Into the Cosmos
Space Exploration and Soviet Culture

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3

Cosmic Contradictions

Popular Enthusiasm and Secrecy in the Soviet Space Program

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Since the collapse of the Soviet Union, *Sputnik* and its successors have been the subject of a vast literature that has generally split into two distinct categories. One body of work, focused on recovering "truth" about the effort, has sought to fill gaps in our knowledge. In the deluge of "new" information available with the coming of glasnost and then continuing into the postsocialist period, historians and journalists have rushed to reveal the "real" story behind the Soviet space program. Another smaller but growing stream of recent literature, favored by social and cultural historians, has explored the meanings behind the undeniably massive cosmic enthusiasm that characterized the height of the Soviet space program in the 1960s. Here, scholars have delved into the social and cultural resonance of space, situating their claims in the broader matrix of postwar Soviet history. In broad terms the first canon has been concerned with production, and the latter with consumption. One obvious bridge between these two literatures has been the figure of the Soviet cosmonaut, who was simultaneously part of the machinery of science, technology, and industry that allowed the Soviet Union to achieve many impressive feats in the early years of the space race *and* a constituent of

the machinery of public relations, critical to creating a global wave of popular enthusiasm for Soviet exploits. Despite a widespread fascination with cosmonauts and what they represented, we know very little about the codes that governed their passage from one world to the other, from production to consumption, from the private to the public. Mediating this connection between production and consumption, between "truth" and "image," was the regime of Soviet secrecy, which not only circumscribed the ways in which cosmonauts crossed over these divides, but also (re)constructed text, images, and symbols on cosmic topics in fundamental ways that remain misunderstood.

Secrecy pervaded every single aspect of the Soviet space program.[1] In the early 1960s so much of it was shrouded in secrecy that it seemed that the program could be capable of anything, and its future appeared boundless. The less we knew, the more seemed possible. This heightened level of secrecy, the strictest it was ever to be in the history of Soviet space exploits, was already in place by the launch of *Sputnik*, the world's first artificial satellite. Two years before *Sputnik*'s launch, on August 8, 1955, the Soviet Presidium (as the Politburo was known at the time) approved a project to launch a satellite into Earth's orbit; one of the first problems on the agenda was *what* to say to the world about the event. The final version of the official Telegraph Agency of the Soviet Union (TASS) communiqué, which was approved ten days later with the help of party ideologue and Politburo member Mikhail Suslov, established several precedents for all subsequent official pronouncements on the Soviet space program.[2]

The press release contained no information on who built the satellite, who launched it, what kind of rocket was used, from where it was launched, why it was launched, and who decided to launch it. The final version of the communiqué, issued on the early morning of October 5, 1957, is illuminating in what it *does* say: there is an abundance of arcane scientific and technical data about the satellite and its trajectory, as if to overwhelm the reader with mathematics in the absence of even a picture of the object. What remains of the text is taken up by expressions of pride of the late "father" of Soviet cosmonautics, Konstantin Eduardovich Tsiolkovskii and some final words about possibilities opened up by this accomplishment. These allusions to the past and the future left a discernible hole about information in the present.[3]

Secrecy was not simply a regime for preventing the transmission of information from one community to another; it also encapsulated an

ongoing discursive metacommentary about the relationship between the space program and the Soviet populace in the 1960s. In every proclamation about a new achievement in space, in every declaration about the heroic work of a cosmonaut, and in all ephemera of the culture of Soviet cosmic travel was embedded a conversation about the acceptable limits of secrecy. Yet because of secrecy, the Soviet space program was victim to a fundamental contradiction resulting from two countervailing impulses. On the one hand, party and government officials sought to promote the space program as much as possible, aided by rhetoric that repeatedly connected the triumphs of the space program with the power of socialism. On the other hand, those selfsame officials accepted the need to maintain deep secrecy about almost all aspects of the enterprise. These antithetical impulses gave the Soviet space program, both in its internal workings and its public image, a peculiar quality that distinguished it from its American counterpart. The discourse surrounding the space effort was characterized by a "rhetorical tension" that was never fully resolved but embodied and amplified by the frequently ambiguous messages about the program's goals, successes, and values.

This chapter explores this "rhetorical tension" to answer a fundamental question: how was it that the Soviet space program—the central advertising emblem of postwar Soviet Union—was shrouded in the highest secrecy and drowned in draconian censorship at the very time when the controls over cultural production were at their most liberal, during the Khrushchev "thaw"?[4] Any possible answer to this question must lie in a deep exploration of the creation, uses, and repercussions of the secrecy regime in the Soviet space program—in particular, the edicts, prohibitions, and procedures of Glavlit, the main censorship body within the Soviet government, that were embedded throughout the entire Soviet media apparatus, including those publications that consistently extolled the glories of the Soviet space program to the populace in the 1960s and 1970s. The chapter explores the motivations and rationales behind the strict secrecy regime in the space program that were rooted in the larger culture of institutional secrecy in the Soviet Union that originated in the 1920s, soon after the October Revolution. It deconstructs the practice of secrecy as manifested in the space program—its main characteristics, how it operated, explicable patterns, and most important, the effects of the secrecy regime for the public understanding of Soviet cosmic exploits during the 1960s and 1970s. Official pronouncements—whether communicated at

a press conference, depicted in a postage stamp, or recounted in a museum placard—were the end results of deeply contested visions of the Soviet space program. These expressions did not reflect a monolithic stand on such issues as modernity, progress, technology, and socialism; rather, they were the outcome of negotiation between various parties invested in maintaining, reinforcing, or undermining secrecy.

Glavlit

Drawing from a long tradition of censorship during the imperial era, the Bolsheviks put their particular imprint on the control of information immediately after coming to power. Only days after the storming of the Winter Palace, on November 10, 1917 ("new style," referring to the Gregorian calendar, which was adopted in Russia in 1918), the Bolshevik Party issued a "Decree on the Press," which, conceding that the "bourgeois press" was "no less dangerous than bombs and machine-guns," prohibited all press that advocated "open resistance or disobedience against the workers' and peasants' government."[5] The culmination of this process was the formation in 1922 of the Main Administration for Literary and Publishers' Issues (Glavnoe upravlenie po delam literatury i izdatel'stva, or Glavlit) as part of Narkompros, the governmental body in charge of cultural activities.[6] Throughout the 1920s Glavlit displayed a noticeable latitude in what was allowed for publication, in line with the economic liberalism of the New Economic Policy (NEP) era, although simultaneously the party *apparat* encoded new rules governing and limiting the circulation of information within the party structure. A whole host of military, economic, political, and "general" information was blanketed under various degrees of classification.[7]

As the historian A. V. Blium has noted, the "era of total secrecy . . . began" by the late 1920s, near the end of the NEP era.[8] Glavlit's work expanded in leaps and bounds, helped by special "lists" (*perechen'*), which themselves were secret, that enumerated the types of information that were considered secret, such as statistical information on the homeless and unemployed, information about sanitary conditions in jails, crime statistics, numbers of suicides, and so on. All "real" economic information, particularly at the national level, was also shrouded in secrecy, while all descriptions of calamities or accidents, especially those dealing with lack of food, were prohibited from publication. Already by the late 1920s

any information that privileged the West or showed Western industry in a favorable light, at least as compared with the Soviet Union, was excised from publication. Acting on these lists, Glavlit issued a barrage of directives to control the flow of particular types of information.

The repressive climate in the late Stalin years brought more draconian secrecy measures into law. Concern over revealing scientific secrets may have played a role in this process. After the infamous Kliueva-Roskin affair, when information about a supposed "cure" for cancer was passed on to American scientists during a brief period of openness in 1946, the Supreme Soviet issued a decree the following year intensifying the penalties for revealing "state secrets."[9] In March 1948, Stalin signed a Council of Ministers resolution that enacted a total ban on all information that touched on state interests. The fact that the decree itself was classified top secret was emblematic of the nature of secrecy in the Soviet context. As the scholar Yorlam Gorlizki has noted: "Stalin pressed the [new secrecy] campaign beyond any rational limits so that it assumed a completely inconsistent and illogical form."[10] He notes that the Council of Ministers was flooded with inquiries, "some quite farcical," about the kind of information that needed to be kept secret. Even evidently innocent information about the operation of a ministry had to be kept closely guarded and "de-secretized" if previously out in the open. Given that the Soviet ballistic missile program, which eventually became the Soviet space program, was undergoing its birth pangs at the time, it is not surprising that even "normal" aspects of its functioning, such as recruiting secretarial or custodial staff or housing issues, were shrouded in a blanket of secrecy. The March 1948 decree was strictly enforced at the lowest levels of missile design organizations throughout the 1950s.[11]

The "thaw" under Khrushchev, the zenith of Soviet successes in space, continued the paradoxical and contradictory tendencies of Soviet secrecy. As others have shown, print culture was crucial during this period as a vehicle for assisting in social change, not so much to challenge the norms of prevailing Soviet life but "to reinvest them with the significance they had lost over the previous thirty years."[12] A combination of new publications, a fresh philosophy about the role of the written word for the future of socialism, and fluctuating notions of what was permissible, resulted ironically in a "flood of new instructions from above," meaning that "Party controls over print culture proliferated in the post-Stalin period, even if they did not intensify."[13] A Glavlit report issued in 1965,

reviewing its previous two years of operation to "protect military and state secrets in print, radio, television, and cinema, and … entertainment" and to "prevent the spread of foreign publications in the country containing anti-Soviet anti-socialist materials," underscored just how busy Soviet censors had been. In 1964, Glavlit employees "monitored" nearly 192,000 pages of literature, compared to 186,000 the year before. Their work included preparing a new "List of information forbidden to publish in the open press, transmitted on radio and television" as well as a similar list meant for regional media outlets. Relevant instructions for the space program were enumerated in Glavlit's "Instructions on how to prepare for the publication of information on scientific and technological achievements of the USSR, which can be recognized as patentable inventions and discoveries."[14]

Glavlit had their hands full as the Soviet space program reached its zenith in the early 1960s. The early cosmic successes coincided with a massive growth in Soviet print publications; almost a quarter of the non-specialized popular journals in existence in the late 1980s were established in the late 1950s and early 1960s. Many of these new journals, such as *Iunost'* (Youth, established 1955), *Iunyi tekhnik* (Junior technician, 1956), and *Iskatel'* (Adventurer, 1961) were key avenues for bringing the Soviet space program to the masses. Older journals, such as *Ogonek* (Light), *Tekhnika-molodezhi* (Technology for youth), and *Znanie-sila* (Knowledge is power), continued into the 1960s with the same vein of technologically utopian literature that was characteristic of their articles in the decade before. The popular literature on space that emerged in the wake of *Sputnik* in 1957 did not emerge out of a vacuum but out of a strong and vibrant tradition of space-themed writing that was ubiquitous in the early and mid-1950s.[15]

What changed was the scale and content of it—that is, there was much more of it and there were now "real" events as points of reference, not just idle fantasy. Spaceships replaced airplanes as harbingers of the future, a change reflected in the transformation of the Air Force's banner journal, *Vestnik vozdushnogo flota* (Journal of the air fleet), originally established in 1918, to *Aviatsiia i kosmonavtika* (Aviation and cosmonautics) in 1962. The latter journal served as one of the mouthpieces of the Soviet space establishment. Major General Nikolai Kamanin, the air force official in charge of cosmonaut training who served on the journal's editorial board helped its editor, Colonel Ivan Shipilov, establish "close ties" with

highly placed but secret designers and scientists so that Shipilov could "use this connection for the cause [of popularizing space exploration]."[16]

The post-thaw period saw strengthened and more streamlined controls over what was permitted in print. In 1965, although it was technically forbidden to mention the name of the mysterious "chief designer" of the space program, it was still acceptable to note that "owing to abnormalities associated with the situation of the cult of personality, [his] rocket aircraft was flight-tested only in 1940."[17] This oblique allusion to the Stalinist purges was whitewashed out by the time the first biographies of Sergei Korolev appeared in the late 1960s.[18] To eliminate such "deviations" from the correct ideological stance and also to encourage publishing houses and other media organs to take more responsibility for censorship in the post-thaw era, the secretariat of the Central Committee issued a new comprehensive decree on secrecy in January 1969. The new law required Glavlit to "strengthen control over the maintenance of state and military secrets in the press. To establish that all questions arising in the process of preliminary monitoring of works of an ideological and political nature, are to be examined at the level of heads of Glavlit and the heads of publishing agencies and cultural organizations. Comments from [Glavlit] workers are to be brought to the attention of the authors of the works without reference to the censor. Violation of this order shall be considered a violation of state and party discipline."[19]

The decree effectively strengthened Glavlit's control over both information and ideological content. At the same time, the immovable curtain between the author and the censor was rendered further opaque. Eight years later, at the height of Brezhnev's stagnation, the Central Committee department in charge of censorship was able to proudly report that the clauses of the decree had been properly executed and that "Glavlit systematically informs the leaders of the organs of press, information, and culture, and in necessary cases party and Soviet organs on errors of ideological and political nature, contained in materials meant for publication or public use."[20]

The censorship apparatus based around Glavlit remained largely the same throughout the 1960s and 1970s. From 1953 on Glavlit, now with the official expansion Main Directorate for the Protection of Military and State Secrets in Print, was subordinated directly to the Council of Ministers—that is, the highest governmental authority in the Soviet Union.[21] In principle, Glavlit was an execution authority, receiving gen-

eral ideological guidelines from the Department of Propaganda of the Central Committee of the Communist Party, one of numerous departments responsible for any and every aspect of Soviet society, culture, and the economy.[22] This department was itself overseen by a secretary of the Central Committee, one responsible for "ideological issues" who had the last word on censorship.[23] On paper, these party functionaries were responsible for determining the appropriate ideological content of open expression so that Glavlit could do its mission of censorship, but in practice, Glavlit's functions were a mix of policy and implementation, an overlap that mirrored the connection between two separate but also overlapping functions: ideological policing and protecting secrets.[24]

Why Secrecy?

Iaroslav Golovanov, the famed and now late Russian space journalist, rationalizing why there was so much secrecy surrounding the space program, once astutely noted that: "Secrecy was necessary so that no one would overtake us. But later when they did overtake us, we maintained secrecy so that no one knew that we had been overtaken."[25] Golovanov's half joke was not so far from the truth in that it encapsulated two different rationales: to protect the strengths of the Soviet state, usually of a military nature; and to protect the weaknesses of the Soviet state, sometimes military but more often than not economical or social. Disaggregating these rationales reveals an array of subordinate factors, some of them repeated explicitly in many Glavlit documents in the postwar period and evident in the workings of censorship within the space industry. These rationales include: to protect information necessary for national security; to present the Soviet Union to the outside world in the most favorable light by controlling information seen as damaging to the national reputation; to present a monolithic view of the Soviet Union where there is no dissent over state policies; to convey that the party and government are in control, whether over ideas, technology, or nature, and that there are no accidental outcomes in Soviet society; and to protect Soviet claims to inventions and technologies by not revealing too much information about them—a point mentioned in many Glavlit documents.[26] Ultimately, as the long history of Glavlit shows, secrecy was also endemic because of the enduring tradition of censorship in the Soviet (and before it, the Russian context)—that is, there was a self-sustaining quality to the sheen of

secrecy, ensuring that it had an indelible and perpetual presence in the Soviet space program despite the many successes and failures of the effort through several decades.

There were compelling institutional explanations for the regime of secrecy that surrounded the Soviet space program, rationales that transcended any need to maintain the fiction of a Soviet lead in the "space race." The fact that the entire institutional structure supporting the Soviet space program was lodged firmly and deeply in a military setting was undoubtedly the most critical factor. The earliest Soviet successes in space—such as the launch of *Sputnik*, Laika, probes to the moon, Yuri Gagarin, Valentina Tereshkova, and many more—were orchestrated by the Experimental Design Bureau-1 (Opytno-konstruktorskoe biuro-1, or OKB-1) headed by the so-called chief designer Sergei Pavlovich Korolev. OKB-1 was subordinated for many years under the Ministry of the Defense Industry and then eventually, like most other space enterprises during the late Soviet era, under the Ministry of General Machine Building. Both of these ministries were part of the highly secretive military-industrial complex, scrutinized by Western intelligence agencies throughout the Cold War. OKB-1's primary goal, at least until the mid-1960s was not space but rather to develop more efficient intercontinental ballistic missiles for the Soviet Strategic Rocket Forces. Because of its association with such an overtly military project, Soviet space achievements were shrouded in an extra layer of secrecy. In July 1955, when work on the rocket that launched *Sputnik* was reaching peak levels, the Council of Ministers issued a decree "with the goal of ensuring more strict secrecy on work carried out on rocket and reactive armaments" that enumerated a whole host of new regulations at various enterprises, including the appointment of a deputy director at each workplace to oversee secrecy regimes and bringing in KGB personnel to help.[27]

Military secrecy could be justified without much controversy because there was "the legitimate strategic purpose of denying sensitive national security information to potential enemies."[28] Secrecy over military affairs was particularly stringent in the defense industry, which developed weapons. Although the names of certain accomplished designers—particularly aviation designers—were revealed during the interwar years, this practice was abandoned at the height of the Cold War when the identities of such designers as Korolev were unknown to the public. Moreover, all information about the organizations that they headed

was kept strictly secret. Real names of weapons were never used in writing. Instead Soviet industrial managers developed an esoteric system of naming weapons that relied on a number-letter-number system that was based on no discernable logic; in all written documents, for example, the *Vostok* spacecraft was referred to as "object 11F63" (*izdelie 11F63*), while its launch rocket was "object 8K72K" (*izdelie 8K72K*). Many workers employed at factories contracted to deliver parts for such spacecraft had little or no idea what the part was for. Draconian rules dictated daily handling of paperwork within defense enterprises, with documents divided into at least five categories of access—none of which were permitted to be seen by workers not employed by the enterprise. Workers in a particular department at an organization usually had no knowledge of what was going on in other departments.[29]

Military secrecy first emerged as a temporary practice as part of the draconian measures adopted during the civil war. These measures were reinforced during the so-called war scare of the late 1920s. In 1927 all defense factories were renamed so that their traditional names were replaced with numbers beginning from one to fifty-six. Eventually, this custom was extended to research and design institutions attached to the factories, which were also given numbers to disguise their work profile. This tradition endured to the mid-1960s so that Korolev's organization was simply named OKB-1, while a competitor organization was named OKB-52. To further obfuscate the mission of these institutions, in the 1960s ministries introduced a wholesale name change to generic "machine building" titles. For example, Korolev's OKB-1 was renamed the Central Design Bureau of Experimental Machine Building, while OKB-52 became Central Design Bureau of Machine Building. Afraid that Western intelligence would pick up even these bland names, workers at such institutions were not allowed to use them in public and instead ordered to use special "post office box numbers" to refer to each institute, design bureau, or factory.

The military secrecy regime far exceeded what was necessary for strategic rationales, indicating that this regime was driven by more than simply a need to protect state secrets about mobilization plans and weapons development. An important driver of military secrecy—and in fact, the entire Soviet secrecy regime—was to maintain privilege of those who had access to decision making. The historian John Barber and his coauthors have noted that "secretiveness was . . . one of the defenses protecting the

priority and privilege of the military sector generally, and of the defence industry in particular."[30] Secrecy in the Soviet space program, embedded deep within the structure of the Soviet defense industry, stemmed from a similar rationale, given that the space program received enormous disbursements at times—for example, during the era of "stagnation," when many Soviet citizens might have wished for a better standard of living. In addition, there were many within the space program who insulated themselves from critique not only from the general public but also from their peers within the program who might have threatened their status and privilege. Designers would routinely conceal their own plans or exaggerate their own accomplishments to industrial managers or party leaders; the system rewarded those who clung to secrecy or obfuscation.

One of the most enduring examples of military secrecy—the creation of a fake launch site—suggests another rationale for military secrecy, one that had less to do with protecting military secrets than to project the peaceful intent of the space program to the domestic audience. After the *Sputnik* launch Soviet officials said nary a word about exactly from where all these rockets were being launched, but because they wanted to record Gagarin's flight as a world record to the Fédération Aéronautique Internationale (FAI), they had to submit the name of the launch site, as per the federation's rules. It was out of question for the Soviets to reveal the name and location of the launch range, located in a desolate area of Kazakhstan, whose express purpose was to support the launch of intercontinental ballistic missiles (ICBMs). For years, any speculation in the West on where Soviet rockets were launched from was immediately reported back to Soviet officials, who were extremely sensitive about this information.[31]

Given this conundrum, two junior officers at a military institute were asked to come up with a solution. One of them, Vladimir Iastrebov, later recalled that "we needed to name the launch place for the launch vehicle of the *Vostok* spaceship, but we were not allowed to mention Tiura-Tam, where the cosmodrome (or more precisely, the rocket range) was located. Because of this, [Aleksei] Maksimov and I selected on the map the 'most plausible' [adjacent] point of launch that was not far from Tiura-Tam. It turned out to be the town of Baikonur, and since then, with our casual selection, the cosmodrome got its now well-known name."[32] For more than two decades after the launch of Gagarin, official Soviet media assiduously maintained the fiction that Soviet rockets were launched from a place called "Baikonur" in Kazakhstan, when in fact the town of Bai-

konur was three hundred kilometers away from the actual launch point. The façade was maintained despite the fact that the actual location was widely known by Western observers already in the 1960s, suggesting that the obfuscation was meant more for a domestic audience rather than a foreign one. Soviet citizens were to believe that their glorious space program had purely civilian purposes while the American one had belligerent intentions.

Space Censors

Glavlit, through its daughter organizations and the publishing-house system, was the ultimate arbiter in directing the censorship apparatus during the Soviet era, but it delegated censorship duties in a number of thematic areas, such as military issues, nuclear weapons, and the space program, to smaller specialized organs.[33] During the early months after *Sputnik*, the process of issuing public communiqués and books on the space program was rather haphazard; senior scientists and engineers within the program typically drew up statements that passed through censors within the Academy of Sciences and the relevant publishing house, with Glavlit checking the results but usually deferring to their authority.[34] The academy posed as a convenient public face of the space program although its institutes and staff had little direct involvement in Soviet space achievements because it was run almost entirely out of the Soviet defense industry.

Because of this public fiction, many of the thousands of young Soviet enthusiasts who wrote to volunteer for the space program addressed their letters to "the Academy of Sciences." These letters were then passed on to an institute within the Ministry of Defense with the descriptive name NII-4 (pronounced *nee-chetyr*), which, not so much from intent but rather confusion, inherited much of the public relations functions of the space program in the early 1960s. NII-4, whose main job was to evaluate and conduct research on the battle-fighting capabilities of nuclear-tipped intercontinental ballistic missiles, was located in the Bol'shevo suburb of Moscow, not far from Korolev's own design bureau. Here, the institute deputy director Iurii Mozzhorin, a colonel in the Soviet artillery forces, was handed the job of drawing up the TASS communiqués that were hungrily pored over both at home and abroad for clues into the Soviet space program. Mozzhorin remembers drawing up the press release for

Gagarin's launch in advance of the event. Three preprepared envelopes were distributed to radio and TV stations and TASS, each containing the text of a particular scenario (complete success, death of cosmonaut at launch or in orbit, or emergency landing of cosmonaut on foreign territory); depending on the outcome, the press was ordered to open one and destroy the others.[35]

Throughout the 1960s each State Commission—the ad hoc group of high-level individuals from different branches of the government that oversaw a particular space mission—had a special "press group" that authored and disseminated information about space events. By mid-decade, however, it had become clear that the Soviet space program needed a formalized system to prepare and control the information that was revealed about the space effort, especially because the amount of information being disseminated increased dramatically every year. The obvious solution was to assign Glavlit this job. In July 1967 the highest industrial officials in the space program drew up a plan to create an "expert commission" attached to Glavlit that would be responsible for coordinating and approving all media on the Soviet space program. Because leading space program officials would head and manage the commission, Glavlit opposed this plan, undoubtedly because it would diminish Glavlit's control over the flow of information. In the end, Glavlit lost this battle, and the job was assigned to the space establishment, with Glavlit maintaining a coordinating capacity instead of a leading one.[36]

Mozzhorin retained the task of managing the public relations capacity of the space program. As he moved from institution to institution, from his original employer (NII-4) to TsNIIMash (the Tsentral'nyi nauchno-issledovatel'skii institut mashinostroeniia, or Central Scientific-Research Institute of Machine Building), the leading research and development institute of the Soviet space program, he took the media job with him. As director of TsNIIMash for nearly thirty years, Mozzhorin played a critical role in arbitrating conflicts within the Soviet space program but also formulating future plans. As such, he was in an ideal position to know the full spectrum of both prevailing and future capabilities of the program. His "propaganda" task was formalized by a Council of Ministers decree on July 1, 1968, when the Soviet government for the first time *officially* assigned his staff at TsNIIMash the mission of "organization and preparation of materials on rocket-space themes for publication in print, transmission on radio and television and for showing in film and

in exhibitions."[37] Soon after, a team at TsNIIMash performed a two-year research project (from 1968 to 1970) on the entire spectrum of Soviet space-related propaganda and how to systematize the process. The team prepared a draft decree, later approved by the USSR Council of Ministers, which included a document titled "Regulations on the Preparation for Open Publication of Materials on Rocket-Space Technology."[38]

Secrecy was obviously a central concern here, as Mozzhorin himself recalled. He was responsible "not only for the preparation of drafts of TASS communiqués, [and] headers for scientific and technical articles in the newspapers, but also [for ensuring] . . . that all open publications on rocket-space technology in the Soviet Union and materials exported abroad were technically correct, did not contradict government edicts, and did not violate secrecy."[39] Mozzhorin performed this "thankless" job together with Anatolii Eremenko, "a very smart, principled, technically literate, and literary specialist" who headed TsNIIMash's department of "information, expertise and history." Like Mozzhorin, Eremenko authored many books and articles for the Soviet media on the history of Soviet space exploration.[40] This department coordinated their work with representatives from the Academy of Sciences, the Ministry of Defense, the defense industrial ministries, various ministries responsible for radio, television, print, film, central and local organs of the Soviet press, TASS, the Novosti press agency, and the Znanie (Knowledge) All-Union Society, a major popular science outlet during the Soviet era. Both Mozzhorin and Eremenko remained at their posts until 1990, when the former retired. Eremenko continues to work at TsNIIMash and remains in charge of its museum; in 2004, despite his work in the censorship apparatus or perhaps because of it, he was awarded the Utkin Silver Medal "for many years [of] active journalistic work on rocket and space technology and cosmonautics."[41]

Mozzhorin's group played a key role in articulating the public face of the Soviet space program, but the evidence suggests that high-level party and government officials were frequently drawn into issues that were relatively trivial. The Military-Industrial Commission, the very powerful governmental body that supervised the Soviet military-industrial complex during much of the Cold War, for example, had to approve TASS communiqués on every Soviet space event prepared by Mozzhorin's group. When questions of openness reached the Politburo level, as they did often, they highlighted an acute ambivalence about secrecy that fre-

quently delayed plans. For instance, in February 1964, U.S. and Soviet officials signed an agreement to display space artifacts in each other's countries. The Politburo (then known as the Presidium) met a couple of months later to discuss the issue but deferred to the expertise of rocket designers and administrators who recommended that certain aspects of the *Vostok* spacecraft be declassified for the exhibit.[42]

Despite the recommendations, doubts plagued the main actors for months. The Central Committee and the Council of Ministers adopted a set of guidelines for displaying space program artifacts in museums only on February 26, 1965. Even with these guidelines senior party officials continued to waffle about displaying the *Vostok* and had to be apprised of the most arcane details of exhibitions. When space industry officials organized an exhibit entitled "Man in Space" for foreign audiences, the discussion once again went up to the Politburo level in August 1965. As a result of these discussions, the Central Committee and Council of Ministers issued a further decree three months later approving the *Vostok* exhibit.[43] In all, it took eighteen months to simply find agreement about what to show abroad.

If the Politburo often had to give the final word, Mozzhorin and Eremenko wielded enormous power because they provided the first and most important filter for information that the architects of the space program wanted to publish. As such, every single pronouncement on the Soviet space program—whether in a book, a newspaper, a magazine, a poster, a postage stamp, or a placard at a museum—passed through the hands of these two men, who had a special office in the main TASS building in Moscow. Mozzhorin later recalled that managing this affair was a "nightmare" partly because he was frequently caught between the demands of leading space designers who wanted recognition and glory and party ideologues who decried such attempts because they might violate secrecy edicts. Mozzhorin's group also feared that they would "let" something out and be penalized for it, and thus usually erred on the side of caution, even if the information seemed benign. He was particularly afraid that some or other party member would find something published in a foreign news magazine about the Soviet space program that should not have been there.

In one case Mozzhorin was nearly dismissed from his post. In 1967 he approved an essay for publication in the newspaper *Trud* in which Strategic Rocket Forces Commander-in-Chief Vladimir Tolubko noted that

military officers were the ones operating the infrastructure in support of the Soviet space program. Minister of Defense Andrei Grechko insisted that there be an investigation on why this article was published, because he feared it might convey to Americans that the Soviet Union was militarizing space.[44] Several people were reprimanded for the incident but Mozzhorin kept his job, although Grechko proved right to some degree. The article was immediately picked up by the American media, scrutinized widely, and confirmed what Western observers had long suspected: that the Soviet space program was essentially a military enterprise.[45]

Where Mozzhorin and Eremenko were the final arbiters of the public face of the Soviet space program, they rarely ever wrote material personally. For this task the party's Central Committee approved a select few journalists, usually one each from a major newspaper or journal to be privy to secret information. These journalists were granted special permission to travel to secret places, meet people whose identities were still secret, and see classified equipment. Yet such writers as Aleksandr Romanov (TASS), Vladimir Gubarev (*Pravda*), Mikhail Rebrov (*Krasnaia zvezda*), Iurii Letunov (radio), and Iurii Fokin (television) displayed a curious homogeneity in their work, all playing up certain tropes—heroism, the socialist cause, Soviet ingenuity, the inevitability of success—that produced a bland product; volume, vague allusions, and highly technical detail trumped economy, actual facts, and eloquence.[46] Mozzhorin himself conceded as such, remembering that most of the articles "smacked of . . . techno-fetishism. They were too high-level and uninteresting for the broad masses, and [they] poorly advertised domestic space [achievements]." Some of the correspondents, such as those from *Pravda* and *Izvestiia*, were hired on the recommendation of the Central Committee secretary for defense industries and space programs, Dmitrii Ustinov, but secrecy seriously impaired their ability to write meaningful pieces; they were forced, in Mozzhorin's words, to write "sugary streams of enthusiastic text."[47] Ironically, the space program "leadership," who themselves were partly responsible for imposing such draconian secrecy, expressed much dissatisfaction with the "low promotional effectiveness" of the literature, which largely resulted from said secrecy.

Although Mozzhorin's group was to act as censors, they had a symbiotic relationship with journalists. The latter were allowed access in exchange for following the former's mandates as closely as possible. This relationship helped to create a powerful union of censor and journalists,

a block of actors who controlled both the content and contours of publicly available information on the Soviet space program. Lev Gilberg, the editor of the Mashinostroenie publishing house, which issued dozens of space-themed books, frequently invited officials from Mozzhorin's censorship group to write for him. Gilberg had a key connection into the inner workings of the space program, being a good friend of Vladimir Shatalov, the general in charge of cosmonaut training in the 1970s and 1980s.[48] This coalignment ensured that those writers who did not participate in self-censorship or "play the game" were excluded from the privileged access given to selected correspondents and writers. It also fed the striking homogeneity in the writing on the Soviet space program in the 1960s and the 1970s, both in terms of content and style.

Secrecy in Practice

As Soviet space exploits began to accumulate, certain guiding principles of the secrecy regime became evident. These obviously reflected the characteristics of the broader Soviet secrecy system, but inflected with the peculiarities inherent in the space program, such as its connection to the military, its association with national prestige, and its high-risk nature.[49] Three broad strategies guided those who produced the public narratives of the Soviet space program: first, they eliminated contingency from narratives of the space age so that all successes were assumed inevitable and the idea of failure rendered invisible; second, they constructed a space (no pun intended) of "limited visibility" for both actors and artifacts (that is, only a few selected persons—usually flown cosmonauts or public spokespersons with little or no direct contact with those directing space projects—and objects were displayed to the public); and third, they constructed a single master narrative or chronicle that included a set of fixed stories in which the central characters were few (such as Tsiolkovskii, Gagarin, and later Korolev) but heroic and infallible.

The first pattern of secrecy, the elimination of contingency, was designed to remove failure from the Soviet space program. With almost no exceptions, coverage of Soviet space exploits, especially in the case of human space missions, omitted reports of failure or trouble. This was the case from the early 1960s to the late 1980s. If a rocket failed to reach orbit, it was never announced; only successes were trumpeted. If a mission was curtailed early, TASS would merely exclaim that the original mission

had been scheduled for that length. Because of the fear of conceding any kind of failure, accounts of cosmonauts' missions were so sanitized that reports inevitably veered toward ambience than substance. In this sense books and articles from the 1960s conveyed a kind of "thick description" (to use the words of the anthropologist Clifford Geertz) without the actual object being described. In other words, they contain no details, only settings. Canonical space books from the early years, such as *Nashi kosmicheskie puti* (Our space way, 1962), *Ukhodiat v kosmos korabli* (They leave for space in a ship, 1967), *Na beregu vselennoi* (On the coast of the universe, 1970), and *Letchiki i kosmonavty* (Pilots and cosmonauts, 1971) provide literally hundreds of pages of text of reconstructed conversations among cosmonauts, engineers, and laypeople that touch on a variety of social and cultural phenomena, such as family life, workplace customs, humor, and devotion to the Communist Party. These provide rich context, but they do not convey substance because the central issue at hand— the feats of the cosmonauts—are left to the imagination.

Demands for secrecy may have originated from military imperatives, but they had repercussions on many other dimensions of the Soviet space program. For example, the publicity-versus-secrecy dichotomy was paralleled in another polarity: the need to praise the seamless work of Soviet machines versus the need to extol the heroics of Soviet cosmonauts. The historian Slava Gerovitch has explored these built-in contradictions within the space program, particularly how different constituencies within the upper echelons struggled to find an appropriate balance between man and machine.[50] The public dimensions of this struggle showcase an attendant tension, not so much with man and machine, but between publicity and secrecy. For example, during the *Voskhod-2* mission in 1965, when Aleksei Leonov became the first man to exit his spaceship and "walk" in space, the spacecraft faced a number of serious problems that were not revealed at the time.[51]

One of these problems involved the failure of the automatic orientation system that would position the spacecraft in the proper direction before reentry. Through a very complicated and extremely risky series of actions, the crew was able to manually orient the ship for landing, although they landed nearly four hundred kilometers off course. The cosmonauts were forced to spend two nights in near arctic conditions fending for themselves while rescue services searched for them. After the mission, officials argued over how much to reveal publicly about this and

the other lapses of safety during the flight.[52] The two cosmonauts were prepared in advance for a postflight meeting with journalists by rehearsing answers to sixty possible questions. The press conference itself had a vaguely farcical quality about it as the cosmonauts resorted to gross generalities and half-truths. At one point the cosmonaut Pavel Beliaev was forced to say that the crew had been "delighted" that the automatic system of orientation had failed, because this provided them with an opportunity to use the manual system.[53] Here, the fallibility of machinery was removed from the center of the narrative so that failure became peripheral, sidelined, and no longer important. We see how secrecy was not simply a regime designed to safeguard military information but also was invested with a certain flexibility, invoked in different circumstances to arbitrate among a variety of seemingly intractable issues at the forefront of the Soviet space program. In this particular case the invocation of secrecy (not revealing the true extent of the many failures on the flight) allowed man to exercise agency over the machine.

Eliminating contingency also meant not divulging information about future plans because plans inevitably changed, leading to delays. One manifestation of this policy was to say nothing about impending missions. In early 1967, Kamanin noted in his diary that the Novosti press agency received hundreds of queries from foreign news agencies about cosmonauts and future flights into space but that "we give them very little information, and even when we do, it's outrageously late. The CPSU [Communist Party of the Soviet Union] categorically prohibits giving detailed information before a flight, allows very little to report during a flight, and cuts all text on technology."[54] This practice was put to test in the late 1960s, when the Soviets appeared to have fallen behind in the so-called race to the moon. Because Soviet cosmonauts had not displayed anything close to matching their American counterparts at the time, Western analysts assumed that the Soviets had faltered behind the Americans, a suspicion that decades later proved to be true. At the time, however, Soviet cosmonauts were often put in awkward positions of conveying that the Soviet space program was indeed advancing along a deliberate plan despite clear evidence to the contrary.

When cosmonaut Vladimir Shatalov, for example, was visiting Japan in May 1969, he was bombarded by questions about the Soviet Union's recent poor showing in space. Kamanin dourly noted in his diary that "we cannot tell the truth openly about our failures and mistakes—we

must beat around the bush, trying to put a good face on a bad situation."[55] Sometimes cosmonauts on foreign goodwill missions, frustrated by such questions, would make brave statements about impending Soviet moon missions, which only raised the ire of party officials back home who demanded more control over cosmonaut statements.[56] Amplifying Golovanov's insightful comment (cited earlier in the chapter), secrecy worked in favor of the Soviet space program when it was ahead because the audience, both home and abroad, could let their imaginations run free as to what was going to be possible in the future. When the Soviet Union fell behind, secrecy became absolutely essential to obscure this situation, which further strained the gap between what was happening in the Soviet space program and what was being told about it.

The second trope of secrecy was to construct a space of limited visibility for actors. In practice, this meant that the real architects behind the Soviet space program were rarely named. Soviet Communist Party First Secretary Nikita Khrushchev famously noted in 1958 that "when the time comes photographs and the names of these glorious people will be published and they will become broadly known among the people. We value and respect these people highly and assure their security from enemy agents who might be sent to destroy these outstanding people, our valuable cadres. But now, in order to guarantee the security of the country and the lives of these scholars, engineers, technicians, and other specialists, we cannot make their names public or print their pictures."[57] An official decree of the Central Committee of the Communist Party and the Council of Ministers expressly prohibited leading space designers, including the many chief designers, from speaking on the radio, on television, and in print under their own names. This is not to say that the space program did not have public spokespersons. Besides cosmonauts, the Central Committee had designated a number of eminent scientists who had little or no connection to the actual operation of the space program, to travel internationally and speak with authority on Soviet space achievements. When they spoke, these academicians—such as Ivan Bardin, Anatolii Blagonravov, Leonid Sedov, Evgenii Fedorov, and Boris Petrov—vacillated between two poles. Either they spoke in the most absurd generalities or they delved into the most egregious detail, usually about scientific experiments. Both were strategies designed to evade questions about the program itself. Some of these men had tenuous connections with the secret world of Soviet space, but as Iaroslav Golovanov astutely noted: "Those

who were only slightly in the know . . . were so ensnared by what they had signed about not disclosing government secrets, that they uttered only banalities, and thus differed only *slightly* from the uninitiated."[58]

Naturally, those who were effectively in the driver's seat of the Soviet space program found this arrangement troubling if not insulting. Some of them were, however, allowed to write in public but *only* under pseudonyms. This culture of pseudonyms was a widespread practice that blossomed in the 1970s, when more and more "insiders" sought to bring their literary skills to public attention. Although most of the literature on the Soviet space program in the 1960s was authored by sanctioned newspaper and magazine journalists, by the following decade, a large group of designers began doubling as writers but under assumed names so as not to reveal their true identities. In recent years scholars have mapped the pseudonyms with the real names, but in the glory days of the Soviet space program, Westerners or indeed Soviet citizens had little or no way of judging whether a named author was a fiction or flesh and blood.[59] One outcome of the practice of using pseudonyms, as well as the equally ubiquitous practice of using melodramatic identifiers such as "Chief Designer" or "Chief Theoretician" or of the custom of omitting the biographies of authors, was the emergence of a culture of surrogacy in the literature on the Soviet space program, one that gave Soviet space-themed public culture a kind of disembodied voice. Even during the 1960s, it was apparent to many that the people speaking on behalf of the Soviet space program were not deeply connected to it. The discourse had a given and received quality about it, lacking agency; one could say that there was much said about the Soviet space program but it wasn't clear who was saying it.

The one exception to this rule was, of course, the cosmonauts, since they were the most visible face of the space program. But secrecy presented a set of problems for the public role of cosmonauts. Like their American counterparts, cosmonauts represented the most compelling, appealing, and effective instruments of the space program. Space travelers on both sides of the Iron Curtain had to deal with massive bureaucratic structures that sought to manage their public activity.[60] Because of secrecy, however, the cosmonauts' public stance evolved in markedly different ways from the astronauts. The inhibitions on cosmonauts were numerous and onerous: they could not be photographed with their spaceships, they could not describe them, they could not speak of those cos-

monauts who had not flown yet, they could not talk about the military foundations of the space program, they could not refer to the rockets that launched them on their glorious voyages, they could not talk about future plans with any specificity, and so on. Many cosmonauts wrote memoirs, aided by ghost writers and with censors peering over their shoulders, but they mirrored the patterns of the general literature on the space program—context without content. The handicaps they faced were ably underscored by the occasional press conferences. The following exchange between journalists and first cosmonaut Yuri Gagarin at his first post-flight press conference exemplifies the flavor of the public discourse:

—When were you informed that you were to be the first candidate?

—*I was informed in due time. There was plenty of time for training and preparation for the flight.*

—You said yesterday that your friends, pilot-cosmonauts, are ready to complete new cosmic flights. How many pilot-cosmonauts are there? More than a dozen?

—*In accordance with the plan for the conquest of cosmic space, our country is preparing pilot-cosmonauts. I think that there are enough men to accomplish a series of flights into space.*

—When will the next spaceflight take place?

—*I think that our scientists and cosmonauts will undertake the next flight when it is necessary.*[61]

Journalist Iaroslav Golovanov, who was at this press conference, noted in his personal diary that Gagarin seemed "terrified of saying the wrong thing, all the time looking back at [public spokesperson] academician Evgenii Konstantinovich Fedorov, who struggled to pretend that he had some direct relevance to this historic event. The most interesting thing I learned at that press conference was that [Gagarin] weighed 69.5 kilograms."[62]

Cosmonauts in general faced the conundrum of being the most powerful and simultaneously the most powerless representatives of the Soviet space program. They were instruments of political power, coming to symbolize in their bodies new Soviet power and prestige, ambassadors of Soviet socialism to both the Eastern bloc and the Western world. Their utterances, occasionally militaristic and politically minded, were more potent than a dozen *Pravda* editorials. The cosmonauts were, in many

senses of the word, the elite of the Soviet space program, in a society that officially disavowed them. The problem of blurred boundaries between being an elite and being a hero was not a new one—famed Soviet aviators in the 1930s negotiated these categories skillfully—but they did not deal with an all-encompassing regime of secrecy. The early aviators carried out their record-breaking exploits in full view of the world, often landing to welcome receptions in foreign lands.[63] Their machines were not only visible manifestations of their achievements but also measures of the power vested in the hands of the aviators. Secrecy divested modern-day cosmonauts of this power—they after all could not pose in front of their spaceships nor be seen at the literal spaces where they performed their heroism, at the launch pad and in their spaceships. They were powerless because of the draconian limitations imposed on their public discourse, for they could never speak freely about anything.

At the same time, although the cosmonauts' public statements, their only tangible instrument of agency, were constricted by secrecy codes, their language was overcompensated, almost overripe, with meaning. I use the word "meaning" here only in the broadest sense, the way that "signified" is more important than the "signifier," to use linguist Ferdinand de Saussure's terms. The variety of the signified was left to the imagination of the consumer, the public, opening up immense possibilities for interpretation. By dint of their vagueness and reach for a grand narrative (of socialism, technology, human evolution, and so on), the words of cosmonauts achieved a level of public, political, social, and cultural resonance that the words of astronauts never did. Secrecy gave cosmonauts' statements a potency of meaning that they might have lacked had they been mired in the details of their missions. Despite the ruthless secrecy and censorship, the many cosmonaut biographies of the 1960s and 1970s communicate an enthusiasm, generalized but irresistible, that undeniably infused the great Soviet cosmic project of the 1960s with a kind of fervor and energy—and mystique—which a completely open program would probably have lacked.

The final dimension of the secrecy regime was the creation of a single master narrative with a set of fixed stories, highly teleological, with all roads inevitably converging to a single transcendental point. The central concern was to ensure that alternative interpretations of received knowledge from official sources were eliminated; the public had to believe in a singular story with no ambiguity about the events, goals, and meaning of

the Soviet space program. In describing Soviet censorship in the 1930s, the historian Jan Plamper has described the "abolition of ambiguity" as a "secondary censorship mode," a powerful practice that emerged during the early Stalin era when the party "not only saw to it that heretical cultural products be kept from public view [but] also sought to control the interpretation of those products that actually were allowed to circulate in society."[64] One way of enacting this secondary form of censorship was to use the selective publication of information to construct a master narrative of Soviet space history, one that encompassed priority (before the Americans), progress, and purpose.

The master narrative of Soviet space exploits came under many threats. One of the most rancorous controversies stemmed from an adversarial stance between censors and writers on one side and the space industry designers on the other. In the early 1980s Mozzhorin's press group began to compile essays for a comprehensive encyclopedia on the history of space exploration. More than three hundred eminent authors contributed to the manuscript, planned for publication in 1982, the twenty-fifth anniversary of the space age, but Mozzhorin found fault with many of the works for "popularizing Western achievements" too much. Such a book might put the master narrative of Soviet achievements in space, of unchallenged preeminence, in jeopardy.

Surprisingly, many leading Soviet designers, including the powerful Valentin Glushko, opposed this move, believing that such a stance would actually cheapen Soviet accomplishments. Mozzhorin continued to stand steadfast, at one point even delaying the publication because he objected to publishing the names of important Soviet space designers whose names were ostensibly still secret.[65] Despite the best efforts of Glushko and others, the number and length of essays on the American space program were reduced while the same were increased for Soviet efforts in space. After a long protracted battle between the censors and designers that even drew in the attention of Politburo members, the book, neutered and sliced up, was issued in 1985, the last gasp of the Soviet master narrative of cosmic conquest.[66] It was only after glasnost and particularly after the collapse of the Soviet Union, when the secrecy regime fell apart, that multiple, contradictory, and personalized narratives of the history of the Soviet space program flooded into the public consciousness, "privatizing memory," and creating a market of different accounts that were now valued and traded.[67]

Figure 3.1. This image of first cosmonaut Yuri Gagarin shows another cosmonaut (Grigorii Neliubov) airbrushed out of the background. Because he had not actually flown in space and was still in training, his existence was censored out of the official Soviet narrative of the mastery of space.

These three features of the secrecy regime in the Soviet space program—eliminating contingency, creating a limited space of visibility, and maintaining a master narrative—deeply affected not only the content of Soviet space culture but also its aesthetic qualities, as particularly manifested in the imagery associated with Soviet space exploits. Because the cosmonaut could not be shown next to or in his (or her) spacecraft, Soviet publishers had to be creative in communicating the new and modern symbiosis of man, technology, and adventure that the Soviet space program represented. This creative process was recruited in service of two requirements: to highlight a particular ideological stance; and to not raise any questions in the reader's mind that "something" was missing.

Cosmonaut photographs from the 1960s typically emphasized some familiar tropes of the cosmonaut as a family man—a modest, hard-working and diligent student, one who is agile in training, able to inspire large crowds, and at home with working people. Most of these images are highly stylized and many of them are staged; few had any overt technical associations. Many were embellished with penciled accents as was common for Soviet publications of the period, sometimes to emphasize particular points in a specific picture or to airbrush out aesthetically displeasing features.

Editing or altering images was a common practice, largely to sanitize them of any object or person that violated secrecy codes, a tradition inherited from the Stalinist-era practice of whitewashing important party and government officials from official pictures.[68] Despite the looser cultural restrictions of the Khrushchev's thaw, the space program retained this particular Stalinist trait as unflown (and hence, still secret) cosmonauts were "disappeared" from various pictures whose full vistas were not published until the 1980s or 1990s.[69] In some cases, the adjustments were purely aesthetic: a man might be positioned farther from another to eliminate clutter, or a speech by an air force general might be edited to delete mistakes in his diction (figure 3.1).

Soviet artists and model builders were notorious for producing versions of Soviet spacecraft that often had little or no connection with reality. This practice, ubiquitous in the early 1960s, opened the way for some outlandish depictions of Soviet spacecraft, including a supposed *Vostok* spacecraft shown at air shows or documentary films that bore little resemblance to any real spaceship but that had quite striking and even beautiful fins attached to one end.[70] The tension between aesthetics and secrecy was most starkly evident in the work of Soviet "cosmic" painter Andrei Sokolov, probably the most well-known "space" artist of the period. Sokolov later remembered that because he had no security clearance, he had to paint from his imagination about the Soviet space experience. Once, when he painted a rocket in flight, the painting was censored without explanation. Many years later he discovered that because his image approximated a real space rocket, it was not allowed for public consumption. Sokolov's experience provides a telling counterpoint to that of Aleksei Leonov, the cosmonaut turned painter, who was intimately familiar with secret technology. According to Sokolov, Leonov "deliberately distorted reality [in his paintings] because of the requirements of

Figure 3.2. To celebrate Aviation Day in July 1961, Soviet authorities approved the display of a *Vostok* spaceship at an exhibition in Tushino. The object approved for display had little resemblance to the actual spacecraft and included superfluous additions such as an aerodynamic fin added to the rear. *Source*: *Soviet Space Programs: Organization, Plans, Goals, and International Implications*, prepared for the Committee on Aeronautical and Space Sciences, U.S. Senate, 87th Congress, 2nd Session (Washington, D.C.: U.S. Government Printing Office, May 1962).

censors, sketching deformed trusses on the launch pad and improbable satellites."[71] The contrast between Sokolov and Leonov encapsulates how secrecy mediated the relationship between artist and the art in the world of secret space: because of secrecy, those who were not privy to secrets had to be careful about unleashing their imaginations, while those in the know had to let their imaginations run free so as not to give away those secrets (figure 3.2).

In addition to editing images, many key events—including, for example, meetings of the State Commission that oversaw the launches of the *Vostok* and *Voskhod* spaceships with cosmonauts on board—were restaged (or in some cases prestaged) for the cameras. After Gagarin's flight, for instance, Korolev was refilmed talking to Gagarin by radio, confidently holding a microphone and reciting the exact words he had said during the actual launch. Gagarin's prelaunch speech, supposedly given at the launch pad right before entering his spacecraft—flowery and hyperbolic—was actually recorded much *earlier* in Moscow.[72] Famous Soviet journalist Anatalii Agranovskii vividly described a scene where a truck driver at a farm stops to hug and congratulate the mother of cosmonaut number two, German Titov, after his launch. Official photographers in-

sisted on retaking the whole scene with both the truck and the driver's clothes washed, and finally denuded the scene of any spontaneity when they objected to the fact that the truck driver's vehicle was an American Studebaker—that is, unacceptable to be seen in print.[73] The final image retained only a ghost of its original intent to capture the joy of a passerby and the gratitude of a cosmonaut's mother.

In all of these and many other cases, the object of re-creation was at one level designed to remove the messiness inherent in everyday life. Images would reflect the fact that the project of Soviet space exploration was literally a cosmic adventure far above and beyond the mundanities of daily existence, one where events unfolded with meaning and deliberation without imperfection and ambiguity, much like the machines and the men who orbited the Earth. Here, the elimination of spontaneity and ambiguity was not simply a structural process but also an aesthetic one. The style of images, film, and text on the Soviet space program created a singular kind of aestheticism that rendered the Soviet space program unusually static and devoid of color. All the vast rhetoric, images, films, posters, and the like on display for the populace at the height of the space race were designed to inspire. But if their dynamism was immediate, it was also only surface deep; beneath the text and the images were lives where life itself seems to have been struck out. Western audiences who saw these pictures saw them as ham-fisted ideologically colored propaganda. But looking deeper, the pictures were much more complex aestheticizations of a fundamental conflict between secrecy and publicity, between fixity and ambivalence. Eliminating uncertainty was central to creating a master narrative of Soviet space history, because that story had to be without defects. These defects were not simply structural, however; they were also aesthetic in nature. Because of this requirement, the architects of the official world of Soviet space created a world of limited visibility, wherein aesthetics and editing were conjoined in unbreakable relationship, one mediated by secrecy.

In the Soviet space program, especially during the 1960s, there was a chasm between what was actually happening and what was being told about it. There were many reasons for this gap between rhetoric and reality—all governments after all seek to control information about activities that are closely identified with the state—but in the Soviet case the central explanatory factor for the chasm was secrecy. The regime of secrecy

in the Soviet space program created a fundamental conundrum between the drive to publicize the project as much as possible and the equally firm insistence that everything must be kept secret. This tension was never fully resolved and insinuated itself into all public discussions of the space program for a period of almost thirty years, from the launch of *Sputnik* in 1957 to the beginnings of glasnost in the late 1980s. Secrecy played itself out through the elimination of contingency, through the limiting of individuals who were allowed to speak, and through the creation of master narratives. Each had its own dynamic, a contested space where actors sought to define their places in the public image of the space program.

How was it that secrecy in the Soviet space program was at its peak during the Khrushchev thaw, a period identified with the relative loosening of controls over free artistic expression? One explanation is structural: besides being a period of cultural freedoms, it was a also a time of heightened tensions between the superpowers, manifested in a massive and expensive race to build strategic missiles. In the Soviet Union the same organizations that designed and built these weapons also designed, built, and launched the *Sputnik*s and *Vostok*s that launched the Soviet cosmic project. Given its proximity to weapons making, the space program had to be shrouded in total secrecy.

There is another way to see this apparent contradiction. The heightened secrecy surrounding the Soviet space program peaked along with the most successful period in the Soviet space program. This was also the first burst of public discourse on the Soviet space program, an explosion that was reflected in the euphoric and frequently hyperbolic claims about the program and the equally euphoric and hyperbolic response of the populace, measured in the thousands of supportive letters sent to newspapers, magazines, and the Academy of Sciences by Soviet people from all walks of life. For a brief period, before disillusionment set in during the early 1970s, the official word and the popular response mirrored and fed each other. The official word—what was being told about the space program—was at a fundamental level about "what ought to be happening." Here we are reminded of historian Sheila Fitzpatrick's trenchant observation about socialist realism, that writers and artists were "urged to . . . [see] life as it was becoming rather than life as it was. . . . Ordinary citizens developed the ability to see things as they were becoming and *ought to be*, rather than as they were."[74] Soviet newspapers, magazines, and exhibitions were less a site of "performance," as such scholars as Jef-

frey Brooks might say, but rather the principal vehicle to *project* the raised expectations of the thaw generation.

To see the official press narratives on the Soviet space program, filtered through the censorship apparatus, as simply a mode for social control of opinions is to miss the point. As the historian Thomas C. Wolfe has noted, the Soviet press "participated in the cultivation of a complex kind of subjectivity and self-concept that is not seen by the scholarly model of an oppressive state tormenting the lone individual with a press devoid of real content."[75] Here, the condition of what "ought to be" (public) was as important as "what was" (secret); they existed simultaneously and were essential to each other. For Soviet citizens during the thaw, especially young Soviet men and women, the notion that there was an ineffable and secret world behind the rhetoric provided a charge to everything said about the Soviet space program. It is no coincidence that that charge of cosmic enthusiasm was at its height during a period of high success in space, a time of raised expectations of the thaw, *and* a regime of draconian secrecy. Triumphs in space and hope for a better society were given an extra boost by secrecy because it lifted the ceiling on people's aspirations and expectations of the future. Without deep knowledge of the inner workings of the Soviet space program, people believed that anything was possible in the near future. For a brief golden period this cosmic enthusiasm helped merge the visible with the invisible, the private with the public, and secrecy with success.