

patronizing omission and as an offshoot of the burgeoning racial and ethnic consciousness of the 1950s and 1960s, historians and social scientists have begun to reconstruct a broad panorama of ethnic experiences and histories. Some of this has been interpretive, analytical, as well as historical, and one thinks immediately of the excellent efforts of Milton M. Gordon, Alvin M. Josephy, Jr., Rudolph J. Vecoli, Gordon W. Allport, Oscar Handlin, Joan W. Moore, and Herbert J. Gans, to cite only a very few. Others, better nameless, have been swept along by the trend but have forgotten Clio's advice that to stray far from the evidence is to stray into oblivion. This is where Bodnar's work makes its greatest impact, for it provides the essential building blocks necessary for a clearer appreciation of a complex and difficult historical problem. We would all be better off if there were more studies of this kind at our disposal — specific, well defined, and somewhat more comprehensive — to aid us in our search for that most elusive entity — understanding.

In short, this is an intelligently selected collection of secondary material which will be useful for students and scholars of Pennsylvania social history, but whose usefulness will be impaired for reasons of limitations of depth and scope of sampling.

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Nuclear Navy, 1946-1962. By RICHARD G. HEWLETT and FRANCIS DUNCAN. (Chicago and London: University of Chicago Press, 1974. Pp. xv, 477. Foreword, preface, illustrations, appendixes, notes, sources, index. \$12.50.)

Nuclear propulsion revolutionized undersea warfare in the years after World War II. To a lesser extent the application of atomic energy to surface vessels gave them a logistical freedom and radius of action unprecedented since the sailing era. Richard G. Hewlett and Francis Duncan, two Atomic Energy Commission (AEC) historians, have written a superb administrative and technological history of the navy's nuclear power project. The book spans those remarkable years from 1939, when the Naval Research Laboratory first took an interest in fission experiments, to 1962, when the navy possessed a fleet of thirty atomic-powered warships.

Hewlett and Duncan skillfully lead the reader through a maze of names, dates, and technological nomenclature, without allowing the narrative to become mired in the complexities of nuclear engineering or naval bureaucracy. The authors focus their attention on Hyman G. Rickover and demonstrate how by 1949 he had established himself at a strategic point within the navy's Bureau of Ships and the AEC's reactor division. Rickover immediately grasped the importance of engineering over pure science in the development of a practical ship-board reactor. He convinced a hesitant naval leadership to assign high priority to the nuclear submarine and within six years oversaw the building and commissioning in 1954 of the world's first nuclear-powered vessel, *Nautilus*. Informal rather than hierarchical, Rickover's organization concentrated almost entirely on technical matters and therefore was able to resolve difficult engineering problems quickly. The admiral extended his authority vertically to encompass contractors and fabricators of nuclear components, and horizontally to include such naval activities as the formation of a nuclear fleet and the training of its personnel. All this was accomplished by the sheer force of Rickover's personality.

From the beginning Rickover perceived that success of the nuclear project required that it have a high degree of independence from the navy and AEC. This isolation was achieved in part by alliance with private industry. When General Electric appeared unable to come up with a practical reactor, Rickover turned to Westinghouse, which had formed a nuclear division in 1948. The company constructed a major facility at Bettis Field outside Pittsburgh and proceeded under Rickover's close direction to design and build a pressurized-water reactor suitable for submarine use. In 1950 Westinghouse successfully operated a prototype in Idaho, which was "the world's first fully-engineered nuclear reactor capable of producing practical amounts of energy on a sustained and reliable basis" (p. 186). The Bettis laboratory was responsible for the reactor in *Nautilus*, as well as the S5W reactor fitted to the bulk of the navy's nuclear submarines. At Rickover's urging, Bettis also designed the civilian plant built by Duquesne Light Company at Shippingport and the eight-reactor system used in the aircraft carrier, *Enterprise*. In short, Bettis virtually became a naval research laboratory, more responsible to Rickover in Washington than to Westinghouse in Pittsburgh.

Nuclear Navy is clearly written and firmly based on primary sources. Hewlett and Duncan had access to and relied heavily upon

AEC files. Unfortunately, the references are cited inconveniently at the end of the book. Informative charts facilitate comprehension of the dual organization of the navy-AEC project, and simple diagrams help in understanding the fundamentals of nuclear power plants. However, the chronological organization of the book causes some difficulty. Rickover's group pursued several projects at once, and, consequently, the authors' account tends to jump from subject to subject. One wishes a more topical approach, whereby one program is traced from start to finish, were used. A curious omission in the book is the lack of reference to the agreement between the United States and Great Britain which led to the purchase of an S5W reactor and machinery in 1958 for *Dreadnought*, the Royal Navy's first nuclear submarine. This was another example of the way in which Rickover horizontally enlarged the scope of his authority. These objections, though, detract little from what is an otherwise excellent study.

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A Responsible Congress: The Politics of National Security. By ALTON FRYE. (New York: McGraw-Hill Book Company, 1975. Pp. xii, 238. Preface, acknowledgments, index. \$10.00.)

The relationship between Congress and the president in maintaining national security is a widely debated topic among political scientists. Nuclear weaponry, increased public interest in defense spending, concern over excessive use of executive power, and a rising suspicion of technology and scientific advisers has created a sophisticated debate over defense priorities. Alton Frye, Senior Fellow and Director of Special Projects, The Council of Foreign Relations, and Director, Institute for Congress Project, Carnegie Endowment for International Peace, examines the renewed congressional interest in strategic arms development, defense planning and spending, and the implications of these issues upon congressional-presidential relations.

The thesis of Frye's study is that Congress is assuming a subtle but effective role in the development of national security and foreign policy. The old tensions between the executive and legislative branches, Frye maintains, are evolving into a pattern of mutual cooperation due to the fears of a potential arms race. Consequently, a large segment of this book details the debate over implementing the antiballistic missile (ABM) system and the development of multiple independently