

Soviet Space Mythologies: Public Images, Private Memories and the Making of a Cultural Identity by Slava Gerovitch (review)

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budget constraints. Logsdon suggests that in order to remain competitive with other government agencies, it dared not become less ambitious.

Although the STS failed to fulfill many of the claims that were used to sell it (for example, it only flew 4.3 missions per year rather than the promised 40–60, and the cost and effort to service the shuttles between missions were much greater than expected), Logsdon concludes that the three-decades-long program "served the nation well as a focus for US space leadership and the resultant prestige and pride" (p. 292). It also opened up space to scientists and other "specialist" astronauts, rather than keeping space travel limited to military test pilots. It even accomplished at least one geopolitical goal, promoting cooperation in space through the successful construction of the International Space Station.

Logsdon's attention to detail is intense. The bureaucratic nature of NASA and the U.S. government in general gave him an embarrassment of riches to work with in the form of memos, reports, and correspondence. These were supplemented by interviews Logsdon conducted with NASA and Nixon White House insiders beginning in the 1970s. At times it is difficult to see the forest through the trees, as the details of meetings and advisory reports begin to pile up. It is helpful that Logsdon provides an "Overture," an "Intermission," and an "Epilogue" within which he crystallizes his argument.

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Soviet Space Mythologies: Public Images, Private Memories and the Making of a Cultural Identity.

By Slava Gerovitch. Pittsburgh, PA: University of Pittsburgh Press, 2015. Pp. xviii+232. \$27.95.

With Soviet Space Mythologies, Slava Gerovitch has given us a vitally important and beautifully written contribution to the growing historiography on the Space Race. As with his first monograph, From Newspeak to Cyberspeak (2002), Gerovitch masterfully mixes methods from the history of science and technology with cultural history. Here, he argues that the Soviet Union's unique path within a global technological development emerged from and further reproduced two distinct cultural identities: Soviet rocket engineers like Sergei Korolev, Valentin Glushko, and Boris Chertok carved out a space of privileged autonomy while working in public obscurity, while cosmonauts such as Yuri Gagarin, Alexei Leonov, and Aleksandra Tereshkova enjoyed (and suffered through) global celebrity even as their technical roles in manned spaceflight were rather limited. Out of the contradictions

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within these two professional identities and the tensions between them developed a powerful mythology of the Soviet "conquest" of space.

Gerovitch draws and expands on recent scholarship on the history of the USSR's space program, in particular Asif Siddiqi's *The Red Rockets' Glare* (2010) and Andrew Jenks's biography of Gagarin, *The Cosmonaut Who Couldn't Stop Smiling* (2012). Whereas Siddiqi focuses on the pre-Sputnik history of Russian and Soviet rocket science visionaries and Jenks uses Gagarin to talk about Soviet celebrity culture, Gerovitch demonstrates the interplay between engineers and mass culture during the post-Sputnik era (1958–present). *Soviet Space Mythologies* hinges on a long-running debate between rocket designer Korolev and the 1930s aviator-turned-cosmonaut trainer General Nikolai Kamanin over the degree of automation on manned rockets. While the engineers working in Korolev's Special Design Bureau No. 1 argued that the inevitability of human error made automation a necessity, Kamanin and the cosmonauts that he trained urged Soviet authorities to allow space *pilots* to assume more manual control over the Vostok and Soyuz rockets during the 1960s–70s.

Despite a subtle evolution of emphasis, the engineers' prerogative remained hegemonic in the Soviet space program even as automation and a general lack of clarity surrounding the cosmonaut's role led to mounting mission failures along with growing American dominance in space exploration. Gerovitch points out that, while both the American and Soviet programs favored automation, the U.S. program was simultaneously more organized from the top-down and more flexible with astronauts' manual operations that allowed for leaner, more easily maneuverable rockets. The key to Gerovitch's argument lies in the agency he gives to the engineers' professional identities. Contrary to popular conceptions of Soviet science and technology, he claims that automation did not emerge (only) from a totalitarian conception of human-machine relations, but (primarily) because individual engineers asserted their superior expertise. Soviet Space Mythologies compels us to question our assumptions about the Soviet preference for automation in space flight and demonstrates how this outcome was never predetermined by a "totalitarian" mind-set in the Soviet Union. Instead, automation emerged from heated debates among political and Communist Party leaders and the military, along with scientists, psychologists, and engineers.

Gerovitch asserts that the professional identities of cosmonauts and engineers were (and continue to be) shaped through the articulation and then circulation of private memories, even as both groups were profoundly influenced by the public mythologies that they helped construct. This consistent observation emerges from the author's extensive use of memoirs, diaries, and personal interviews, alongside some limited archival materials from the Russian State Archive of the Economy. He notes that space insti-

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tutions continue to control access to related archival documents, but out of this dearth of traditional historical evidence emerges a convincing argument about the interrelationship but also "struggle between master narratives and an array of counter-stories" (p. 7) about the Soviet space program.

APRIL 2017 VOL. 58 Case in point: Gerovitch dedicates an entire chapter to the narrative of Gagarin's Vostok flight in 1961. Here he compares different accounts of the event, from the official story that established a popular mythology to the report Gagarin gave to the authorities, and to the various memoirs and posthumous diaries published recently. Each of these accounts articulates different truths, and not only because of censorship imposed from above. In highlighting these discrepancies, Gerovitch suggests not a binary opposition between Soviet media falsehoods and recent revelations, but instead the construction of "multiple myths, passed from one generation to another as part of the professional culture of these groups" (p. 69).

The strength of *Soviet Space Mythologies* lies not in any claim to uncover new facts about the Soviet space program, but in the author's ability to reveal the nature of the relationship between human agency and technological determinism through a seemingly mundane debate about who would control space flight. In this sense, Gerovitch's book is a stellar example of the nascent field of Soviet history of science and technology.

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ENIAC in Action: Making and Remaking the Modern Computer.

By Thomas Haigh, Mark Priestley, and Crispin Rope. Cambridge, MA: MIT Press, 2016. Pp. 360. \$38.

Today, a book on one machine is something one would look at Arguseyed. Indeed, contemporary historiography has a tendency to move away from machine-centered narratives and focus instead on the human side of computing. As a consequence, the history of computing is often less about the technical artifacts than it is about sociological, political, and industrial developments. This, however, need not imply a neglect of the actual practices around a machine. Indeed, in the past years researchers have re-engaged with the technical histories underpinning computational practices in order to integrate different approaches.

ENIAC in Action is an important product from that perspective, and it adopts a pluralistic method. It explores the formal and engineering practices around ENIAC, which are reconstructed from a rich collection of archival sources, but also engages, for instance, with literature on gender and on military procurement. In that way, the authors carefully unravel ENIAC's history against some popular narratives and so provide a more