

Introduction

Space Exploration in the Soviet Context

James T. Andrews and Asif A. Siddiqi

During the Cold War the space program represented an important marker of Soviet claims to global superpower status. The achievements of *Sputnik* and Gagarin were synonymous with a new and dynamic Soviet state no longer hobbled by the devastations of the Great Patriotic War. The Soviet government devoted enormous resources not only to perform its space achievements but also to publicize them in domestic and foreign arenas. Cosmonauts toured the globe, international space-themed exhibitions extolled the technological panacea of modern socialism, and books about the benefits of Soviet space technology surged out of official publishing presses. The rhetoric underlying this extraordinary program of public engagement worked on at least two interconnected levels. On the one hand, the claims made by official mouthpieces were also assertions about the legitimacy, power, and vitality of the Soviet state. These claims depended on an understanding that space technology (and science, in general) represented a powerful and easily understood measure of the future-oriented sensibility of a nation-state. On the other hand, embodied in the artifacts of the Soviet space program—the spacecraft, the rockets, the statues, the posters, the books, the souvenirs, and the text—were

particular symbols and stories about the resonance of cosmic travel in Soviet culture; as symbols they spoke in new and powerful languages, and as stories they cradled the anticipations and hopes of Soviet citizens.

The intersections of these two phenomena—one focused on the state and the other centered more on culture—serve as the primary context for the works in this volume. Through interrogations of the connections between the material and the symbolic elements of the Soviet space program—associations operating at the individual, community, and national levels—the contributions in this volume offer fresh insight into an unexplored element of Soviet history, the triangular relationship between science, state, and culture in the postwar era. Many authors have written about the Bolshevik state's love affair with science and technology. A measure of technological utopianism had already emerged in tsarist Russia at the turn of the century, but after the Bolsheviks came to power in 1917, this fascination embodied a millenarian mantra.¹ Some of this obsession with the power of science and technology to remake society was rooted in crude Marxism, but much of it derived from the Bolsheviks' own vision to remake Russia into a modern state, one that would compare and compete with the leading capitalist nations in forging a new path to the future.

Here, the tools of capitalism—Ford's mass production, Taylor's scientific management, the Wright brothers' airplane—were value-neutral systems that could be relocated into a socialist context without the exploitative costs of capitalism; science and technology could, in this way, be delinked from one ideology and connected to another. The Bolsheviks never adhered to a singular and sustained vision of the role of science and technology in building the new Soviet Union; on the contrary, the Communist Party's approach was neither monolithic nor consistent. For example, in the 1920s, during the time of the New Economic Policy (NEP), the Bolsheviks reluctantly embraced the old prerevolutionary scientific elite, conceding that their skills might be of use during a period of reconstruction. But by the 1930s, after the Cultural Revolution, Stalinist imperatives resulted in a backlash against the old intelligentsia who were seen as being divorced from the "real" problems of socialist construction. Instead, party directives embraced a more populist stance on science and technology: "technology for the masses," in the words of a popular adage of the day.²

The traumas facing the scientific and engineering communities during late Stalinism have been well documented. During the Cold War pioneering scholars of Soviet science, such as David Joravsky and Loren Graham, underscored the important relationship between ideology and Soviet science.³ Yet most laypeople typically understood this connection within the Soviet context as discrete and unidirectional. For example, the “failures” of Soviet science, including the disastrous case of Lysenko and the ban on genetics research from 1948 to 1964, represented stark examples of the negative influence of ideology on science. Meanwhile, the successes of Soviet science were seen as exceptions where Soviet scientists succeeded despite the draconic and limiting structures imposed on them.⁴ But recent scholarship on Soviet science has completely overturned such views.⁵ Besides returning agency to the scientific community and investing our understanding of the role of scientific and engineering practice under Stalin with deeper complexity and nuance, the most important corollary of this new literature has been to dislodge the perception that the Lysenko affair was emblematic of Soviet science as a whole.⁶

If the relationship between science and the Soviet state (and indeed the lack of delineation between the two) has been a subject of much fresh inquiry, mass engagement with science and technology during Soviet times, including popular (and populist) enthusiasm for science, has until very recently been a marginalized field. Mass campaigns involving science and technology were not anomalies during the interwar years but part and parcel of prevailing Soviet culture. James T. Andrews’s recent work on public science has underscored the ways in which public enthusiasm was not simply a result of structured state directives but had significant foundation in genuine mass interest in the powers of science and technology.⁷ Lewis H. Siegelbaum, Scott W. Palmer, and Asif A. Siddiqi have explored specific dimensions of public engagement with science and technology—with automobiles, airplanes, and spaceships, respectively—deepening our understanding of how Soviet scientific enthusiasm was a peculiar combination of the mundanely practical and the grandiosely symbolic.⁸ This new work has not been monolithic. Where Siegelbaum sees automobile users as appropriating automobile technology in ways unanticipated by the state, Palmer views the state as a more powerful force in using fascination with aviation to distract the populace from the earthly realities of the day. Siddiqi’s work on cosmic enthusi-

asm in the 1920s suggests that such popular fascination often stemmed out of deeply mystical notions fundamentally at odds with the Bolshevik project.⁹

Mass enthusiasm for science and technology in Soviet times had its own peculiarities, but this can be best understood as part of broader (usually) state-sponsored campaigns to encourage large segments of the population to invest their work and life with the transformative spirit of the Bolshevik project. The most obvious touchstones here include Stakhanovism, but there were many others, such as the celebration of new secular holidays and festivals, popular campaigns focused on atheism, stratospheric and arctic exploration, literacy initiatives, and industry-related programs such as the shock worker movement.¹⁰ Historians who have investigated these phenomena have contended that mass enthusiasm for these causes were not cynically fostered by a monolithic state exerting power over a passive populace; rather, it was the result of earnest bottom-up zeal that often mutated into forms at odds with the original intention of the campaigns.

Soviet cosmic culture can best be understood as the outcome of similar processes, with two overlapping and often conflicting phenomena, a massive state-directed project, the actual space program, and an equally vast popular response, one whose existence was fundamental to the sustenance of the former. As a number of scholars have shown, popular interest in cosmic themes in Russia long predated any statist intervention. From the late nineteenth century on, Russian readers were first introduced to cosmic themes, particularly through the imported science fiction of such Western icons as Jules Verne and H. G. Wells. This interest exploded after the Bolshevik Revolution (although not necessary because of it) as the gospel of the “patriarch” of “cosmonautics,” Konstantin Tsiolkovskii, was taken up by a younger generation of activists. Cosmic fascination in the 1920s took many forms: societies, exhibitions, film, novels, posters, poems, and paintings, for example.¹¹ Interrupted by the exigencies of industrialization and then the Great Patriotic War, Soviet popular enthusiasm for the cosmos again bloomed in the postwar era, particularly after Stalin’s death. The launch of the *Sputnik* satellite on October 4, 1957, signaled not only the birth of the space age, but also evidence of directed state intervention into the idea of space-flight. *Sputnik’s* trail in the night skies over the Soviet landmass was clear proof that the Soviet state—the party and the government—had

made possible the dreams of generations of space dreamers. As the space program became first and foremost identified with state imperatives and ideologies, it became a tool for posturing on the international stage of the Cold War, a point succinctly reinforced by the headline in *Pravda*, five days after the launch of *Sputnik*: “A Great Victory in the Global Competition with Capitalism.”¹²

Within the Soviet Union the satellite and its successors invested the rising hopes of a new postwar “Sputnik generation” with a powerful icon.¹³ Having passed through the hopes and disappointments of the Khrushchev era, the project of spaceflight was one of the few state policies that united all in its utopianism, heroism, and iconography. By the time cosmonaut Yuri Gagarin returned to Moscow after his historic flight into the cosmos in 1961, more people assembled in Red Square to welcome him than had for the parades celebrating victory in the Great Patriotic War.¹⁴ *Sputnik*, like Gagarin, represented a powerful symbol for restoring Soviet pride in the aftermath of the economic, social, and political shocks of late Stalinism.¹⁵

Sputnik inaugurated the first triumphant decade of Soviet space exploration, as one after another, Soviet space exploits inscribed a new glorious cosmic future into the fabric of popular imagination. A row of hero cosmonauts circled the Earth in increasingly ambitious adventures in their *Vostok* and *Voskhod* spaceships. After Gagarin there was the first daylong space mission of German Titov, then the first “twins” in space, Andrian Nikolaev and Pavel Popovich, and then the first woman in space, Valentina Tereshkova. There were other nonhuman successes too: the first living being in space (Laika the dog), the first probe to impact on the surface of the moon (*Luna-2*), the first to take pictures of the far side of the moon (*Luna-3*), and the first to land and take pictures of the surface of the moon (*Luna-9*). For a time at least, the Soviet space program seemed youthful, bursting with energy, and limitless in its capacity to dream. The technical achievements were equally matched by a massive industry of popular enthusiasm, as the state-sponsored media produced hundreds of thousands of books, pamphlets, and posters, sponsored museum exhibits, and most important, sent their young hero cosmonauts to proselytize for the space program and its chief sponsor, the Communist Party of the Soviet Union.

Since the collapse of the Soviet Union, historians have produced many works on the Soviet space program, benefiting from a surfeit of

information inaccessible during the Soviet period. Few of these works, however, situated Soviet efforts to explore space within Soviet society and culture; most of the literature has focused on geopolitical concerns (“the space race”) or narrowly constructed questions of technological development, and have left unquestioned reductive assumptions about the contingent connections between national identity, Soviet culture, and space exploration.¹⁶ In both Russia and the West the topic of Soviet space exploration has generally attracted techno buffs or political historians. The former display a uniformly positivist fetish for technology, terminology, and teleology, while the latter assume that politics alone determined the nature of the program. Both avoid culture as a focus of study unless as an essentializing category to describe ideology (that is, Marxism).¹⁷ Probably the most salient characteristic of this canon has been an overreliance on secondary literature and the inaccessibility of primary archival source material.¹⁸

The aim of this book is to transcend the shortcomings of the antecedent scholarship on the Soviet space program and to examine the many ways in which space exploration contributed to the construction of a distinct set of markers of Soviet identity at the national, community, and personal levels. The contributions do this by situating the study of the Soviet space program as part of an understanding of broader social and cultural responses to massive statist initiatives in Soviet history. Their goal, however, is not simply to relocate space exploration within the broader currents of Soviet history, but more critically, to use deeply entrenched and iconic aspects of space exploration to shed light on critical questions about the nature of postwar Soviet society—particularly the Khrushchev era—including such aspects as national identity, memory, mythmaking, gender, public culture, consumer culture, and the institutionalization of secrecy.

Scholarly study of the Khrushchev era has typically focused on two broad thematic priorities: the cultural dimensions of the “thaw” (focusing particularly on the activities of newly hopeful intelligentsia who benefited from the looser limits on artistic expression) or politics at the highest level (with Cold War milestones such as the Cuban Missile Crisis and the Berlin Crisis of 1961 as the stock stopping points).¹⁹ The post-Soviet archival revolution has allowed historians to explore this gap between art and politics and to investigate a wider variety of questions on the social, cultural, and economic history of the period. This volume is part of this

newer literature on the Khrushchev era whose aims are to bring fresh methodological tools (including archival research) to bear on a period that has typically been overshadowed by the scholarly fetishization of Stalinism. The recent literature on the Khrushchev era has been wide-ranging and ambitious, seeing the Khrushchev era less as a response to Stalinist excesses than a time with its own complex currents that defy easy generalization and periodization. Novel work on such topics as de-Stalinization campaigns, culture and power during the thaw, social, cultural, and educational reforms, the nature of protest and rebellion, atheist campaigns, mass communications, and gender relations have answered old questions and raised many new ones.²⁰ This volume hopes to add to that scholarship and answer two broadly defined and interconnected questions: Why did space exploration resonate so deeply among the Soviet populace during the Cold War? And what does this deeply embedded current of fascination say about Soviet society and culture in the post-Stalin years?

The contributors, predominantly historians of modern Russia and Europe, have mined a vast trove of untouched archival and published sources from Russia, accessible only since the archival revolution of the 1990s, to bring a unique perspective to Soviet history. At the same time, they benefit from the substantive body of post-Soviet scholarship on the history of the Soviet Union, literature that, based itself on archival research, has raised new and provocative questions on the nature of state, society, and culture of Russia under Communist rule.²¹ Similarly, the provocative questions raised by contemporary scholarship on the history of Soviet science and technology, particularly its fresh reformulation of the relationship between science and ideology, also inform the work included in this book.²²

The volume is divided into three broad thematic components, each represented by a set of chapters. The first introductory part, consisting of pieces by Alexei Kojevnikov and James T. Andrews, provides broad cultural context. At one level both of these contributions work as historical overviews, but they also introduce many of the strands of Soviet space culture taken up in more detail by others in this volume. Kojevnikov combines thoughtful personal reflections with a brief and impressionistic tour through the entire vista of Soviet space aspirations of the twentieth century. The heart of his chapter is a meditation on the generation of the 1960s (the *shestidesiatniki*), their hopes, their disappointments, and their nostalgia. Andrews, meanwhile, grounds the volume in the inchoate

cultural beginnings of cosmic enthusiasm, going back to the pre-*Sputnik* underpinnings of popular interest and popularization of space notions, while also looking forward into post-Stalinist times. He argues that, stretching back to the eighteenth-century era of the Romanov tsarist dynasty, Russians had a fascination with the possibility of air and space flight. He believes it was an inherent part of Russians' more general fascination with exploration: on land, air, and in the cosmos. This fascination continued across the 1917 revolutionary divide but began to take on a nationalist component in the Stalin era of the 1930s and 1940s. Yet even during the Khrushchev era of Cold War competition, Andrews believes ordinary Russians exhibited a sincere fascination with space topics in the press, on film, and in popular books—a preoccupation helped in part by the central symbolic role played by Konstantin Tsiolkovskii, considered by many to be the “father” or *Ded* (grandfather) of space exploration.²³ In the end Andrews articulates an overarching theme—namely, that cosmic enthusiasm had been embedded deeply in Russian culture both before and after *Sputnik*'s launching as evidenced by popular journals, magazines, plays, movies, and other diverse venues.

These two chapters set the stage for the heart of this volume, eight additional contributions divided into two parts. In the first part Asif A. Siddiqi, Slava Gerovitch, Andrew Jenks, and Amy Nelson look at the gaps between myth and reality in the Soviet space program and the role of the state apparatus in bridging this gap. Here, the focus spans the gamut from the personal to the institutional. In the second part of the book, Victoria Smolkin-Rothrock, Roshanna P. Sylvester, Cathleen S. Lewis, and Heather L. Gumbert broadly cover the space program's engagement with popular culture, looking at issues as diverse as religion, gender, consumerism, and the appropriation of Soviet space culture for Cold War imperatives.

The first four chapters take up a deeper engagement with the state's role in the Soviet space program, particularly its management of the relationship between myth and reality, between public and private. The Soviet space program differed in one key regard from its American counterpart in its fetishization of secrecy. Almost every aspect of the program was a closely guarded secret during the Cold War. Using secrecy as a lens, Siddiqi deconstructs the process by which state managers tried to create an “official” narrative of the space program. By revisiting the debates over what was considered secret and what was deemed innocuous, he looks at

the prevailing tensions and chasms between the secret and public narratives of the Soviet space program. The basic conundrum for managers was how to publicize the program as much as possible while keeping it secret as much as possible, a tension that was sustained throughout the Soviet era. The resourcefulness of Soviet cosmonauts in the light of equipment failures presented a particular challenge to Soviet journalists because the heroism of men (desirable to advertise) had to be contrasted with the failure of machines (unacceptable to advertise). Siddiqi argues that a “public relations commission” of the Soviet space program, organized in 1968 to arbitrate and dictate on the “proper” nature of information disseminated to the public, was only partially successful in managing public opinion despite the draconian limits on open discussion on the space program.

Myth and reality, and the state’s arbitration of the boundaries between the two are the subject of Gerovitch’s and Jenks’s chapters, which explore the problem of identity and the Soviet space program. Recently, a number of scholars have explored the historical connections between identity, self-fashioning, and the Soviet state.²⁴ In her recent monograph on identity and imposture during the interwar years, *Tear off the Masks*, Sheila Fitzpatrick has explored the tensions between Soviet citizens’ self-identifications and the external signifiers bestowed from above during the interwar years.²⁵ Other scholars, such as Jochen Hellbeck, have investigated the ways in which Soviet citizens (particularly aspiring Communists) wrote their own biographies and thus thought deeply about their own subjectivity.²⁶ Building on this literature, Gerovitch and Jenks look at similar issues of identity, myth, and social constructs by analyzing the role of the cosmonaut in the era of the Cold War. Gerovitch examines the public image of cosmonauts during the Khrushchev era, focusing specifically on the struggles they faced in finding an empowered voice within the context of highly prescribed technical roles defined for them. Gerovitch argues that the popular picture of the cosmonauts as propaganda icons masked a serious inner tension between the public image and the professional identity of the cosmonauts. Trained as military pilots or engineers, the cosmonauts often were not prepared for the political careers awaiting them.

Jenks’s piece on first Soviet cosmonaut Yuri Gagarin touches on the regime’s mythmaking and contrasts this process to Gagarin’s inner struggles within this constructed image of the heroic icon. Although

Gagarin may have accepted his high-profile public Soviet persona as an honest Soviet hero, his personal life was riddled with ambiguity and struggle. Gagarin's ambivalent persona was a post-Stalinist reflection of earlier life stories from the pre-1941 era. In her recent work on Soviet diaries, narratives, and life-stories, the Russian historian Natalia Kozlova has reminded us that people learned to speak and act "Soviet" on the surface, yet these Soviet heroes and heroines (as well as everyday people) had life histories that have managed to elude fixed meanings.²⁷ Jenks also deconstructs Gagarin's penchant for telling audiences the "truth-lie," a lie that is justified because it was told in the service of a greater (usually, nationalistic) purpose. Jenks finds that the relationship between political and personal morality was not always a predictable one in a culture whose central pillar was cosmonaut hagiography—that is, overlooking the weakness and shortcomings of the early cosmonauts. Both pieces by Jenks and Gerovitch illustrate the difficulty of these choices (and how the state could constrain their choices, as the literary critic and historian Alexander Etkind has argued) in the context of the struggle between their public and private personas.²⁸

Amy Nelson in her chapter on celebrities, canines, and the Cold War argues that because animals could seemingly tolerate the stresses of space, space dogs such as Laika played an important role in the Cold War "space race." Her contribution uses their celebrity and sacrifice to explore the interpretive possibilities and methodological challenges of incorporating animals into the history of the human past. Beyond the scientific significance of the canine cosmonauts, Nelson argues that these dogs captured the public imagination in ways that reinforced Cold War rivalries, and in the process the dogs' achievements and feats celebrated human technological advances. Furthermore, their achievements also raised nagging questions about the ethical treatment of animals and the relationship between dogs and humans.

The chapters in the second part focus on the public culture of the Soviet space program. After the successes of *Sputnik* and Gagarin, the party and government closely identified the successes of the space program with the perceived successes of the Soviet state. Officially sanctioned campaigns tapped into the genuine populist enthusiasm for space achievements in service of particular agendas. One of these agendas was atheistic education, a phenomenon explored by Victoria Smolkin-

Rothrock. By exploring the use of space successes and cosmonauts in the practical application of atheistic education, she recreates the attempts of Soviet ideologists to produce and inculcate a kind of Communist cosmology. As Khrushchev's campaign against religion overlapped with the state's promotion of cosmic themes, Soviet political officials sought to align the two in service of each other. Smolkin-Rothrock finds that the results of such campaigns were entirely unexpected and contrary to the original intentions of the planners.

Roshanna P. Sylvester analyzes the state media's profiling of women cosmonauts—in particular, their public image and their functioning as role models for young Soviet girls. On June 16, 1963, Valentina Tereshkova, a twenty-six-year-old Soviet “everywoman” blasted into orbit aboard *Vostok 6*, thus becoming the first woman in space. Sylvester's chapter studies this crucially important period in Cold War history to understand the impact Tereshkova's flight had on the imaginative landscape of the girls who dreamed of following their heroine into the cosmos. Her research, based on an exhaustive study of popular articles in family- and child-oriented newspapers and periodicals, suggests that Soviet girls in middle childhood harbored a genuine enthusiasm for Tereshkova's achievement and were a “captive and engaged audience” for the insistent claims of Soviet empowerment of female Soviet citizens. At the same time, Sylvester emphasizes that just after Tereshkova's mission press coverage already revealed a marked ambivalence about the role of girls and women in the Soviet Union, particularly in fields of science and technology. That there was no subsequent state commitment to further female cosmonaut missions only confirmed this ambivalence.

In her contribution on the material culture of the Soviet space program, Cathleen S. Lewis situates the production and consumption of collectible ephemera within the broader cultural shifts that took place during the Khrushchev thaw. Such historians as Susan Reid have recently discussed the social transformations in the Khrushchev era with regard to artistic and consumer culture.²⁹ Lewis sees the infatuation with space-themed memorabilia as part of this broader post-Stalinist phenomenon, where Soviet citizens were beginning to participate in a modern, leisure consumer-oriented process made possible by relative economic prosperity. She finds that although space-themed artifacts embodied a return to a more modernist aesthetic reminiscent of the immediate post-

revolutionary era, the message that they conveyed was a “conservative” one, reinforcing rather than challenging the status quo of the socialist regime and thus at odds with the hopeful ethos of the thaw.

In the final chapter on the public culture of Soviet space aspirations, Heather L. Gumbert explores the spatial and cultural dimensions of the visits of Soviet cosmonauts to the Berlin Wall in the German Democratic Republic (GDR) during the Cold War. Beginning with German Titov’s historic visit to the Berlin Wall in 1961, and subsequently with Yuri Gagarin’s follow-up visit, the GDR could share in the larger metanarrative struggle with the West (the “space race”), a competition at one level about the technical superiority of one global camp over another. Using a rich array of media sources, Gumbert argues that Titov’s visit to the Berlin allowed East German leaders to redefine GDR’s place in the European context, by reinforcing their allegiance to the larger socialist bloc even as the physical borders with the West were becoming ever more impermeable. Her chapter is a rare and insightful exploration of how the socialist bloc appropriated Soviet space symbols as a tool to legitimize socialist rule.