the Atomic Energy Commission, Admiral Lewis Strauss, and to secure an amendment to the Atomic Energy Act of 1958. This amendment provided for a renewed bilateral exchange of nuclear weapons technologies with Great Britain. The extent to which presidential advisers got out in front of nuclear policy and played the role of staunch opponents of bilateral cooperation is well and properly documented in *Nuclear Rivals*. Indeed, the accurate portrayal of their roles in both the Roosevelt and Truman administrations, in war and peace, is a major asset of this book. Yet any implication of presidential abdication of the policy formulation role in this sphere is a misconception.

The caveat above notwithstanding, Septimus H. Paul has made a particularly valuable contribution to the literature. In his use of sources, Paul reveals a sophisticated understanding of the power calculus and refocuses our attention on some of the seminal issues and disagreements of the early Cold War period, with all their complexities. For just these reasons, *Nuclear Rivals* should be required reading not only for historians of this era but for all students of national security policy making.

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Henry “Hap” Arnold was one of our great commanders. The only airman to hold five-star rank, he led the Army Air Forces through World War II with a strength, tenacity, and vision that was instrumental to victory, while at the same time breaking his own health. Dik Daso, a former Air Force fighter pilot, Ph.D., and curator at the National Air and Space Museum, tells Arnold’s important story with unusual insight and verve.

Graduating from West Point in 1907, Arnold earnestly desired an assignment to the cavalry but instead was posted to the infantry. Despite exciting and formative experiences in the Philippines, he still hankered for the cavalry. Once again he was refused. He then transferred to the Signal Corps, and in 1911 he became one of our first military pilots. Fate. Over the next three decades he became widely recognized as an outstanding aviator (he won the coveted Mackay Trophy twice), commander, and staff officer. When Oscar Westover, chief of the Air Corps, was killed in a plane crash in September 1938, Arnold took his place and led the air arm for the next seven years. But the long hours and incredible pace he set for himself took their toll. He suffered severe heart attacks during the war, and another in 1950 took his life.

Other books have been written about Arnold, and his memoirs are packed with detail. Nonetheless, Daso was able to uncover family sources and documents not previously used that shed new light on Arnold the man, husband, and father. This approach makes for fascinating reading; it is always a comfort to know that great men are as human as ourselves.

Daso also highlights a unique aspect of Arnold’s life—his appreciation for the integral relationship between science, technology, and airpower. Early in his career Arnold recognized that a second-rate air force was worse than none at all. The path to aviation leadership was a strong research-and-development program and a commitment to progress. Arnold’s vision in this regard was extraordinary. He
consciously pursued contacts with leading scientists, industrialists, and engineers, planting in them ideas and urging them to move more quickly and boldly. He supported research into cruise and ballistic missiles, precision weapons, jet engines, and rockets. Daso highlights the special relationship between Arnold and the brilliant aeronautical scientist Theodore von Kármán, who in 1945 wrote the seminal Toward New Horizons, a detailed look at the future of air and space technology that would serve as the blueprint for Air Force research over the next two decades.

Daso points to Arnold’s holistic approach to airpower as one of his great insights. Arnold understood that it took more than a collection of military airplanes to generate airpower. Needed also were a strong industrial base, robust research and development, a broad aviation infrastructure, a large pool of qualified personnel, and, perhaps most importantly, a clearly devised, coherent, and codified doctrine for the employment of those assets. Arnold, believing unshakably in the importance of strategic airpower, labored to ensure that America possessed all of these necessary factors.

One of the most interesting and insightful portions of this account is the epilogue, where Daso expands upon a letter that Arnold wrote shortly before his death regarding his views on leadership. The general noted several vital qualities: technical competence, hard work, vision, judgment, communication skills, a facility for human relations, and integrity. One could also add mental and physical courage. As he went higher in command and responsibility, Arnold was continuously faced with tough decisions. Having the courage to do the right thing regardless of the consequences and regardless of the effect on friends and family is enormously difficult. This list of attributes, which Arnold displayed in abundance throughout his career, serves as the perfect summation for both the book and the man.

One might quibble with Daso over what he left out of this book. He spends almost no time discussing broad issues of strategy in World War II, targeting debates, interservice rivalries, or Arnold’s relationships with his commanders. It is useful to recall here that Arnold’s title was “commanding general” of the Army Air Forces; he was indeed that. He had far more control over his air forces and personnel than does a present-day chief of staff. An exploration of this aspect of Arnold’s life would have been interesting.

Nonetheless, Daso’s research is prodigious, the numerous illustrations are excellent, and his writing style is eminently pleasing. This is an excellent biography of a great commander; it should be read by airmen of all ranks, scholars, and other services’ officers who wish to understand better the key influence in the development of the U.S. Air Force.

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Hugh Sebag-Montefiore has given us a scholarly and thoroughly researched account of the code breaking that staved off unsustainable losses of merchant shipping and thereby led to victory in the Battle of the Atlantic. This book is particularly recommended to communications and communications security personnel.