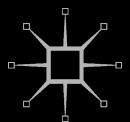




IMAGINING OUTER SPACE

European Astroculture
in the Twentieth Century

EDITED BY
Alexander C.T. Geppert



‘This wonderful multinational and multidisciplinary collection is greater than the sum of its fascinating parts. Crystalline aliens, a mysterious Siberian explosion, silicon-based life forms, *Tintin*, *Thunderbirds*, *Star Trek* and Raélians are just some of the many things which are examined in a brilliantly eclectic series of essays.’

—David Edgerton, Imperial College London

‘With generous references to the scholarship and original sources, as well as its own intelligent and well-integrated contributions, this book establishes a comprehensive new field of research – “astroculture.”’

—Michael G. Smith, Purdue University

‘Europe too has a history of imagining outer space, distinct from yet inextricably linked with global cultures of perceiving and experiencing the universe. This splendid volume offers a fascinating panorama of visions of the future. Anyone interested in the complex relationship between technology, space and culture will garner much from this groundbreaking work.’

—Helmuth Trischler, Deutsches Museum

‘Intriguing. [...] A book of essays filled with European perspectives on space and spaciness.’

—Alexis C. Madrigal, *The Atlantic*

Imagining Outer Space is a brilliantly organized compendium of current scholarship at the intersection between space history and the popular cultures of science/fiction. It also sheds new light on the often underplayed European contributions to imagining outer space as a richly inhabited human realm. It

successfully establishes “astroculture” as an energetic and growing area of scholarly production and debate.’

—De Witt Douglas Kilgore, *Science Fiction Studies*

‘However peripheral Europe’s contributions to the Space Age may have been, nothing was spared in the imagination. The matter was of exemplary global interest, after all. It is the details that count here, and the contributions in this volume offer plenty: crystalline aliens and Mars scenarios, spaceflight in comic strips and ghost rockets (a European equivalent to flying saucers), UFOs in postwar France and well-intentioned offers of interstellar communication.’

—Helmut Mayer, *Frankfurter Allgemeine Zeitung*

‘*Imagining Outer Space* offers an interdisciplinary and transnational approach to the cultural and social history of the space age in Europe. It is its redrawing of the disciplinary boundaries of space history that should be most applauded. [...] Highly recommended not only to readers interested in the history of outer space and the Space Age.’

—Anke Ortlepp, *H-Soz-u-Kult*

‘With its emphasis on multidisciplinary, and its wide variety of contributions, topics, and themes, *Imagining Outer Space* demonstrates the rich potential that astrocultural studies holds for the field of the history of spaceflight, while at the same time, it truly contains something for everyone.’

—Janet Vertesi, *Quest: History of Spaceflight Quarterly*

‘This is clearly an important contribution to the literature and a stimulus to ongoing and future debates and endeavours in the intertwining realms of culture, space and technology.’

—Derek Hall, *Space Policy*

‘*Imagining Outer Space* offers rich potential in explaining the infatuation of spaceflight by Europeans of many different nationalities and cultures. [...] Without question, astrocultural investigation is one of the more interesting and original efforts to restructure spaceflight history in the early twenty-first century.’

—Roger D. Launius, *Technology and Culture*

‘Together, the chapters survey an excellent variety of topics that fall under the “astroculture” umbrella. Further research into European astroculture would be a valuable contribution to other social and cultural histories of Europe and to wider understandings of human engagements with outer space. *Imagining Outer Space* is a giant leap in that direction.’

—Jason Beery, *European Review of History/Revue européenne d’histoire*

‘This is an eclectic, detailed and [...] revelatory set of essays that delve into how (mostly Western) Europeans portrayed outer space, spaceflight and space exploration. It certainly fills a gap.’

—Jon Agar, *British Journal for the History of Science*

‘This volume’s fifteen diverse essays, substantive introduction, and valuable epilogue all examine various aspects of “astroculture” by considering and configuring the cultural and social significance of the Space Age both to and within the Atomic Age. [...] Fascinating.’

—Pamela Gossin, *Isis*

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Astroculture After Apollo

(European Astroculture, vol. 2)

MILITARIZING OUTER SPACE

Astroculture, Dystopia and the Cold War

(European Astroculture, vol. 3) (forthcoming)



Alexander C.T. Geppert
Editor

Imagining Outer Space

European Astroculture in the Twentieth Century

Second Edition

European Astroculture
Volume 1

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If one undertakes to discuss what man ought to do with the planets, one must first say what one thinks man ought to do with himself.

Olaf Stapledon, *Journal of the British Interplanetary Society* (1948)

Die Geschichtswissenschaft muß den Sprung in die planetarische Zukunft wagen.

Hermann Heimpel, *Frankfurter Allgemeine Zeitung* (25 March 1959)

Aujourd'hui, il s'agit de l'espace à l'échelle mondiale (et même au delà de la surface terrestre, de l'espace interplanétaire), ainsi que des espaces impliqués, à tous les échelons.

Henri Lefebvre, *La Production de l'espace* (1974)

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PREFACE TO THE PAPERBACK EDITION

The re-issuing of *Imagining Outer Space: European Astroculture in the Twentieth Century* in paperback format six years after its original publication coincides with the advent of two companion volumes. *Limiting Outer Space: Astroculture After Apollo* (Palgrave Macmillan, 2018) and *Militarizing Outer Space: Astroculture, Dystopia and the Cold War* (Palgrave Macmillan, forthcoming) take up some of the problems raised and issues discussed in the present book. The second volume of this trilogy, *Limiting Outer Space*, focuses on a single decade in the history of imagining, thinking and practicing outer space – the ‘long 1970s’ – and foregrounds a single problem, that is the reconfiguration of sociotechnical imaginaries and human expansion scenarios during the decade after the moon landings, the so-called post-Apollo period. The third and final book, *Militarizing Outer Space*, explores the militant and violent dimensions of outer space in science fiction and science fact, thus exposing the ‘dark’ side of global astroculture.

All three volumes are the product of work conducted, choreographed or coordinated by the Emmy Noether research group ‘The Future in the Stars: European Astroculture and Extraterrestrial Life in the Twentieth Century’ at Freie Universität Berlin which I had the pleasure of directing from 2010 to 2016. As the publication of this *European Astroculture* trilogy was not planned from the outset but rather coalesced over the course of our collective expedition, there is no systematic rationale behind the thematic succession of these three volumes. What they have in common, however, is the endeavor to establish ‘astroculture’ as a new field of historical inquiry; the will to decenter space historiography by pushing its geographical focus beyond the borders of the two Cold War superpowers; and the quest to de-exoticize the history of outer space while allocating it the place it deserves within mainstream historiography of the twentieth century.

For the paperback edition a few factual errors were corrected and some minor improvements made. Web links have been checked, authors’ biographies updated,

and a limited number of references added to keep an already comprehensive bibliography as current as possible. Otherwise, all 17 contributions remain as they were originally published in 2012, unaltered in form and format.

Finally, I would like to express sincere gratitude to our funding body, the Deutsche Forschungsgemeinschaft (DFG), and, above all, to everyone who contributed to this enterprise's launch, lift-off and landing.

Shanghai
November 2017

Alexander C.T. Geppert

ACKNOWLEDGMENTS

When contemplating outer spaces and other worlds, the ‘pleasures of the imagination’ are infinite – and the conceptualization, compilation and composition of the present volume has indeed proved such.¹ Early versions of all articles published here were originally presented at the first international conference on the cultural history of outer space in twentieth-century Europe, held on 6–9 February 2008 at the Zentrum für interdisziplinäre Forschung (ZiF) of Universität Bielefeld, Germany. Entitled *Imagining Outer Space, 1900–2000* and generously co-funded by the ZiF and Fritz Thyssen Stiftung, this conference congregated nearly 70 scholars from more than a dozen countries, with the common aim of historicizing outer space and analyzing its cultural significance in the European imagination, particularly since 1945.

Subsequent to that first gathering, the Deutsche Forschungsgemeinschaft has beneficently underwritten the establishment of an independent Emmy Noether research group, ‘The Future in the Stars: European Astroculture and Extraterrestrial Life in the Twentieth Century,’ located at the Friedrich-Meinecke-Institut of Freie Universität Berlin. Special thanks go to the core members of this group, Daniel Brandau and William R. Macauley. Together, we have already begun to take up and deepen many of the themes raised in this volume, with a view to integrating the cultural history of space into mainstream historiography of the twentieth century, so-called *Zeitgeschichte*. This collective venture will continue to propel such a ‘leap into the planetary future’ over the next five years.²

Organizing an event on this scale and preparing the ensuing book for publication entails the accumulation of unforeseen debts of gratitude. First of all, I would like to thank the ZiF and its former Managing Director, Ipke Wachsmuth, the late Johannes Roggenhofer, ZiF’s Executive Secretary, as well as Barbara Jantzen, Scientific Assistant to its Board of Directors, for their trust in the intellectual potential of a certainly unusual, yet hardly exotic topic. Trixi Valentin, head of ZiF’s conference office, proved to be the epitome of cordial

professionalism and ensured that the event went off without a hitch. Without the Fritz Thyssen Stiftung's generosity, the enterprise could never have been launched. Claudia Schmölder's help on all matters concerned was absolutely central, her experience as always truly appreciated, and I am most grateful for her sage advice and long-standing sense of proportion. Finally, my superb research assistants Dorothee Dehnicke, Friederike Mehl, Tom Reichard, Katja Rippert, Magdalena Stotter and Ruth Haake proved as instrumental as possible. Jennifer Pierce and Severin Siebertz also helped substantially in preparing the manuscript for publication. I am truly obliged to all of them.

While this volume would not exist without the Bielefeld conference as its precursor, I should like to stress that the book by no means simply presents its 'proceedings.' Quite to the contrary: while I do regret that a strict, unsentimental selection of contributions was imperative, this book comprises a limited set of carefully chosen and thoroughly revised articles, painstakingly arranged in both thematic and largely chronological order, asking complementary questions and speaking directly to each other's concerns. I must also single out the help of several illustrious commentators whose much appreciated insights and criticism shaped the conference and, in turn, this volume. They include Peter Becker, Ralf Bülow, Paul Ceruzzi, Andreas W. Daum, Peter Davidson, Steven J. Dick, De Witt Douglas Kilgore, Kai-Uwe Schrogl, Angela Schwarz, Helmuth Trischler and Bernd Weisbrod. At Palgrave Macmillan, editors Michael Strang and Ruth Ireland gamely took on yet another lengthy manuscript and oversaw its publication with the same care that I had come to appreciate through previous collaboration. In a similar vein, cooperating with Penny Simmons proved again a true pleasure; I could not have wished for a more thoughtful and meticulous copy-editor. I also gratefully acknowledge the enthusiasm and encouragement of the two anonymous reviewers.

Imagining Outer Space endeavors to break new ground in the historicization of outer space by introducing the notion of 'astroculture,' inserting a distinctly (West) European element into the hitherto largely US- and USSR-centered historiography, elucidating the complex relationship between science and fiction, and emphasizing the significance of outer space as a site for the projection of competing versions of the future. The volume brings together original and innovative work by both junior scholars and some of the most distinguished experts in this small, but rapidly burgeoning field of historical research. Featuring 15 contributions – plus an introduction and an epilogue – from representatives of nine disciplines and eight countries, *Imagining Outer Space* is in itself an exercise in international transdisciplinarity. It is for this reason that the lion's share of my gratitude goes to the authors themselves, and it is with great respect that I acknowledge their unceasing willingness to travel thus far with me, both in time and space.

Berlin
August 2011

Alexander C.T. Geppert

Notes

1. This is, of course, John Brewer's term. See his *The Pleasures of the Imagination: English Culture in the Eighteenth Century*, London: HarperCollins, 1997.
2. Hermann Heimpel, 'Der Versuch mit der Vergangenheit zu leben: Über Geschichte und Geschichtswissenschaft,' *Frankfurter Allgemeine Zeitung* (25 March 1959), 11. See http://www.geschkult.fu-berlin.de/e/fimi/astrofuturismus/C_IOS/Hauptseite.html for the complete conference program; for further information on the Emmy Noether research group 'The Future in the Stars: European Astroculture and Extraterrestrial Life in the Twentieth Century,' consult <http://www.geschkult.fu-berlin.de/astrofuturism>.

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Ever since American pilot Kenneth Arnold observed nine shiny ‘saucer-like aircraft’ flying in formation from Mount Rainier to Mount Adams in Washington State, USA, on 24 June 1947, such disc-shaped missiles have been known as ‘flying saucers.’ The cover image is based on German graphic designer Klaus Bürkle’s dramatic 1971 interpretation of the UFO’s founding myth. © Gösta Röver, Freie Universität Berlin.

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ABBREVIATIONS

AI	Artificial Intelligence
ARD	Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten der Bundesrepublik Deutschland
BBC	British Broadcasting Corporation
BIS	British Interplanetary Society
BNCSR	British National Committee on Space Research
BRD	Bundesrepublik Deutschland
CETI	Communication with Extraterrestrial Intelligence
CNES	Centre National d'Etudes Spatiales
COPERS	Commission Préparatoire Européenne de Recherche Spatiale
DDR	Deutsche Demokratische Republik
DEFA	Deutsche Film-Aktiengesellschaft
DFG	Deutsche Forschungsgemeinschaft
DVLR	Deutsche Versuchsanstalt für Luft- und Raumfahrt
ELDO	European Launcher Development Organization
ESA	European Space Agency
ESPI	European Space Policy Institute
ESRO	European Space Research Organisation
ET	Extraterrestrial
ETH	Extraterrestrial Hypothesis
ETI	Extraterrestrial Intelligence
EU	European Union
FAZ	<i>Frankfurter Allgemeine Zeitung</i>
GfW	Gesellschaft für Weltraumfahrt
HAEU	Historical Archives of the European Union
ID	Electromagnetic Identification
IGY	International Geophysical Year
IM	Inoffizieller Mitarbeiter
IONS	Institute of Noetic Sciences
ISS	International Space Station
JPL	Jet Propulsion Laboratory

MfS	Ministerium für Staatssicherheit (DDR)
NACA	National Advisory Committee on Aeronautics
NASA	National Aeronautics and Space Administration
NASM	National Air and Space Museum
NATO	North Atlantic Treaty Organisation
n.d.	No date
n.p.	No publisher/pagination
NRC	National Research Council
SDI	Strategic Defense Initiative
SED	Sozialistische Einheitspartei Deutschlands
SETI	Search for Extraterrestrial Intelligence
SF	Science Fiction
SRA	Self-Reproducing automaton
UFO	Unidentified Flying Object
UK	United Kingdom
UN	United Nations
USA	United States of America
USAF	United States Air Force
USSR	Union of Soviet Socialist Republics
VfR	Verein für Raumschiffahrt
ZDF	Zweites Deutsches Fernsehen

NOTES ON CONTRIBUTORS

Debbora Battaglia is Professor Emerita of Anthropology at Mount Holyoke College and Five College Fortieth Anniversary Professor. A sociocultural anthropologist, she specializes in alterity and world-making at intersections of science, technology and cosmology. Her books include the edited volume *E.T. Culture: Anthropology in Outerspaces* (2005), and she is the author of numerous articles on outer space in public and expert knowledge spheres. In progress are two book projects, *Seriously at Home in '0-Gravity'* and *Aeroponic Gardens and Their Magic*.

Thore Bjørnvig holds an MA in the History of Religions from the University of Copenhagen. A former associated member of the Emmy Noether research group 'The Future in the Stars: European Astroculture and Extraterrestrial Life in the Twentieth Century' at Freie Universität Berlin, his research focuses on intersections between science, technology and religion, with a particular emphasis on outer space. Recently published articles include 'The Holy Grail of Outer Space: Pluralism, Druidry, and the Religion of Cinema in *The Sky Ship*' (2012) and 'Outer Space Religion and the Ambiguous Nature of *Avatar's* Pandora' (2013). Together with Roger D. Launius and Virgiliu Pop, Thore Bjørnvig has also co-edited a special issue of the journal *Astropolitics* on spaceflight and religion (2013). He blogs on astroculture for the Danish popular science news site videnskab.dk and the Nordic popular science news site sciencenordic.com.

Thomas Brandstetter is a historian of science and technology. He has published on a variety of subjects, including the history of astrobiology. Thomas Brandstetter's book publications include *Kräfte messen: Die Maschine von Marly und die Kultur der Technik* (2008).

Steven J. Dick was the 2014 Baruch S. Blumberg NASA/Library of Congress Chair in Astrobiology at the Library of Congress's John W. Kluge Center. From 2003 to 2009 he served as the NASA Chief Historian and Director of the NASA History Office; from 2011 to 2012 he held the Charles A. Lindbergh Chair in Aerospace History at the Smithsonian National Air and Space Museum in Washington, DC. Steven Dick is the author or editor of twenty books, including *Societal Impact of Spaceflight* (2007, co-ed.); *Discovery and Classification in Astronomy: Controversy and Consensus* (2013); and *The Impact of Discovering Life Beyond Earth* (2016, ed.). Minor planet 6544 Stevendick is named in his honor.

Rainer Eisfeld was Professor of Political Science at Osnabrück University from 1974 to 2006. Now emeritus, he continues to serve on the Board of Trustees of concentration camp Memorials Buchenwald and Mittelbau-Dora. His most recent publications are *Political Science in Central-East Europe: Diversity and Convergence* (2010, co-ed.); *Mondsüchtig: Wernher von Braun und die Geburt der Raumfahrt aus dem Geist der Barbarei* (1996, 2012); *Radical Approaches to Political Science: Roads Less Traveled* (2012); *Ausgebürgert und doch angebräunt: Deutsche Politikwissenschaft 1920–1945* (1991, 2013); and *Political Science: Reflecting on Concepts, Demystifying Legends* (2016).

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Philip Pocock is a Canadian artist living in Berlin. In the 1980s he exhibited photography at the Art Gallery of Ontario in Toronto and at the Cooper Union in New York where he was a faculty member of the International Center of Photography. He co-founded the desktop-published *Journal of Contemporary Art* in 1988 and relocated to Europe in 1991. In 1995 he co-produced a 'videoblog' *Arctic Circle*. In 1997 he was funded by Documenta X to create *A Description of the Equator and Some Otherlands*, a Web 2.0 cinema. In 1999 he installed a *Humbot* at MOMA Paris and ZKM Karlsruhe, where he ran a lab with students for a decade, creating YouTube precursor *Unmovie* in 2002 and the *SpacePlace* 'app' in 2005, released before the iPhone appeared. Recently Philip Pocock installed *Aland* at the Nam June Paik Art Center in Korea.

Claudia Schmölders is a cultural scholar, author and translator. Her numerous book publications include *Die Kunst des Gesprächs: Texte zur Geschichte der europäischen Konversationstheorie* (1979, 1986); *Das Vorurteil im Leibe: Eine Einführung in die Physiognomik* (1995, 2007); *Gesichter der Weimarer Republik: Eine physiognomische Kulturgeschichte* (2000, with Sander Gilman); *Hitler's Face: Biography of an Image* (2005); *Das Vorurteil im Leibe: Eine*

Einführung in die Physiognomik (2007); *Balzac: Leben und Werk* (2007, co-ed.); and *Faust & Helena: Eine deutsch-griechische Faszinationsgeschichte* (2018).

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Introduction

European Astrofuturism, Cosmic Provincialism: Historicizing the Space Age

Alexander C.T. Geppert

‘Outer Space’ is an expanding subject.
D.J. Gibson, British Foreign Office (26 October 1959)¹

Ubiquitous, limitless and ever-expanding as it may be, outer space has a history too. Over the course of the twentieth century, the dark, infinite and unfamiliar vastness that surrounds us has stimulated the human imagination to an extent hitherto unknown. Numerous ventures to ‘explore,’ ‘conquer’ and ‘colonize’ the depths of the universe in both fact and fiction must be read as attempts to counter the prevailing *horror vacui*, the fear of empty spaces and voids of infinity felt and explicitly formulated since the sixteenth century. They all aim at overcoming what Sigmund Freud (1856–1939) termed in 1917 humankind’s ‘cosmological mortification,’ the humiliating decentering of the earth effected by Nicolaus Copernicus’s (1473–1543) heliocentric cosmology. Three decades and two world wars after Freud’s observation, influential British futurist and science-fiction writer Arthur C. Clarke (1917–2008) identified a related ‘desire to know, whatever the consequences may be, whether or not man is alone in an empty universe’ as the one key motive underlying all human efforts to overcome gravity and reach out beyond humankind’s natural habitat on planet Earth.²

Imagining and re-imagining space and furnishing it time and again with one artifact after another, be they mental or material, has had a doubly paradoxical

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