

Where Kohonen is most insightful is in how she deals with the human element of the Soviet space program. Cosmonauts were made into heroes, much as U.S. astronauts were in the days of Mercury, Gemini, and Apollo. But the Soviet government made its heroes very human at the same time. Unknown before successful flights, they achieved heroic stature quickly and then were presented as everyday men. There was a certain paradox in the way Soviet censors tried to make cosmonauts ordinary, as befit Communist ideology. The book has chapter titles that include “A Completely Ordinary Hero,” “The Housebroken Hero,” and “The Tormented Hero.” Cosmonauts were shown as family men at home, with wives and children. They could even be clumsy.

The contradiction of heroism and ordinariness is brought out nicely in a particular discovery the author makes about the most heroic of all the Soviet cosmonauts, Yuri Gagarin. Most photos of this “first man in space” show him as strong, handsome, and without flaws. But she found a film in which this superhero is walking down a red carpet to be embraced by the Soviet leader Nikita Khrushchev. Everything is just right about the scene, except for one detail the author spies: Gagarin’s shoelaces are untied. He might have tripped over his own laces. How could this detail be left in? Kohonen believes it was deliberate, a way to convey the humanity of the hero. He can err. Ironically, later versions of the same scene eliminate Khrushchev. The Soviets removed the leader from pictures when he was deposed from power.

Pictures do matter, and the contradictions of Soviet politics and ideology are made clear in *Picturing the Cosmos*. It is a good book, offering a different look at Soviet policy in the USSR’s Golden Age of space achievement. Like America, the Soviet Union saw the public relations benefits of space endeavors. The Soviets had greater control over media displays than did the United States, and hence the clash between censorship and reality is more obvious. But in both nations the use of space for political messaging mattered—and matters still.

I do have one quibble: the book could have benefited from an index.

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**Alexander C. T. Geppert** (Editor). *Limiting Outer Space: Astroculture after Apollo*. (Palgrave Studies in the History of Science and Technology: European Astroculture, 2.) xxiv + 367 pp., figs., bibl., index. London: Palgrave Macmillan, 2018. \$109 (cloth). ISBN 9781137369154.

The Apollo moon landings were not the start of a new space era, as many had hoped, but, rather, the end of two decades of excitement and anticipation. The Apollo project had demonstrated how much was possible, but also how difficult and expensive going into space was. Now the space race was over, and the world turned to other, more urgent issues—or in any case the American government did. There would be no Mars mission, as NASA had hoped, only short-lived space stations in Earth orbit. Any exploration further afield was to be conducted by robots such as the Pioneer and Voyager spacecraft. In the 1970s, man’s future in outer space no longer seemed limitless, as Alexander Geppert writes in his introduction (p. 16).

The essays in *Limiting Outer Space* focus on “astroculture” in the 1970s, described by Martin Collins in his historiographical essay as the “in-between decade” (p. 29). It was the decade between Apollo and President Reagan’s Strategic Defense Initiative (a.k.a. Star Wars), but also between 2001: A *Space Odyssey* (1968) and, say, *Moonraker* and *Alien* (both 1979). The contributors to this volume want to show that, culturally, the crisis of spaceflight in the 1970s is at least as interesting as the preceding “space age.” While

the high-flying, science-fiction-style expectations were toned down after real spacecraft had been seen in action, this did not mean that there were no more space enthusiasts, and utopian expectations also still flourished—not just despite the “more urgent issues” that I referred to in the first paragraph, but also because of them, according to these authors. Issues such as social inequality, the Vietnam War, environmental pollution, and the “limits to growth” did not stop people from dreaming about space. On the contrary. Iconic photos of the Earth as seen from outer space (the “Blue Marble”) made environmental issues a “global” concern in a fundamentally new sense. And if resources on Earth were limited, or mankind was about to make it uninhabitable by pollution or nuclear war, that was all the more reason to look beyond our planet, wasn't it?

This is the second book of a trilogy about “astroculture,” based on a 2012 symposium that was related to a research project on European astroculture at the Freie Universität Berlin. The first volume, *Imagining Outer Space* (Palgrave Macmillan, 2012), also addressed European space culture, though not in one specific period; the third volume will focus on the military dimensions of space. “Astroculture” is somewhat pompously defined as “the interplay of different social groups and heterogeneous cultural forms aiming to ascribe meaning to the infinite void that surrounds Planet Earth” (p. 17). In practice, the essays discuss space policy as well as a wide variety of space-related culture: films (including the inevitable 2001, discussed by Robert Poole), literature, toys, utopian societies, and international diplomacy.

The essays especially discuss the changing relation between space and the quest for utopia, in a time when the prospect of unlimited growth was no longer self-evident. The wild expectations of the 1950s became more pragmatic in the 1970s. Instead of delivering instant world peace, a Soviet and an American astronaut symbolically shook hands in space. The Outer Space and Moon treaties (1967 and 1979; discussed in an essay by Luca Follis) defined space as the “province and heritage of mankind,” anticipating activities and benefits in the future while trying to take the Cold War out of space as much as possible. Moreover, the discussions about these treaties were linked with discussions about international equality and justice. As always, space reflected earthly concerns.

The authors also aim to take the Cold War out of space—or at least out of space history. For example, they want to look further than the two superpowers, emphasizing developments in Europe, both East and West (though mostly West), with essays about literature, films, Spacelab, and, for example, LEGO's immensely successful space toy sets from this period (an essay by Thore Bjørnvig). They succeed in part. European astroculture is certainly interesting enough, but this volume also underlines again the overwhelming dominance of America. All things related to space in the 1970s are first and foremost “post-Apollo.”

The paradoxes of the era are perhaps most visible in an essay by Peter Westwick. He demonstrates how members of the idealistic L5 Society ended up supporting Reagan's Star Wars project, not because they considered the weaponization of space a good idea, but because it appeared to be the only way to keep the government interested in developing the technology that was needed for the utopian space colonies that the L5 Society promoted.

Like any edited volume, this is a collection of rather different case studies. It is held together by its chronological and thematic framework. As it turns out, astroculture in the 1970s is certainly worth the effort—too bad the price of the book puts it out of reach for most historians. The scholarship is generally good, and the case studies are well chosen, if not always surprising. It very much reminded me of David Kaiser and W. Patrick McCray's *Groovy Science* (Chicago, 2016), which, interestingly, is not quoted (although other work by the contributors to that volume is). Although less light-footed, this volume also celebrates the paradoxes of the 1970s, when idealism, power politics, and commercial savvy were seamlessly connected.

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