of the work is not at all that of the stormy petrel; it is primarily expository, well-documented in contemporary foreign comparisons and historical precedents, and deadly serious. The urgency of his plea for upgrading our educational standards derives in part from his own difficulties in finding competently educated people to staff his assignment in building the first nuclear power plant for naval use. Incidentally, that story is very well told by one of those he did find, Commander E. E. Kintner, USN, in the January 1959 *Atlantic*.

It is possible in the book to identify personal villains, comparable to the battleship admirals and the cavalry generals, but Admiral Rickover does not make the mistake of simplifying the problem to soap-opera good guys versus John Dewey and the National Education Association.

The "Freedom" term in the title means pretty specifically our survival as a nation, as in Thomas Jefferson's dictum: "If a nation expects to be ignorant and free . . . it expects what never was and never will be." Jefferson would have loved Rickover. The first three chapters deal with education as our first line of defense (the battleship admirals wince), lead time and military strength, and pioneering on the frontiers of knowledge.

Chapters five through seven, "Energy Resources and Our Future," "In-

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Engineering and Science

vestment in Human Resources," and "The Education of Our Talented Youth," obviously invite comparison with *The Next Hundred Years*, recently published by three Caltech professors. While there is no direct reference to the latter volume, Rickover comes to pretty much the same conclusions using pretty much the same data. A difference exists in point of view; *Education and Freedom* stresses that action is mandatory.

Anybody can write a book deploring anything. This book explains what is to be deplored, it compares the deplorable with the admirable, and it produces a recommended program for doing something to convert the present deplorable state of American public education to something admirable. Appendix One, "Primer for Parents," is a realistic, do-it-yourself manual. Appendices Two and Three are objective explosions of contemporary Dutch and Russian educational philosophies and the specifics of their application.

In conclusion, this is recommended reading for everybody concerned with education, along with James B. Conant's *The American High School Today*, with which it has many points of congruence, especially with respect to the teaching of foreign languages. Other recommended readings, and readings as a basis for intelligent action, made by Admiral Rickover himself, are *Quackery in the Public Schools*, by Albert Lynd (1953), and *The Restoration of Learning*, by Arthur Bestor (1955).

As Charles van Doren says in the preface, "This is a fine and thoughtful book, and it is probably going to make a lot of people very angry. I think that's a good thing."

Paul C. Eaton, Dean of Students at Caltech is Lt. Comdr., USNR (Ret.). In World War II he served in various units of the Third, Fifth, and Tenth Fleets, principally in anti-submarine operations. In 1947 he had active duty in submarines in the Gulf of Maine, his own backyard, just before joining the staff at Caltech.

Morphologische Forschung

by F. Zwicky

Winterthur, Switzerland . . . \$2.20

Written in German, Fritz Zwicky's latest book, *Morphological Research*, is subtitled *Character and Development of Material and Conceptual Relationships*.

Dr. Zwicky, Caltech professor of astrophysics and staff member of the Mount Wilson and Palomar Observatories, defines morphological research as "total research which is concerned with all the solutions of any given problem and which evaluates the relative values of all of these solutions."

Dr. Zwicky has already written extensively of applications of the morphological method to problems in jet propulsion and in astronomy — most recently in *Morphological Astronomy*, (1957). In his new book, he discusses the applications of the method to sociological as well as scientific, technical, and military problems.

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