That-Which-Must-Not-Be-Named: Remembering Secrecy in the Soviet Space Program[1]

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Introduction

This policy of unnecessary secrecy did more harm than good.
Boris Chertok, *Rockets and People*, vol. III, p. 16[2]

In our quest to be the first to send a man into space, we had a fundamental advantage over the Americans—the secrecy of our program.
Boris Chertok, *Rockets and People*, vol. III , p. 251[3]

I start with these two quotes from the memoirs of Boris Chertok, the deputy of the Chief Designer of Soviet spacecraft Sergei Korolev, to highlight the contradictory relationship with secrecy that Soviet space engineers had. On the one hand, in their memoirs they often recall secrecy requirements with disdain and ridicule. On the other, secrecy was an essential part of their daily practice, and they could hardly imagine working without it.

This talk is not about government decrees or official procedures. It's not about secrecy as a matter of state. It's about the daily life of secrecy: the routine of checks, the habits of talk, and the inner discipline, the constant sense of self-censorship, which becomes part of an identity under a secrecy regime. It is about the subjective, emotional side of secrecy, about secrecy as a way of life, not just a formal system of norms.[4] I will draw on the Foucauldian emphasis on the productive, rather than restrictive, aspects of power.

My analysis has been inspired by the wonderful anthropological study of the Lawrence Livermore National Laboratory by Hugh Gusterson, based on dozens of interviews with Lab employees and their families.[5] My study draws on interviews I collected for the volume, *Voices of the Soviet Space Program*, and numerous memoirs published by space program veterans in the post-Soviet years.[6] Out of 13 veterans I interviewed, 9 mentioned secrecy. It clearly occupied their minds decades after the events they recalled, and belonged to some of the most emotional parts of their stories.

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[1] Paper for the conference, "Cultures of Secrecy," Zurich, Switzerland, January 2017.
[2] Boris Chertok, *Rockets and People*, vol. III, p. 16.
[3] Chertok, vol. III, p. 251.
[4] On the culture of secrecy in "closed" Soviet cities that emerged around missile and space facilities, see Asif Siddiqi, "Cosmic Contradictions"; Siddiqi, "ZATOs In View," *Russian History Blog*, April 20, 2012, http://russianhistoryblog.org/2012/04/zatos-in-view/. On living conditions in "secret cities," see N. V. Mel'nikova, "Tvortsy sovetskogo atomnogo proekta v rezhimnykh gorodakh," in *Rezhimnye liudi v SSSR*, ed. Kondrat'eva and Sokolov, 49–66; and also studies by Stefan Guth and Anna Wendland. For an insightful comparison with similar settlements in the United States, see Kate Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters* (New York: Oxford University Press, 2013).
[5] Hugh Gusterson, *Nuclear Rites*.
[6] Slava Gerovitch, *Voices of the Soviet Space Program*; Chertok, *Rockets and People*; Iurii Mozzhorin, *Tak eto bylo: Memuary Iu. A. Mozzhorina. Mozzhorin v vospominaniiakh sovremennikov*; Vladimir Syromiatnikov, *100 Stories about Docking and Other Adventures in Space*.

The central metaphor of Gusterson's work is that an institution with strict secrecy policies effectively functions as a secret society. "Investigation for clearance is a bureaucratic variant of classic initiation rituals," he argues. As a cultural anthropologist, he studies the secrecy practices at Livermore as constitutive of the institutional culture of the lab, shaping the identity of lab employees, and structuring their relations with colleagues and their families.

Entering the Secret World

Working in the rocket and space industry required security clearance, though not as high as in nuclear weapons industry. The levels of clearance depended on the level of secrecy of the documents to which an individual would have access. The documents belonged to five different groups. Starting with the least secret:

1. For Official Use Only (Для служебного пользования, ДСП); in the US: For Official Use Only (FOUO) or Restricted
2. Secret (Секретно); in the US: Confidential
3. Completely Secret (Совершенно секретно); in the US: Secret
4. Completely Secret – Particularly Important (Совершенно секретно – особой важности, ССОВ); in the US: Top Secret
5. Completely Secret – Special File (Совершенно секретно – особая папка, ССОП). No analogue in the U.S.

Cosmonaut Georgii Grechko joked that "Completely Secret – Particularly Important" meant "destroy upon reading," while "Completely Secret – Special File" meant "destroy without reading."[7]

Accessing documents of the first group did not require clearance, only following specific restrictive procedures. Accessing "secret" documents requirement third-degree clearance (третья форма допуска); "completely secret" – second-degree clearance; and "particularly important" – first-degree clearance.[8] "Special file" documents were related to the nuclear weapons program, and access to them had only Korolev and his closest associates. When speaking of nuclear warheads for his rockets, Korolev was said to have always lowered his voice to whisper, perhaps out of respect for the mighty weapons, or perhaps partly because he was not sure if the things he discussed could really be shared with the people around him, who might not have had proper clearance.[9]

Entering the cosmodrome (announced to the world as Baikonur, but its real, unmentionable name was Tiura-Tam) required first-degree clearance. A special form was issued, containing 32 marks, which designated various stages in the clearance process.[10] This illustrates what Asif Siddiqi has called "a social map of knowledge," only in reverse.[11] For Siddiqi, social practice creates a map knowledge, and here the clustering of documents effectively divided people into groups, introducing social divisions.

[7] http://www.newizv.ru/news/2007-04-12/67775/
[8] http://center-yf.ru/data/Yuristu/dopusk-k-gosudarstvennoy-tayne.php
[9] Chertok, vol. II, p. 422.
[10] V.F. Khalipov, in *Bessmertie Gagarina*, ed. Ustinov, p. 563.
[11] Asif Siddiqi, "Secrecy, Science, and the Soviet State: Toward a Social Map of Knowledge," Zurich, January 2017.

Secrecy Routines

Once inside the secret world, the engineers had to follow strict procedures for handling classified information. All technical documentation deemed secret was printed on "pinkish-brown blueprint paper" to distinguish it immediately from unclassified paperwork.[12] When making notes or drawing illustrations during a discussion, the engineers could not use any scrap paper, but had to use special laced and sealed notepads with numbered pages, from which one could not tear off a page without leaving a clear trace.[13]

All information passing through unsecured channels, such as telegraph, had to be encrypted. Chertok describes, for example, the procedure for sending telemetry data from monitoring stations (NIPs) to the flight control center:

> Information came from distant stations to NIP-16 in the form of telegrams, the content of which had been encoded, and upon receipt it had to be decoded followed by the mandatory registration of all the messages as was the procedure with the document control of classified material. Throughout all of this a chain of command was also observed: before information requiring an immediate decision reached the flight director, it passed consecutively through the NIP chief, the heads of the communications or telemetry groups, the information-security service, and the analysis group.[14]

Telegrams prepared for encryption were also written down on special secret notepads.[15] All this happened in real time, as a spacecraft was flying, and crucial decisions had to be urgently made.

Routine procedures required any documents taken out of a facility to be put in a container and sealed by a designated security officer. If documents were urgently needed at night, when the security office was closed, even top managers had no choice but to violate the secrecy regime and to break the rules, surmising that their punishment for failing the job would be greater than the punishment for breaking secrecy norms.

Grigorii Kisun'ko, the chief designer of a missile defense system, recalls how he once had to violate the strict secrecy procedures:

> One night I was called in by the chief engineer of the Third Main Directorate, with all necessary documents. This included charts and tables bound in classified notebooks, which were laced, page-numbered, and sealed by the Secrecy Section. But in the evening I had let the section officers go, and it was not possible to seal the documents in a secure container. There was no armed escort, without which it was not permitted to leave, even with a sealed container. So I had to go without all these measures. I just wrapped the notebooks in a newspaper.

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[12] Chertok, vol. III, p. 610.
[13] G.V. Kisun'ko, *Sekretnaya zona: ispoved' general'nogo konstruktora* (Moscow: Sovremennik, 1996), chap. 9 (http://militera.lib.ru/memo/russian/kisunko_gv/09.html).
[14] Chertok, vol. IV, p. 488.
[15] Chertok, vol. IV, p. 159.

Called in by his boss, Kisun'ko had no choice but to break the rules, surmising that the punishment for failing his job would be greater than the punishment for violating secrecy procedures. He was indeed forgiven for this violation.[16]

Coded Language

Even in secret documents, engineers had to use coded language. Space rockets, like combat missiles, were referred to as "articles" (изделие), coded with a "number-letter-number" designation.[17] The same term, "article," was applied to nuclear weapons. The first intercontinental missile, which was also used as a booster to launch Sputnik and then Gagarin, was called by different names depending on the level of secrecy of the document. Top-secret Communist Party and Government resolutions and Ministry decrees referred to it as R-7. In the secret technical documentation, the same missile was called 7R. In other classified documents, it was called "article 8K71." In verbal communication, engineers usually called it "Semyorka," referring to the digit 7 in the article designation. Finally, for the public, it was christened Vostok space rocket.[18] According to Chertok, this "triplicate bookkeeping" was extremely difficult to keep track of, especially, if personnel with different degrees of clearance was involved. Top managers had to manually write in top secret names of missiles into blank spaces left in documents prepared by typists.[19]

Space engineers got so used to using the term "article" instead of "missile" that they stuck to the same code in interviews conducted decades after their retirement and after the collapse of the state for which they once worked. A similar phenomenon was noted by Gusterson. For example, Herb York, a former director of Livermore, recalled that when working on uranium separation project during World War II, he was told never to use the word "uranium" and to say "tuballoy" instead .

> To my recollection, following my first day I never again heard the word "uranium" either in a normal conversation or in a confidential aside. This custom-this way of living, working, and thinking with code words became deeply ingrained in me and everyone I knew. As a result, after news of the bomb burst upon the public two and a half years later, it was deeply shocking for me to read that forbidden word in the headlines and to hear people utter it out loud-with a certain awe, to be sure, but nonetheless as if it were just another, normal word. Hearing it was one of those things that caused a sudden, queasy feeling in the pit of the stomach. Something was badly awry. I clearly recall that for me, saying "uranium" out loud had become the equivalent to cursing one's mother – I could not possibly have done either.[20]

Cosmonauts also used coded language for communication with the ground, in order to avoid disclosing information over open airways. For example, in cosmonaut Vladimir Komarov's training journal, technical and health issues were reported in the language borrowed from botany: retrofire malfunction was designated as "fir tree"; elevated radiation level as

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[16] Kisun'ko, chap. 9 (http://militera.lib.ru/memo/russian/kisunko_gv/09.html).
[17] Chertok, vol. II, p. 244, 277.
[18] Chertok, vol. II, p. 317.
[19] Chertok, vol. II, p. 421.
[20] Gusterson, pp. 89-90.

"banana"; vomiting as "rose"; and the need to terminate flight as "dahlia." This vocabulary varied from mission to mission. For cosmonaut Valentina Tereshkova, for instance, inability to operate equipment was called "birch tree"; retrofire success "oak"; retrofire malfunction "elm"; and vomiting "rowan." For cosmonaut Pavel Popovich, vomiting was designated as "thunderstorm," and he caused panic on the ground when reported seeing a thunderstorm on Earth. Doctors became anxious, and he had to clarify that it was a meteorological thunderstorm.[21]

Since cosmonauts' coded terminology changed from flight to flight, it did not become ingrained in their communication. Among engineers, by contrast, secret terminology was used consistently for decades, and became part of their professional jargon.

Internalized Surveillance

Being under constant watch, people become self-conscious and begin to watch themselves even more thorough than outside minders. Gusterson calls this phenomenon "internalized surveillance": Livermore scientists assume that their telephone conversations are monitored and begin to limit their conversations to "safe" topics, even if they don't touch classified matters. To avoid risking their security clearances, they prefer not to discuss, for example, political topics. "Thus," Gusterson argues, "even in the absence of overt warnings against political dissent, surveillance had expanded for many employees from a technique for finding breaches of classification into a more generalized mechanism for disciplining amorphous political deviance."[22] Soviet space engineers similarly avoided political issues in their conversations. As one interviewee admitted, "there were no dissidents among us."[23]

Segregation

Secrecy draws lines between those in the know and those in the dark. It separates; it establishes classes; it creates a social structure. Not only documents are classified, people are classified as well – as belonging to different groups according to their degree of clearance. Communication between different groups is restricted, and they are often physically separated. Secrecy creates segregation.

The simplest form of segregation was creating special spaces for secret work. Classified matters could be discussed at "secure" facilities with limited access, such as the Institute of Applied Mathematics, but could not be raised, for example, in the building of the Presidium of the Soviet Academy of Sciences, frequented by foreign visitors.[24] Segregation also occurred within "secure" facilities – between those with higher and lower clearances. Chertok recalls that in Korolev's design bureau a group involved in the design on the nuclear warhead, which had a higher security clearance, was "treated like a delegation from a foreign country. It had special rooms closed off from other work rooms and had its own top-secret records management system."[25] While monitoring space missions, groups of telemetry, analysis, and systems

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[21] Valentina Ponomareva, *Zhenskoe litso kosmosa*, chap. 6.
[22] Gusterson, p. 85.
[23] Vladimir Syromiatnikov, *100 Stories about Docking and Other Adventures in Space: Twenty Years Back*, vol. 1 (Moscow: Universitetskaia kniga, 2005), 463. Syromiatnikov confirmed this during our interview.
[24] Chertok, vol. IV, p. 126.
[25] Chertok, vol. II, p. 277.

specialists were strictly separated, and the communication among the groups was subjected to cumbersome procedures reminiscent of the "rigid military order and discipline."[26] In case of crisis, however, in order to facilitate fast decision-making, specialists "abandoned restraint and violated regulations."[27] Ironically, crisis-related information was precisely the kind that the authorities would want to conceal.

Classified information was effectively hidden from colleagues working just next door, even if they had security clearances. Several interviewees mentioned that they had been unaware of Gagarin's impending launch, even though they had worked for the space industry. A military officer working at a nearby launch site was not privy to this information.[28] A space engineer who worked on onboard equipment for cosmonauts visited Korolev's bureau on business on April 12, 1961, and he had no idea that this would be the day when their instruments would for the first time be used in space.[29]

Secrecy procedures were often used by space industry leaders to achieve their own goals, in particular, to hide information from competitors. For example, the each missile chief designer built a separate test launch site at Tiura-Tam, with the sites separated by 40 to 50 kilometers. Chertok called it "peculiar feudalism, where each chief secludes himself from his colleagues behind a wall of secrecy."[30] When a group of engineers from Vladimir Chelomei's design bureau visited the bureau led by his rival, chief designer Mikhail Iangel', the latter forbade the visitors from taking with then their handwritten notes, citing security regulations. Chelomei had to appeal directly to Khrushchev to get the notes back.[31] Secrecy also created hurdles in the chain of contractors and subcontractors. The designers of parts often had only a vague idea of the work of the entire system, while the integration designers did not understand how the parts worked. As a result, the overall design proved less effective.[32] Facing such practices, perpetuated not merely by formal rules, but by chief designers themselves, defense industry chief Dmitrii Ustinov bitterly complained at a top-management meeting: "Our design bureaus are concealing their projects from one another more stringently than they would from foreign spies. We need to organize an active exchange of information and experience."[33]

Various defense agencies routinely used secrecy to protect their projects from interference by other agencies. For example, the Moscow air defense system code named *Berkut* was kept secret from the Ministry of Defense.[34] The Ministry of Defense, in turn, did not share classified information with the rocketry research institute that worked on design guidelines for new missile development. The Institute's director Iurii Mozzhorin recalled, "As a civilian research institute, we lacked official information from the Ministry of Defense about the defense doctrine, methods of combat use of nuclear missiles, and their intended targets. We could not count on earning trust by the military, who considered this information top secret and belonging entirely to their domain." As a result, the institute formulated missile development policy without any help from the Ministry of Defense.[35] The director's mention of "official

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[26] Chertok, vol. IV, p. 488.
[27] Chertok, vol. III, p. 638.
[28] Safro interview in Gerovitch, *Voices*, pp. 32-33.
[29] Tyapchenko interview in Gerovitch, *Voices*, p. 110.
[30] Chertok, vol. IV, p. 310.
[31] Kisun'ko, chap. 17 (http://militera.lib.ru/memo/russian/kisunko_gv/17.html).
[32] Syromiatnikov, vol. II, p. 94.
[33] Chertok, vol. IV, p. 289.
[34] Kisun'ko, chap. 8 (http://militera.lib.ru/memo/russian/kisunko_gv/08.html).
[35] Mozzhorin.

information" is characteristic. He may have obtained some necessary details through unofficial channels.

Selective sharing of information was also typical of the chief designers, including Sergei Korolev. He had access to various sources of top secret information, which he discreetly shared with his close associates. For example, he showed his "inner circle" classified reports of developments in the American space program.[36] Sometimes he would "leak" information they were not officially supposed to know, hinting at important news, such as the creation of the first Soviet missile-defense system, which was totally separate from Korolev's development of intercontinental ballistic missiles. When speaking of nuclear weapons, that is, a subject of the highest degree of secrecy, he always lowered his voice. Acting like a leader of a secret order, who brings its ordinary members revelations from above, he was creating in his circle the sense of privileged access to higher truth.[37]

The Aura of Secrecy

Gusterson notes that many so-called secrets are mundane and just appear important to those who don't know them. "Still," he argues, "regardless of whether they are secret because they are important or important because they are secret, secrets are exciting. Secrecy is a means by which power constructs itself as power, and the knowledge of secrets is a perquisite of power. … To know these secrets, then, is to be transformed into a member of a privileged elite. … it gives the laboratory a certain mystique, and it compensates laboratory scientists for the sacrifices they must make to work there."[38]

Secrecy brought with it an aura of prestige. A Soviet military veteran I interviewed proudly recalled how he was among the best officers specially selected to serve in rocketry units, "new secret weapons" at the time.[39] A veteran engineer wrote in his memoirs how, in his college years, the most prestigious specialties were the most secret and required the highest clearance, and were therefore sought after by him and his friends.[40] Other veteran engineers told me with pride that their college thesis on reactive engine design was classified as "strictly secret"[41] or how they agreed to work for a space contractor without being told any details of the job, because they were secret.[42] Chertok recalled how rocket engineers had to sign all their publications in the open press with pseudonyms. He wrote, "Such circumstances amused us and even filled us with pride: look how valuable we were to the state!"[43] As he put it, the engineers "had not only experienced the pangs of creation, but had also tasted the first fruits of secret celebrity;"[44] "the atmosphere of secrecy and protection that surrounded our work flattered their vanity."[45]

Even Chertok could not restrain himself from boasting about access to privileged information. When an official Soviet statement in August 1957 claimed a successful test of an intercontinental ballistic missile, only the select few knew that it was a bluff: the test missile had

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[36] Chertok, vol. III, p. 246.
[37] Chertok, vol. III, p. 314.
[38] Gusterson, pp. 87-88.
[39] Krayzman interview in Gerovitch, *Voices*, p. 20.
[40] Syromiatnikov, chap. 1 (http://www.razlib.ru/astronomija_i_kosmos/100_rasskazov_o_stykovke/p5.php).
[41] Daron interview in Gerovitch, *Voices*, p. 41.
[42] Priss interview in Gerovitch, *Voices*, p. 97.
[43] Chertok, vol. IV, p. 455.
[44] Chertok, vol. IV, p. 117.
[45] Chertok, vol. II, p. 395.

to warhead. "Aside from the very few of us who were privy to the secret results of the flight tests, no one knew," wrote Chertok in his memoirs.[46]

Korolev's biographer Iaroslav Golovanov wrote:

> Korolev liked secrecy. … Yes, secrecy burdened him. Yet he liked the aura of mysterious significance, which surrounded him and his work, which made him unlike anyone else – a chosen invisible man. Riding in his *Chaika* automobile in the streets of Moscow, he felt like a padishah, who dressed a beggar and disappeared in the crowd. Reading foreign media reports, in which journalists … were trying to guess who might be the enigmatic "Chief Designer," he was not so much vexed and annoyed by their ignorance, as he felt sweet pleasure and hidden joy.[47]

At one spot the barrier of secrecy that separated space engineers from the general public came dangerously close to them – where it separated them from their own families.

A Secret in the Family

In his study of Livermore, Gusterson has described the tension between nuclear scientists' family life and work in terms of a contradiction in values: the sentimental values of the domestic sphere had "the potential to disrupt the masculine world of the public sphere."[48] Secrecy, he argues, creates "a disciplinary distance between weapons scientists and their families" and effectively "insulates weapons scientists from questions and challenges about their work and maintains a seal between the values of the public and domestic spheres." As one scientist put it, "I lived one life at work, and when I was at home I lived another life."[49] This often created a painful emotional distance between family members. "A local minister called laboratory wives 'science widows.'"[50]

The Soviet space industry was part of the vast rocketry and nuclear weapons military complex, and rocket engineers were subject to the same strict secrecy regulations as the rest of defense industry, or even stricter. The 1957 Ministry of Defense regulations called for "preventing any cases of disclose in private correspondence or conversations with relatives and friends of any information about the location and true name of a military unit or institution, and about the nature of its work."[51] Private correspondence was routinely screened for disclosure of state secrets. The stern warnings did not stop a wave of regime violations. In one military unit, for example, in just one month of July 1959, the censors found 62 cases of violation of the secrecy regime in private letters; in another unit, 780 violations of the entrance procedure were reported in one month. In December 1959 the minister of defense issued a new harsh order "to do away with liberalism and to punish severely those who allow heedlessness and lax vigilance."[52]

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[46] Chertok, vol. II, p. 383.
[47] Golovanov, *Korolev*, pp. 688-689.
[48] Gusterson, p. 97.
[49] Gusterson, pp. 98-99.
[50] Gusterson, p. 100.
[51] Vladimir I. Ivkin and Grigorii A. Sukhina, eds., *Zadacha osoboi gosudarstvennoi vazhnosti: Iz istorii sozdaniia raketno-iadernogo oruzhiia i raketnykh voisk strategicheskogo naznacheniia (1945–1959 gg.)* (Moscow: Rosspen, 2010), 573.
[52] Ivkin and Sukhina, eds., *Zadacha osoboi gosudarstvennoi vazhnosti*, 883.

Secrecy deeply impacted the family lives of Soviet space engineers and cosmonauts as well. When Vladimir Shatalov, then an Air Force pilot in Odessa, Ukraine, was invited to Moscow for a series of medical tests required for cosmonaut selection, he was not allowed to tell his family the true reason for his trip. He tells the story in his interview:

> I spent a month in a hospital undergoing those tests. We were warned not to tell anyone about it. Many candidates failed the tests, but I stayed to the end. At the concluding meeting, I was told that everything was all right, and I should expect a call. I took off my hospital coat, grabbed my lieutenant colonel uniform out of the closet, where I had hung it when I arrived, put it on, and returned to Odessa. Then my mother interrogated me as to where I had been for a whole month without any message or phone call. I invented a story that I had to fly a lot and had to report to the draft design commission . . . She said, "Nonsense. I know how I wash and iron clothes. You did not wear any of it." Then I said I was not feeling well and had to spend some time in the hospital for check-up and some treatment. I said nothing of the cosmonaut group, and nobody knew anything.[53]

Even after he moved to Star City, he could not tell the truth to his wife, who for a time remained in Odessa. His inventions soon provoked a family crisis:

> In April 1963, the cosmonauts went to a concert dedicated to the Cosmonautics Day. That concert was broadcast on television, and the camera turned to the audience and showed a group of cosmonauts, including myself. Then my wife asked me how come I had to sit among the cosmonauts. I again invented a story how I was in Moscow, bought a ticket to the concert and was lucky to get a seat next to the cosmonauts. She did not believe me. Well, I said, keep it quiet. Such were the times.[54]

Space industry managers clearly realized the difficulties posed by the attempts to reconcile family life with the demands of secrecy. A veteran space engineer recalled how soon after finishing college he was assigned to work on a classified project. "My supervisor decided to send me … to work on that problem. I was a bachelor and could more easily go on business trips than others. Thus I was assigned to work on a top secret military project."[55]

Sergei Korolev took secrecy regulations very seriously. He treated them as "mandatory, necessary, and fair." He never brought any classified papers home, did not keep a diary, and never discussed work-related matters at home. As his biographer put it, "if a tape recorder were installed at Korolev's house, which recorded all family conversations, then even if one listened to the recordings for many months, one would be hard put to tell where Korolev worked and what he did."[56]

Conclusion

In the post-Soviet era, when Russia and the United States began closely collaborating in space, many secrecy restrictions were lifted. The U.S. Space Shuttle flew several missions, docking

[53] Shatalov interview in Gerovitch, *Voices*, pp. 175-176.
[54] Shatalov interview in Gerovitch, *Voices*, p. 176.
[55] Meschansky interview in Gerovitch, *Voices*, p. 101.
[56] Golovanov, *Korolev*, p. 687.

with the Russian space station Mir. This amazing feat of space technology, however, produced little public interest. A veteran engineer explained it this way: “Nobody expressed admiration for the “space brothers,” like in good ol’ days. Everything was open, the aura of secrecy gone, and the interest of the public largely disappeared with it.”[57] The space enterprise lost the mystique of secrecy, and with it, it lost its prestige, both among the public and among the engineers.

This makes one think of important functions of secrecy far beyond the mere protection of defense secrets. As Gusterson has put it, secrecy constructs “a particular social order within the laboratory and a particular relationship between laboratory scientists and the outside world.”[58] Within the walls of space design bureaus, secrecy introduced social segregation and hierarchy, based on access to secrets. As Asif Siddiqi has argued, “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.”[59]

Secrecy was not entirely imposed on space engineers from above. The chief designers themselves perpetuated and enforced the secrecy regime as something essential to the engineering culture of their design bureaus. Chertok recalled that “the ‘top’ designers, who drew up and signed the [government – S.G.] decrees, believed that absolute secrecy was every bit as necessary as when producing new combat missiles.”[60]

Gusterson has compared the Livermore National Laboratory to what sociologist Erving Goffman termed “total institutions” – “institutions that are able to sever, control, or reduce the individual's contacts with the rest of society and regulate the minute details of his or her daily existence.” Such institutions, Gusterson argues, “have a powerful ability to ‘deself’ people: to alter their position in a field of social relationships and thus to peel away their old identities and create new ones.”[61]

Upon entering the secret world, Soviet space engineers lost their former selves and turned into professional bearers of secrets. They internalized security norms and could write, speak, and perhaps even think only in a regulated way. They turned into *homo secretus*, people without names, working on something unmentionable. “Secret celebrity” became an essential part of their identity, a source of their pride and a consolation for anonymity. They viewed secrecy not as a wall separating them from society, but as a pedestal raising them above it. The burden and absurdity of secrecy regulations was a small price to pay for standing on the pedestal.

[57] Syromiatnikov, vol. II, p. 441.
[58] Gusterson, p. 80.
[59] Siddiqi, “Cosmic Contradictions,” p. 56.
[60] Chertok, vol. IV, p. 66.
[61] Gusterson, p. 81.