open to abuse to be a defective theory; if anything, because of that potential it is a realistic one. I highly recommend this work as a useful resource for practical moral formation in just war theory.

ALI GHAFFARI


In this third volume of his memoirs, ably edited by acclaimed space historian Asif Siddiqi, Boris Yevseyevich Chertok, who was the most senior surviving Soviet space engineer until his death at age ninety-nine in 2011, offers a unique, firsthand window into Cold War history as he lived it over his six-decade career. He spent most of it at the uppermost level of the OKB-1 design bureau (now S. P. Korolev Rocket and Space Corporation Energia), where he participated in every major project though 1991.

In this series, volume 1 details Chertok's rise from aviation factory electrician to official in charge of extracting Nazi rocket expertise, volume 2 the post-1946 emergence of the Soviet missile program. In volume 3, Chertok recounts and reflects on the golden age of Soviet cosmonautics, from Yury Gagarin's historic orbital flight in 1961 to the death of key figures in the Soviet space program in and around 1967. Volume 4, released in early 2012, covers the U.S.-Soviet moon race. Chertok's personable, technically informed, and somewhat politically detached perspective, as well as his frankness regarding credibility of sources and where he lacks information, makes for an accessible, historically useful account.

From his perch in the Soviet missile bureaucracy, Chertok observed the Cold War as a scientific-technological-military competition. Manned space-flight was regarded as an indicator of national prestige—and socialist superiority: “There was an ongoing battle at the front line of the Cold War's scientific-technical front. Rather than soldiers, it was scientists, engineers, the 'generals' of industry, and workers who determined the battle's outcome. And warriors of another sort came on the scene—cosmonautes” (p. 61). Each side fed off the other in constant one-upmanship, Chertok stresses: "American operations had a very strong effect on our plans. American historians of aeronautics assert that our successes were the primary reason why the United States converted its space programs into a top-priority, nationwide challenge" (p. 246).

Central to this competition, for some time, was a race to land a man on the moon. On August 3, 1964, Central Committee and USSR Council of Ministers Resolution 655-268, "On Work for Lunar and Space Research," recommitted Moscow to “land a man on the moon and return him to Earth by 1967–68” (p. 397). This goal was restated in a similar decree of October 25, 1965 (p. 568). This competition was very real, and there was no substitute: “[N]o matter how successful [other] programs might be, they could not compensate for our loss of superiority if the Americans were to become the first to fly around the moon” (p. 523).

Then, despite suffering a major setback in the Apollo 1 fire of 1967, the United States started pulling ahead. The Soviet
program was held back by a year of
time-consuming yet inadequate ground
testing and the tragic death of Vladimir
Komarov when Soyuz 1 crashed in 1967.

In retrospect, there were larger reasons
for these results. The Soviet defense
industry that Chertok depicts suffered
from both direct involvement by party
organizations throughout the produc-
tion process and limited government
capacity, ruinous bureaucratic and
interpersonal struggles and finger-
pointing, overly ambitious deadlines,
lack of systematic review of decisions,
and lack of politicians who understood
the benefits of a comprehensive military-
civilian approach. So much depended
on a single individual. Chief Designer
Sergey Korolyov was a microcosm of
Soviet society, having both suffered
significant repression and marshaled
significant technical resources. His
untimely death in 1966, itself partly a
result of medical malpractice, devastated
the Soviet space program. Korolyov’s
successor Vasily Mishin would prove
far less effective at cultivating the
Kremlin bureaucracy. Obsessive
secrecy reigned. The Central Committee
maintained a categorical prohibition
on acknowledging space failures, even
when detected by foreigners. Inefficient
use of limited resources imposed
additional burdens: “For a long time
during the post-Khrushchev period,
we continued to develop and produce
several parallel lines of strategic missiles,
allowing unjustified redundancy” (p.
155), their overproduction camouflaged
by creative budgeting (p. 146).

The United States led significantly in
missile numbers, accuracy, and nuclear
weapons—a tremendous disparity dur-
ing the Cuban missile crisis, although
subsequently the Soviets worked to
reduce the gap. Spaceflights served
propaganda purposes, in part to
cover up missile limitations. Risky space
spectaculars were attempted, including
—on Khrushchev’s personal orders via
telephone to Korolyov—the 1964 cram-
mimg of three cosmonauts without space
suits and with only limited life support
into a Voskhod capsule whose “new
landing system had only been tested
once” (p. 237). Soviet mission-control
facilities were less advanced: “[T]he
mission control centers at Cape Canav-
eral and Houston seemed like a fantasy
to us” (p. 599). The USSR fell behind
in integrated circuits, microchips, and
computers, in part because of a lack of
civilian applications. Quantity reflected
lack of technological integration:
“[T]he first Soyuzes had so much varied
radio technology on board that they
required twenty antennas” (p. 580).

Looking to the present and beyond,
Chertok condemns the present Russian
government’s “crime” of dismantling
the nation’s great technological
infrastructure (p. 331). He makes
fascinating future projections: by 2015,
“China (and perhaps India) will become
superpowers, surpassing Russia in terms
of military-strategic might.” Future
conflict may center on resource access;
the United States, Europe, and China
may covet Russia’s unparalleled reserves
of oil and gas, China its fresh water and
eastern territory as well. “Under those
conditions, it appears that the strategic
significance of high-precision, nonnu-
clear weaponry together with intermedi-
ate and even short-range tactical nuclear
weapons might become a factor in
detering a large war just as ICBMs were
in the 20th century” (pp. 156–57). Cher-
tok judges further that “Chinese rocket
and space technology will overtake the
As in previous volumes in the series, Chertok documents the toils of Soviet designers, who were remunerated poorly, subjected to difficult working conditions, and hidden from foreign sight and contact. Chertok learned of his nation’s deployment of missiles to Cuba, for instance, from Kennedy’s speech (p. 95)! Driven in part by heartfelt ideals tempered by knowledge of the horrors of the Stalin era, these designers achieved so much, so quickly, under such formidable constraints—truly amazing accomplishments. Theirs is not only a Soviet legacy, rooted now in a bygone era, but a part of a larger human legacy that will inspire further exploration as mankind moves farther into space.

ANDREW S. ERICKSON


The most recent book by Andrew Bacevich—a retired U.S. Army colonel and now-retired professor of history and international relations at Boston University—details the history of the four-decade U.S. involvement in “the Greater Middle East,” a region Bacevich defines as encompassing areas of the Persian Gulf, North Africa, and the Balkans.

The book starts with the formulation of the Carter Doctrine: how the OPEC oil embargo, the Iranian Revolution, and the Soviet Union’s invasion of Afghanistan, combined with America’s need for oil and the fact that most of the world’s oil at the time came from this area, led then-president Jimmy Carter to declare the security and stability of this region to be a vital national interest. Bacevich believes the doctrine created a broad, open-ended commitment that expanded with time. Early in the book he describes the decision making, strategy and policy development, and organizational changes that positioned the United States as the guarantor of regional security. This was the context for the formation of U.S. Central Command, which included in its geographic area of responsibility not only the Persian Gulf states but a total of nineteen countries, including Egypt, Ethiopia, Somalia, Kenya, and Pakistan. Bacevich argues that this new combatant command created both an expectation of and the pretext for future military intervention in the Central Command region. The “Soviet threat of the 1980s served as a placeholder, providing a handy rationale for developing capabilities subsequently put to other purposes”; that “posture justified by the need to defend the Persian Gulf from outside intrusion positioned the United States itself to intrude.”

Bacevich offers a broad overview of significant events in this area of the world over the last thirty-five years. In addition to the Soviet invasion and occupation of Afghanistan and America’s support of the mujahideen “freedom fighters,” Bacevich discusses the Marine Corps barracks bombing in Lebanon, the U.S. attack against Mu’ammar Gadhafi in Libya, and the war between Iraq and Iran. His broad synthesis similarly includes Somalia, Saddam Hussein’s invasion of Kuwait and the ensuing Gulf War, the conflict in the Balkans, and, of course, the attacks of