

social dimension of technology—being the launchpad of a new profession. The invention and evolution of space technology prove inextricably interwoven with the invention and evolution of the American astronaut.

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### **Imagining Outer Space: European Astroculture in the Twentieth Century.**

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In 1997, Howard McCurdy published his pathbreaking *Space and the American Imagination*, which related the dreams of spaceflight to the larger American culture. Asif Siddiqi has also explored this theme in the context of the Russians in his *The Red Rockets' Glare: Spaceflight and the Soviet Imagination, 1857–1957* (2010), while this collected work seeks to do the same for the nations of Europe. In *Imagining Outer Space: European Astroculture in the Twentieth Century*, Alexander Geppert brings together an eclectic though insightful collection of essays to address this question.

Geppert dubs the study of this phenomenon “astroculture,” which is essentially shorthand for “how did the idea of outer space, spaceflight and space exploration develop over the course of the twentieth century into a central element of the project of Western and in particular European modernity” (p. 6). It also seeks to describe how “outer space [was] represented and communicated, imaged, popularized and perceived in media” (ibid.). This notion of astroculture in Europe has some analytical potential, especially as it relates to the longstanding fascination of a subculture of Europeans in the prospects of spaceflight. This subculture ranges from science fiction—such depictions as Tintin, Dan Cooper, and *Space: 1999* come to mind—to nonfiction, such as reporting in magazines like *Aus Forschung und Technik* and *Science et Vie*, to oddities like UFO sightings in Europe. Geppert assembles chapters on all of these subjects, and many more, in this quite revealing collection of essays.

Several of the essays are genuine gems that not only stand on their own, but also reinforce themes in other chapters. For example, the film image of Wernher von Braun explored by Michael Neufeld and William Macauley’s essay on the Pioneers 10 and 11 plaques provide uniquely European perspectives on U.S. space activities. Some of the chapters deal with very recent events, such as the Tristan Weddigen piece on the Mars lander Beagle 2 and broader essays on space and culture by Geppert, Steven Dick, Bernd Müt-

ter, and Rainer Eisfeld; others focus on earlier time frames, such as Claudia Schmölders's chapter on the 1908 Tunguska event.

Several of the essays venture into the esoteric and weird world of UFOs and alien life. Indeed, if there is one larger theme in this volume, it is the European fascination with life beyond Earth. Fully eight of seventeen chapters deal with the issue of UFO visitation, the search for extraterrestrial intelligence, or the potentialities of contact with nonhuman life. In this arena, I found Thomas Brandstetter's investigation of crystalline aliens and James Miller's exposé of the political repercussions of French UFO sightings particularly evocative.

It is difficult to ascertain a well-defined definition of astroculture from this volume. Geppert expends considerable effort to bring it into focus, emphasizing the relationships and reconciliations of society, culture, and space in the European context. Depending on the disciplinary tradition of the various authors, however, this definition becomes muddled and transformed by perspectives drawn from anthropology, cultural studies, art history, history of science, science and technology studies, history, and philosophy. The differing analytical styles range from the historical analysis of Guillaume de Syon, to Thore Bjørnvig's literary turn on Arthur C. Clarke's writings about weightlessness, to Debora Battaglia's highly personal anthropological account of encountering astrobiology for the first time.

While each investigative approach has its own unique strengths and weaknesses, the broad variety is both refreshing and unnerving. When considered as a collection, *Imagining Outer Space* offers a set of lenses through which anyone may view the unique experience of space enthusiasm in Europe. This represents the considerable strength of the volume, as multidisciplinary offers one insight after another in many different contexts. That same multidisciplinary, however, is often jarring, and the experience of reading this book often leads to head-spinning disjunctiveness. Because of the divergence of approaches and the nonlinearity of inquiry, the question must be asked: So what? We will have to wait for further investigations of astroculture to answer that question. Will Geppert, as I hope he does, undertake an effort to systematize the idea of astroculture?

As it is, *Imagining Outer Space* offers rich potential in explaining the infatuation of spaceflight by Europeans of many different nationalities and cultures. It may well jump-start a new approach to the history of spaceflight, something beyond the well-worn space-policy and geopolitical studies that are so much a part of the field. Without question, astrocultural investigation is one of the more interesting and original efforts to restructure spaceflight history in the early twenty-first century.

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