Asif A. Siddiqi: Challenge to Apollo: The Soviet Union and the Space Race, 1945–1974
Challenge to Apollo: The Soviet Union and the Space Race, 1945–1974 by Asif A. Siddiqi
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portunism of his chief rival, Gustav Doetsch. Reading Segal on Süss, one is reminded of John Heilbron’s sympathetic portrait of Max Planck, *Dilemmas of an Upright Man* (California, 1986). Whatever one might think of the nobility of his cause, Planck surely embodied many qualities of the “upright Prussian” in his efforts to preserve and defend German physics. Segal’s case for Wilhelm Süss is far less compelling; surely it deserves closer scrutiny.

**David E. Rowe**


Nayan Shah’s *Contagious Divides* is a well-researched and engagingly written history of the Chinese residents of San Francisco. It traces—over a hundred-year period—the changes in the perceptions white politicians, public health officers, and newspaper editors had of the Chinese community, which went from being a group that threatened the commercial, moral, and physical health of the city to citizens that deserved public housing, clinics, and social services. The author draws on an impressive variety of sources, including English-language newspapers, published rumors, pictures, letters, poems, oral histories, and public health reports. Moreover, Shah adroitly engages with queer and postcolonial theories and with histories of public health in Africa and Asia.

The author begins with late nineteenth-century public health investigations into Chinatown and the subsequent vilification of the area that resulted from these reports. Shah outlines the various ways in which the city tried to regulate where Chinese residents lived and their businesses, at times with little success. The authorities met their match when they tried to close Chinese laundries: a Chinese guild took the matter to court and won in the Supreme Court.

Shah outlines the fears Christian missionaries, doctors, and public officials had of Chinese society, which they saw as aberrant and dangerous. The catalogue of deviance included the large number of Chinese working-class men who lived packed tightly into bunkhouses, smoked opium, and did not have readily apparent family ties—except to the few Chinese women in the city, who were branded as prostitutes and blamed for infecting young white men with syphilis. Shah also examines the intersecting fears expressed by white workers, labor leaders, and politicians over competition with Chinese workers and the supposed dangers they posed to public health.

At the heart of the book are accounts of the 1900 and 1906 outbreaks of bubonic plague, and in these we see many of the strengths of this local study. With a careful and nuanced analysis of events, Shah narrates how the disease was diagnosed using much-contested bacteriological methods and describes the quarantines, vaccination campaigns, house-to-house investigations, and travel restrictions that public health officials imposed on Chinese residents. Shah also discusses Chinese resistance; once again Chinese leaders—this time members of the merchant and diplomatic elite—took to the courts, winning cases that lifted the travel bans and quarantines.

Shah argues convincingly that white city leaders changed their minds about Chinese residents in part because of the efforts of Chinese-American advocates and because the Chinese community began to look more like white communities. After 1900 Chinatown had a growing population of families and Christian Chinese businessmen, who wanted to change the perception of Chinese residents as dirty and different. White and Chinese-American reformers set their sights on mothers in the community, who were to learn the new ways of hygiene that would set their children on healthy paths to citizenship. Chinese-American advocates began to lobby for state, municipal, and federal resources, and they were successful, with their biggest coup being federal dollars to build subsidized apartments. Although the author’s analysis of the change in perception is thorough, it is unsettling that other groups make only cameo appearances. How did those who saw Chinese residents as dangerous view poor whites, Japanese, Filipinos, Latinos, or African Americans? More on these groups would provide a context for gauging the white citizens’ perceptions of Chinese residents. Finally, Shah raises some intriguing but unanswered questions about the role of the courts. Did other groups in San Francisco take their resistance to the courts and—if so—to what ends? But these are questions for another book on the city, which will owe a large debt to Shah.

**Molly P. Sutphen**


One of the most visible manifestations of the arms race that typified the Cold War era has been...
universally dubbed the “space race” between the Soviet Union and the United States. This euphemistic term hides in plain view the most salient elements of the conflict: that there was indeed a race between nations and that the goal was access to space and a piloted mission to the moon. There has been a wealth of writing on the truths of these two elements, ranging from good history to rampant speculation and from complete rejection to full acceptance (no correlation implied). Although Walter McDougall significantly raised the bar in the debate in 1985 with The Heavens and the Earth (Basic), until now we have not had available, in one volume, a systematic review and analysis of the Soviet side of the story that matches in detail and veracity what has been discussed about the American program.

As Asif Siddiqi points out in his monumental Challenge to Apollo: The Soviet Union and the Space Race, 1945–1974, most European and American historiography on the space race has tended to emphasize the impact of the early Soviet feats (Sputnik, Yuri Gagarin, etc.) on American space policy. Siddiqi, in contrast, focuses in depth on the details of the origin and development of the many facets of the Soviet missile program in the 1940s and 1950s that enabled a few visionary enthusiasts to argue that the Soviet Union could place a satellite into earth orbit with hardware virtually at hand. He then proceeds to show how the originally unified and coherent structure that gave the Soviet Union its first wins in the “race” became corrupted as the scale of the enterprise grew enormously; as other design bureaus competed with the original infrastructure, carefully constructed by Sergey P. Korolev, that protected and focused people like the brilliant Mikhail Tikhonravov and his “satellite team”; and as funding, channeled through the military, was consistently redirected to ballistic missile defense systems.

Siddiqi’s encyclopedic history is neatly divided into three major eras, covered in some nineteen chapters. There is an adequate pre–World War II prehistory that poignantly recounts the insane tragedy of Stalin’s purges as the most devastating factor inhibiting Soviet science and technology. Then comes the postwar ascent of a few young, highly vigorous aviation and aerospace designers, notably Korolev, and their acquisition of captured German technology and subsequent rapid development of a domestic ballistic missile capability. Siddiqi does a good job showing how the Soviets decided between cruise missiles, bombers, and intercontinental ballistic missiles, opting for the last as the primary delivery system for nuclear warheads. Korolev also quietly promoted the development of satellite system concepts in the early 1950s, so that when the International Geophysical Year was announced as a challenge by the West, the Soviets fortuitously had in place all the major pieces of the puzzle and saw the “vast political significance” (p. 143) of lofting a 3,000-kg craft into earth orbit. The unity and momentum created by this nondeterminative set of circumstances carried the nation through Gagarin’s flight. The success of that flight ushered in the third and by far the most complex era, scaling up for the moon, the treatment of which comprises over 60 percent of the book.

For each era, Siddiqi carefully traces changes in the political and institutional relations between factions—initially competing ministries and then competing design bureaus—that both promoted and resisted the development of ballistic missile systems. He identifies how four major groups—engineers, artillery officers, industrial leaders, and the Party—interacted and played off one another. Siddiqi also shows how the Soviets managed technological innovation, in the third era shifting from evolutionary to revolutionary schemes reluctantly and belatedly—but rarely, if ever, effectively—as competing design bureaus diluted constantly dwindling resources and capitalized on constantly shifting political enthusiasms. And finally, in the third era, Siddiqi lays out how and why the Soviets failed in their very real and concerted effort to beat the United States to the moon.

It is relatively easy to find extraneous words, minor redundancies, and cosmetic flaws in a work of this magnitude, but these do not detract from the specialist’s delight in the wealth of data and many insights made easily available in this most welcome addition to the space history literature.

David DeVorkin


During the nineteenth century, the United States grew from a local household agrarian society to a national industrial economy controlled by large corporations—a growth that caused a shift in the prevalent ideas about society and human nature, the market and the self. The Soul’s Economy is a study of this shift as it is expressed in the writings of prominent reformers and social scientists...