

THINKING OUTER SPACE

Philosophy, Astroculture and the Histories of Planetarity

NYU BERLIN

19-21 July 2023



CONTENTS

Synopsis 4

Program 5

Abstracts 7

Biographies 20

Participants 30

VENUE

Frannz Restaurant

Schönhauser Allee 36 10435 Berlin Germany

4 SYNOPSIS

In the past decade, scholars in the humanities and social sciences have begun to realize that the exploration of outer space was much more than a technoscientific and geopolitical enterprise. Rather, it was also an endeavour prepared and accompanied, deliberated and critiqued by a wide array of intellectuals ranging from Hannah Arendt, Hans Blumenberg and Pierre Teilhard de Chardin to Carl Schmitt. Marshall McLuhan and Jean-Francois Lyotard. Weighing postwar world orders, environmental consciousness, cosmic solitude and human futures from an extra-terrestrial perspective, these philosophers contributed to the planetization of earth through the thinking of space.

Held at NYU Berlin, the three-day conference Thinking Outer Space focuses on twentieth-century philosophy, astroculture and space thought. At the same time, it recognizes that contemporary understandings of outer space have also been shaped by legal agreements. state institutions and popular science. Aiming to globalize the study of astroculture, the conference transcends the intellectual boundaries of the major space-faring nations. As such, it seeks to engage with the rich and heterogenous cosmologies found in non-western and indigenous contexts.

At present, successive waves of geopolitical competition and commercial speculation are putting outer space back at the center of worldwide attention. State and corporate plans for returning to the Moon and colonizing Mars are capturing the public imagination and budgets alike, while the threat of military confrontation and environmental destruction beyond earth is ever-expanding. How philosophers and public intellectuals from a variety of disciplinary, political and cultural backgrounds conceptualized and communicated outer space is crucial to comprehending what some have been quick to label the rise of a 'new' or 'second' Space Age.

Examining the intellectual and ethical foundations of present-day planetarity, Thinking Outer Space brings together historians, geographers, anthropologists, ethnographers, literary scholars, political scientists, scholars of religion and sociologists. Over the course of three days and across nine chronologically and thematically arranged panels, thirty participants from a dozen countries will debate topics ranging from the so-called planetary turn, nineteenth-century protoplanetarianism and cosmic philosophies to the making of space law, narratives and poetics of planetization, and planetary ethnographies.

Alexander C.T. Geppert Rory Rowan PROGRAM 5

Wednesday, 19 July 2023

14:00-14:45

Welcome and Introduction

Alexander Geppert (New York/ Shanghai) and Rory Rowan (Dublin):

Outer Space and the Thinking of a Planet

15:00-16:00

Panel I: A Planetary Turn?

Chair: Bronislaw Szerszynski (Lancaster)

Stefan Pedersen (Sussex): The Earth System, Cosmology and Planetary Politics

Alexander Geppert (New York/ Shanghai) and Brad Tabas (Brest): Planetization: Five Theses

Coffee

16:30-18:00

Panel II: Proto-Planetarians

Chair: Laurence Guignard (Paris)

Vladimir Brljak (Durham): The Stars and the Angels: The Cosmos of a Nineteenth-Century Clergyman

Oliver Dunnett (Belfast): Alexander von Humboldt and his Influence in Planetary Thinking since 1845

lan Klinke (Oxford): Panpsychism, Space Colonization and the Origins of Astropolitics

18:00-21:00 Buffet

Thursday, 20 July 2023

9:30-10:30

Panel III: Cosmic Philosophies

Chair: Helmuth Trischler (Munich)

Michael Hagemeister (Bochum): Russian Cosmism

Saskia Abrahms-Kavunenko (Copenhagen):

Spiritual Universalisms and the Invention of the Fragile Planet: Theosophy, the Occult and the Race towards Heaven and Earth

Coffee

11:00-12:30

Panel IV: The Juridification of Outer Space

Chair: Christoph Conrad (Geneva)

Gabriela Radulescu (Berlin): Metalaw: Regulating Relations between all Beings in the Universe at the Dawn of the Space Age

Stephen Buono (Cambridge, MA): Metalaw: Philosophy and the Birth of a Discipline

François Rulier (Toulouse):
Planetizing International Space Law
for a Pacifist Space Exploration

Lunch

14:00-15:00

Panel V: Poetics of Planetization

Chair: Haitian Ma (Amsterdam)

Helen Ahner (Berlin):

Feeling Outer Space: Planetariums as Sites of Epistemic Emotions

Thore Bjørnvig (Copenhagen): The Milky Way Can Wait: Scandinavian Planetization of Earth, 1956–1982

Coffee

15:30-16:30

Panel VI: Narrating Astroculture Chair: Michèle Matetschk (Berlin)

Jörg Kreienbrock (Chicago): The Philosophy of Science Fiction: Gotthard Günther in Outer Space

Arthur Z. Wang (Philadelphia): Escape Velocity: Black Scientists and Life Writing in Outer Space

17:00-18:00

Panel VII: Exploring Inner Space

Chair: John Brewer (Pasadena/Cambridge, MA)

Greg Eghigian (University Park): UFOs and the Inner Space of Outer Space

Ben Van Overmeire (Kunshan): Inner and Outer Space in the Thought of the Buddhist Modernist Alan Watts

Beer garden

Friday, 21 July 2023

10:00-11:00

Panel VIII: Planetarity after the End of History

Chair: Bernd Weisbrod (Göttingen)

Olga Dubrovina (Padua): Gorbachev's New Thinking in Space: The Universe as a Common Home

James Lowder (Glasgow): Beyond Solar Catastrophe: The Post-Earth Futures of Jean-François Lyotard and Carl Sagan

Coffee

11:30-12:30

Panel IX: Ethnographies of the Planetary Present

Chair: Piero Messina (Paris)

Anna Szolucha (Krakow): Rescuing the Planetary for Ethnographic Research: Philosophical Meanings and Research Application

N.N.

Lunch

14:00-15:00

Concluding Discussion

Chair: Rory Rowan (Dublin)

Alexander Geppert (New York/Shanghai)

Brad Tabas (Brest)

N.N.

16:00

Farewell Drinks

ABSTRACTS 7

Saskia Abrahms-Kavunenko

Spiritual Universalisms and the Invention of the Fragile Planet: Theosophy, the Occult and the Race towards Heaven and Earth

Although national and commercial space companies frequently appeal to nationalism and secular ideas of progress to justify their activities, space exploration has always been inspired and undergirded by religious ideas and practices. The Russian founding father of astronautics, Konstantin Tsiolkovsky, was a Cosmist: a group of thinkers and philosophers who were heavily influenced by the New Religious ideas of the Buddhist-influenced Theosophical Society. His dream of liberating humanity from the boundaries of the planet was accompanied by fantastical and unsettling ideas about achieving human spiritual and material perfection. In 1968 when the Apollo 8 crew came back from their mission to the moon, they brought with them the first clear color photos of earth taken from the moon's orbit. This visual image of the earth in outer space caused vast sections of the world's population to reimagine the earth as a planet and gave birth to new kinds of global environmental movements. American astronauts viewing the sunlit earth from outer space have typically described the experience as demonstrating that the planet is unified, fragile and discrete. This talk will discuss how these impressions of the earth from above are influenced by the universalizing tendencies found within many of the key esoteric movements during

the fin-de-siècle. By engaging how the intertwined histories of scientific and occult explorations carried over from the fin-de-siècle into the twentieth century, this talk discusses how ways of imagining the planet have shaped present day environmental movements.

Helen Ahner

Feeling Outer Space: Planetariums as Sites of Epistemic Emotions

What does outer space feel like and what do these feelings have to do with our existence on earth? These were some of the questions asked by the first planetarium visitors, who experienced a multi-sensory simulation of the night sky in these newly established educational institutions of the Weimar Republic. They mentally embarked on journeys into outer space and enjoyed the thrill of transgressing the boundaries of planet Earth. The planetarium presentations were not only intended to convey simple factual knowledge about the celestial constellations and planets, but also to motivate moral-philosophical discussions about the universe and the position of human existence in it. In order to do justice to the tasks of knowledge transfer and moral education, deep emotions such as wonder, amazement and sublimity, but also pleasure and horror were used, which were consciously evoked and felt in the planetarium. Also, the shows not infrequently referred to intellectual heroes of the bourgeoisie - most notably Immanuel Kant -, and contemporary intellectuals such

as Walter Benjamin, but also engineers, museum makers and natural scientists used the planetarium as a starting point for reflections on the relationships between humans. technology, the planetary and outer space. Drawing on over 900 sources on the planetariums in Munich. Jena, Hamburg and Vienna, which I have collected and examined in the course of my doctoral thesis, my presentation explores how thinking and feeling intertwined in the planetarium (Daston 2001), how different intellectual traditions entered into dialogue with each other in the planetarium lectures, how the planetarium acted as 'lieux de l'avenir' (Geppert and Siebeneichner 2017. Bovce-Jacino 2017) and how outer space was designed and 'conquered' in the sociotechnological imaginary (Jasanoff 2015) under the dome.

Thore Bjørnvig

The Milky Way Can Wait: Scandinavian Planetization of Earth, 1956–1982

In 1978 Finnish astronomer Nils Mustelin (1931–2004) published Liv bland miljarder av stjärnor: Civilisationer i Vintergatan – och därbortom? (Life Among Billions of Stars: Civilizations in the Milky Way – and Beyond?) on the prospects of finding and communicating with extraterrestrial life. The book was translated into Danish, Finnish and Norwegian and thus played a role in conveying and popularizing thoughts about space exploration and contact with extraterrestrial beings in a Scandinavian context. In

a radio speech from 1982, however, Mustelin concluded that humanity's possible destiny among the stars had to wait until we had averted the catastrophes looming on earth. At about the same time, Danish poet Thorkild Bjørnvig (1918-2004) engaged topics of cosmos, space exploration and environmental destruction in both essays and poetry. Considered one of the most important Danish poets of the twentieth century, his thinking about cosmic perspectives and threats of environmental catastrophe was a weighty contribution to the public debate in Scandinavia. Extraterrestrial perspectives and earthly catastrophes, however, had already been firmly linked by Swedish author and Nobel laureate Harry Martinson (1904-1978) about twenty years earlier in the epic poem Aniara (1956), describing the exodus into outer space by the remnants of a humanity fleeing a war ravaged and environmentally doomed earth. All three were prominent intellectuals and thinkers who expounded an extraterrestrial perspective on earth. Stressing the environmental degradation of earth in a cosmic context. they contributed to its planetization.

Vladimir Brljak

The Stars and the Angels: The Cosmos of a Nineteenth-Century Clergyman

In 1858, the Scottish clergyman, cartographer and astronomer James Gall published a little-known book titled The Stars and the Angels: A Natural History of the Universe and Its Inhabitants, in which he attempted to harmonize modern cosmological science and biblical history - with considerable, albeit unacknowledged, help from works of imaginative literature, especially John Milton's Paradise Lost. The result offers remarkable insights into the possibilities open to an educated cosmological imagination at this transitional juncture in its history: only decades away from the dawn of modern space exploration, vet still heavily influenced by religious and philosophical traditions reaching deep into European premodernity. Some of Gall's thinking is astoundingly prescient. For example, he is one of the first authors to depict earth as a blue planet in black space and to reflect on the cultural and psychological impact of that image - or to speculate, a century before the giant impact hypothesis. that earth's moon originated from a ring of cosmic debris once revolving around the planet. Elsewhere, however, the book departs in very different directions. Humans, we learn, are already a transplanetary, spacefaring species and have been so for millennia. After his resurrection. Christ ascended into space in a material body capable of interstellar

travel, as did Enoch and Elijah before him, and others after. Gall hopes to join them in the deep-space heaven they now inhabit - a definite location in the physical universe, whose 'ascension and [...] declination could be communicated to us' and provides a detailed account. of the physics and biology involved. The paper discusses these and other aspects of Gall's work, concluding with some thoughts on how the concepts of planetarity and planetization look when viewed from pre-twentieth-century perspectives and why these perspectives remain of interest to contemporary discussion of these topics.

Stephen Buono

Metalaw: Philosophy and the Birth of a Discipline

At its genesis, space law was indistinguishable from philosophy. The field's first practitioners, though they asked technical questions about sovereignty, rights and authority. found themselves preoccupied with the consequences spaceflight might have for human nature, spirituality and consciousness. Andrew G. Haley, an American attorney widely considered a founding father of space law, is a case in point. His writings on 'Metalaw,' which theorized legal relationships between different races in the universe, were central to the growth and identity of the discipline in the 1950s. Haley conceptualized Metalaw as the basis for natural codes that would operate 'beyond our present frame of reference.' In a reversal of the Golden Rule. he

wrote that 'to treat other [beings] as we would desire to be treated. might well mean their destruction.' Here, indeed, was one of the striking wrinkles of the early Space Age: the professionalized discipline we now know as 'space law' began as a series of thought experiments about human contact with extraterrestrial life. This paper sheds light on this strange - but nevertheless influential - legal philosophy, situates it in deep historical context and traces its effect across the 1950s and 1960s as nations attempted to define the proper boundaries of human activity in space. I show that Metalaw built on earlier philosophical and metaphysical projects - particularly in the West - that sought to divorce human spaceflight from the violent legacy of European 'exploration.' Cosmist disciples of Nikolai Fedorov in the 1920s, astrofuturist fiction in the 1930s and the postwar 'cosmic philosophies' of Olaf Stapledon and Arthur C. Clarke in Britain all left their mark. Metalaw. moreover, eventually appeared in debates about space law at the United Nations, in the U.S. Congress and in private musings on the future of humanity in space. Metalaw. and Haley himself, still resonate for philosophers of space today.

Olga Dubrovina

Gorbachev's New Thinking in Space: The Universe as a Common Home

As part of the acceleration policy (uskoreniye), the beginning of which Gorbachev announced on 23 April 1985 at the Plenum of the Central Committee of the CPSU, special importance was attributed to scientific and technological progress and the implementation of its achievements in the development of the country's economy. One of the leading technology and science-intensive areas for the creation and execution of advanced knowledge was the aerospace sector. Gorbachev inherited the ambivalent approach from former Soviet leaders, which simultaneously combined the desire to guarantee the USSR's dominant role as a military power, relying on, among other things, space technology and the use of space as a soft power in support of communist ideology. With the deepening of the economic crisis and thereby the need to accelerate and expand liberalization reforms Gorbachev had to radically revise his aerospace policy in alignment with the general economic situation. The political component of his 'new thinking policy' played no less a role in reforming the aerospace sector. Glasnost in domestic politics and a dynamic normalization with the West led to serious changes inside this previously locked domain. The purpose of this talk is to explore the main visions and approaches to reforming the aerospace field during perestroika and to analyze the changes

and their connection within the general provisions of the 'new thinking' policy such as proposals of cooperation for peaceful purposes, of foundation of World Space Organization, of involvement countries from outside the major space-faring nations, of liberalization of the whole sector through its industrialization and commercialization.

Oliver Dunnett

Alexander von Humboldt and his Influence in Planetary Thinking since 1845

Alexander von Humboldt has been recognized as a foundational thinker across a multi-disciplinary field including geography, atmospheric science, geology and biology, but also as someone who reconciled scientific experience with the Romantic tradition of written expression in the Western world, often presenting concepts of nature through notions of the sublime. While his earlier publications, based on extensive fieldwork, established his position as one of the pre-eminent natural science thinkers of his generation, since the publication of his Kosmos: Entwurf einer physischen Weltbeschreibung (Cosmos: A Sketch of a Physical Description of the Universe) in five volumes between 1845 and 1862. a 'Humboldt phenomenon' has emerged, consisting of biographies, commentaries and translations of his works, which has only increased in the ensuing 150 years. This paper aims to re-visit some of Humboldt's works with regards to the ways in which he understood the spaces of

outer space, including in Kosmos but also through his earlier works and correspondence. Humboldt devotes considerable attention to cosmic spaces in the former, including over sixty pages of descriptions and analyses of celestial phenomena, from planetary systems to the Milky Way and 'starless openings.' This is presented as part of a cosmographic understanding of earth and cosmos together, a configuration that originated in the classical period but was to wane following the professionalization of the sciences in the nineteenth century. After offering some accounts of Humboldt's cosmic imagination. the paper will trace some of the ways in which his planetary thinking was identified and utilized in the late-nineteenth and twentieth centuries, as the prospect of spaceflight began to dominate discourse about the cosmic environment.

Greg Eghigian

UFOs and the Inner Space of Outer Space

Since the emergence of claims of encounters with flying saucers and alien visitors following World War II, the UFO phenomenon has been the subject of persistent speculation. While defense and intelligence agencies have been concerned solely with determining whether any objects might pose a threat to national security, civilians have proven to be far more expansive in their thinking about unidentified flying objects and their significance. Tracking international discussions

within both academic and lay circles during the last half of the twentieth century, it is apparent that those conversations evolved into more than just contemplating the exciting possibilities of space travel and exploration. Over time, the topic of UFOs increasingly led observers to direct their gaze inward, reflecting on what it revealed about human behavior, potential, imagination. emotions and conscience. This paper, based on both published and archival sources, examines the ways in which a wide array of both establishment and unconventional thinkers used the prospect of extraterrestrial visitation to raise questions about the peculiar psychological vulnerabilities of human beings in the late twentieth century. From professionals in the psychological sciences like Carl Jung, Elizabeth Loftus, Leo Sprinkle and John Mack to writers such as Edgar Sievers, Coral Lorenzen. Michel Monnerie and John Keel, these observers argued that the perceived breach of earth's biosphere by beings from outer space required new perspectives on the human psyche. These ranged from ruminations about spiritual enlightenment to considerations of psychological trauma to self-reflexive studies on self-deception. The overall trend, however. was toward an increasing intimacization of the human relationship to outer space, with the latter seen as having a direct, transformative impact on the spiritual and mental makeup of the individual. Debate surrounding UFOs offered a surprising forum then for observers to

see in both the awareness of space exploration and the possibility of extraterrestrial intelligence a way to reflect not only on the fate of planet Earth but also on the relative fragility and resilience of the human being. The imagined outer space of the second half of the twentieth century thus made a significant and rarely acknowledged contribution to what has been dubbed the 'psychoboom' of the postwar world.

Alexander C.T. Geppert and Brad Tabas

Planetization: Five Theses

The expansion of the human sphere beyond earth has larger repercussions for understanding the present than is usually acknowledged. The outcome of a collaboration between a historian and a philosopher, this paper proposes Teilhard de Chardin's 1946 notion of 'planetization' as a key analytical concept. Planetizing history amounts to situating it within a dynamically transforming horizon, emphasizing the significance of extra-terrestrial technology including robotic spacecraft and orbital infrastructures for the environmental, social and political histories of what is commonly theorized as globalization. To planetize history, then, is to show that the history of the globalized present cannot be written from an exclusively terrestrial point of view.

Michael Hagemeister

Russian Cosmism

The concept of 'Russian Cosmism' was conceived at the dawn of the Space Age to provide the Soviet space program with an indigenous philosophical basis. It has since evolved into one of the most influential ideological currents in post-Soviet Russia and is now considered an organic part of a genuinely Russian way of thinking. Based on a holistic and anthropocentric view of the world and the assumption of a teleologically determined evolution, 'Russian cosmism' seeks to define the position and task of humanity in the universe. Homo sapiens, who emerged from the living matter of the earth, is seen as the decisive factor in cosmic evolution, as its 'self-consciousness', its active leader and potential consummator. It depends on his actions whether evolution will reach a maximum of perfection and unity, or will fall catastrophically (e.g., in the 'Big Freeze') as a result of the (self-)annihilation of humanity. In its development, the earth is in the transition from the biosphere to the noosphere. Through the unification of all human beings, the 'rational living matter', into a 'single organism', a higher 'planetary' and 'cosmic consciousness' will emerge, which is capable of guiding all further development rationally and morally (according to a 'cosmic ethic') and of conquering, colonizing and perfecting the universe. Central components of 'Russian cosmism' are Nikolai Fedorov's doctrine of immortalism and interplanetaryism,

Konstantin Tsiolkovskii's 'cosmic philosophy', which inspired his technical innovations and made him the 'grandfather' of the Soviet spaceflight, Aleksandr Chizhevskii's heliobiology and heliotaraxy, and Vladimir Vernadskii's concept of the noosphere, in which humanity becomes a planetary factor in the Anthropocene. In my paper, I will trace the main features of this syncretic doctrine, point out influences (e.g., from Romantic natural philosophy and esoteric thought) and establish links to active evolutionism, holistic organicism and transhumanism.

Ian Klinke

Panpsychism, Space Colonization and the Origins of Astropolitics

This paper takes its cue from two recent intellectual trends. The first is the formation of astropolitics, a military strategic genre of writing that extends geopolitical concepts and practices into outer space. The second is a renewed interest in panpsychism, the philosophical view that the universe is already conscious or besouled, whether humans colonize it or not. In order to better understand the intersection of panpsychism and astropolitics. I return to the later writings of the colonial geographer Friedrich Ratzel (1844-1904). Although known primarily for his theorization and promotion of terrestrial colonization. Ratzel also had a keen interest in astronomy and used what he knew about the universe to theorize time and space in the social world. He had also

come under the influence of Gustav Fechner's panpsychism and sought to weave panpsychist ideas into his human geography. In uncovering this intellectual history, I caution against attempts to find solutions to the unresolved problems of settler colonialism at the level of ontology.

Jörg Kreienbrock

The Philosophy of Science Fiction: Gotthardt Günther in Outer Space

In 1952, the Karl Rauch Verlag in Düsseldorf publishes a series of American science-fiction novels under the title: Rauchs Weltraum-Bücher. All volumes contain scholarly introductions written by the German philosopher Gotthardt Günther, one of the founders of cybernetics and transclassical logic. My talk will trace Günther's metaphysical science fiction in the context of his philosophical (Heidegger, Spengler, Gehlen) as well as his scientific (McCulloch, von Foerster, Maturana) background. The possibility of space travel represents not only a 'Überwindung von Zeit und Raum,' but, according to Günther, marks a new era of technologically informed metaphysics (in surprising proximity to Carl Schmitt's ruminations about the nomos of outer space). It produces a new Bewusstsein der Maschinen, radically transforming human beings into cybernetic machines, populating the universe. Hence, for Günther, the development of Heael's Weltgeist finds its final formulation in the fantastic imaginations of contemporary American science-fiction.

James Lowder

Beyond Solar Catastrophe: The Post-Earth Futures of Jean-François Lyotard and Carl Sagan

Contemporary science predicts that as the Sun ages it will increase in luminosity and expand in size. Over time this process will render the earth uninhabitable, and it is possible that earth will eventually be engulfed by the expanding Sun (Schröder and Smith 2008), converting geological strata to stardust. Such an anticipatory catastrophe raises questions about the contingent temporalities of humankind, both on earth and off it; and as such, has received attention from philosophers and scientists alike. Focusing on works from the early-to-mid 1990s, this paper examines the ideas of philosopher Jean-François Lyotard and astronomer Carl Sagan through a geographic lens. Of particular interest are Lyotard's Can Thought Go On Without a Body? (1991) and his Postmodern Fable (1993), as well as Sagan's popular science book *Pale* Blue Dot: A Vision of the Human Future in Space (1994). By turning to these works, I unpack what the material erasure of planet Earth means for humankind's relationship with outer space in a philosophical and practical sense. Moreover. and with the ideas of Lvotard and Sagan in mind, this paper builds upon the sparse contributions to this topic by human geographers. Reflecting upon the 'challenges posed to an earth-rooted philosophical tradition... by the inhumanness

of the cosmos' (Dixon 2018, 90), I consider how geographic thought might become 'more-than-earthly' in ways that acknowledge the influential role of cosmic process in shaping human existence and its worlds. Overall, this paper argues that solar catastrophe narratives can continue to unsettle understandings of outer space, earth's future and humankind's destiny, whilst also providing geographic thought with a justification to move beyond its planetary tradition.

Ben Van Overmeire

Inner and Outer Space in the Thought of the Buddhist Modernist Alan Watts

Among the manifold of figures who interpreted Asian philosophy for western audiences in the twentieth century, Alan Watts (1915-1973) was among most prolific and influential. Sadly, Watts' work remains understudied, perhaps exactly because he took on so many topics. One of these topics is his connection of the exploration of outer space to the exploration of consciousness or inner space. In programmatic works such as *The Joyous Cosmology* (1962), the autobiographical narration of an LSD trip with a preface by Timothy Leary, argues that outer space needs to be thought together with inner space. In his unedited lectures, Watts elaborated this argument by drawing upon astrophysical knowledge of the known universe to dismiss materialist and nihilist approaches to the problem of the meaning of human existence. At the

same time, he also draws on Asian traditions, mainly the Mahayana Buddhist notion of mutual interpenetration articulated in the Flower Garland Sutra and 7en riddles called koan, to build a new, spiritual version of planetarity where human consciousness is an important component of material reality itself. Due to this interdependence, Watts ends up claiming to his audiences that 'space is you' because, like space, 'you' cannot be defined. Ultimately, space becomes a term for all of reality, but in a way that can only be understood if analytical modes of thought are abandoned. If we do not do this, we risk treating space and also our exploration of outer space, as 'the conquest of nonexistence.' The scientific approach to space is ultimately insufficient: we can only truly understand space through transformative personal experience. In my talk, I will close-read some astrocultural passages from Watts work. Where appropriate, I will contextualize these passages with Watts' Buddhist source texts, to show how Watts changes concepts from these texts in the process of translating them.

Stefan Pedersen

The Earth System, Cosmology and Planetary Politics

A canon of planetary thought began to take form in the twentieth century. All of the following extraordinary thinkers arguably deserve a place in it: H. G. Wells, Vladimir I. Vernadsky, Lewis Mumford, Oliver L. Reiser, William Vogt, Fairfield Osborn, Kenneth Boulding, Barbara

Ward, Barry Commoner, W. Warren Wagar, Richard Falk, James Lovelock, Carl Sagan and Lynn Margulis. But whoever one assigns to it, a complete canon of planetary thinkers would include a progressively greater number of individuals from the 1970s onwards, as the 'overview effect' that produced a deep affection for the planet among astronauts also vicariously started to impact public sentiments. This beginning of a pivotal change in mass-consciousness was gained from the Apollo's eye view of the earth exemplified in Earthrise. Blue Marble and other iconic planetary images that were captured from space in the period 1968-1972 and widely distributed via the media. This new iconic imagery of the whole earth met with an already burgeoning expression of love for the natural environment to advance an understanding of ecologism that reached a new planetary dimension with Lovelock and Margulis' Gaia theory. More recent contributors to planetary thought including Bruno Latour, Dipesh Chakrabarty and Daniel Deudney broaden our grasp of how the earth system science that the Gaia theory helped give rise to is currently changing the conceptual foundations for understanding our shared social and political world. It is now becoming evident that this scientifically verifiable earth system cosmology necessitates a new planetary politics which can make our species adjust to the normative imperatives revealed by science: primarily ending the climate and biosphere crisis. The early planetary

thinkers thought the new earthlings among us could organize to this end, it "only" takes a shift from nationalism to planetarism.

Gabriela Radulescu

Metalaw: Regulating Relations between all Beings in the Universe at the Dawn of the Space Age

This presentation draws on my doctoral thesis in the history of science in which I look at the acrossthe-Iron-Curtain aspects of radio astronomy's engagement with extraterrestrial intelligence - during the Space Age. In this talk, I focus on the prehistory of Communication with Extraterrestrial Intelligence (CETI) - which later became Search for Extraterrestrial Intelligence (SETI) - in the astronautical community in the late 1950s. I zoom in on the 1956 International Astronautical Congress in Rome - the most important gathering of rocket societies. There, American lawyer Andrew Haley (of the American Rocket Society) argued for the need to regulate relations between all beings in the Universe, thereby presenting the notion of 'Metalaw'. In a compressed historical review of ancient philosophical and religious principles from a wide geographical background, Haley argued that the law until that very moment of 1956 had been 'starkly anthropocentric' - meaning that it had regulated relationships 'of man vis a vis man in his ambit' or 'simply the law of human beings'. Quoting from the base law textbook, Haley drew attention to the fact that law defined a system

of rules that established justice in the 'relations of persons and things as they practically exist'. Some new possibly existing 'things' challenged the anthropocentric law at the time. In the light of the launch of the Space Age, the existence of extraterrestrial entities became important for law: the category of persons and things would for the very first time substantially extend beyond the terrestrial category of 'men'/'humans'. In my presentation, I review the political intertwinings of terrestrials launching objects into outer space that underlay philosophical tenets of Metalaw and claim that the latter reflected traditional bones of contention between the two space actors.

François Rulier

Planetizing International Space Law for a Pacifist Space Exploration

Intrigued by public speculations about possible extra-terrestrial life in the 1950s and 60s, space jurists came to view these as an opportunity to structure law that would become global. For example, Andrew Haley, president of the International Astronautical Federation, anticipated such encounters thus arguing for a metalaw that would apply to all species endowed with reason. The goal was peace between all peoples, from earth and elsewhere. This paper suggests that space legal doctrine developed along such lines, thus positing an internationalist discourse around space exploration. In so doing, it became a stepping stone towards the constitution of a planetary community and affirmed

an openness to a universal community of rational beings. Carried by the strong hopes in the space age and by a sociability characteristic of early spacefaring networks, space legal doctrine developed conceptually by borrowing from notions of human community. Latin-American jurists like the Mexican Modesta Seara Vasquez or the Brazilian Haroldo Valladao also contributed to the debates on building a universal and inter-species law, notably by positing the importance of inter-gentes law that paved the way for planetarity. Although only one of several contemporary factors eliciting space law discussions, the notion of alien encounter did find its place in the Magna Carta of Space, adopted by the Inter-American Federation of Bar Associations adopted in 1961, at the time when the first humans rocketed into space. Thus, space law contributed to an overall thinking on humanity as a single community turned toward the stars. By both anticipating and participating in nascent planetarity that developed after the Second World War, space jurists also borrowed from and expanded notions of astroculture, jurisprudence and technological internationalism. In so doing, they also defended the role of an ordered human community operating in a universalism of reason.

Anna Szolucha

Rescuing the Planetary for Ethnographic Research: Philosophical Meanings and Research Applications

This paper explores the potential of planetary thought for ethnographic research methods as well as the challenges that different meanings of the planetary pose for anthropological analysis of social phenomena as we observe them on the ground. The planetary has recently been applied widely as a synonym of scale to describe the nature of contemporary crises or potential solutions. However, different articulations of the planetary have also become the focus of academic scholarship where it is understood in a variety of more or less compatible ways: from specifically emic understandings of planetary imaginations as visions of exoplanets created by space scientists (Messeri 2016) to grander views of 'planetary social thought' (Clark and Szerszvnski 2020) that entangle social life with processes on a planetary scale. Some scholars treat the planet as a totality of life and non-life (Masco 2020): others distinguish between the planet and the globe to speak about the different realms of human and non-human agency (Chakrabarty 2019); others still use planetary-scale processes on earth such as the Anthropocene to 'interplanetarize' our ways of thinking by linking them to similar processes elsewhere in the cosmos (Olson and Messeri 2015). While not necessarily speaking in planetary idioms. Indigenous scholars

also offer ways of thinking about the planetary, for example in terms of gift and reciprocity (Kimmerer 2020), ethical relationality (Donald in Todd 2015) and kin relations or moral bonds between humans and non-humans (Whyte 2020). Starting with Gavatri Spivak's notion of planetarity, this talk explores which of these articulations of the planetary offer promising ways of thinking about ethnographic practice of intercultural translation. Can a planetary perspective of our research offer alternative viewpoints, shift our own perspective and at the same time, help us learn something unexpected about what connects humans everywhere?

Arthur Z. Wang

Escape Velocity: Black Scientists and Life Writing in Outer Space

From Gil Scott-Heron's spoken-word poem Whitey on the Moon (1970) to the conclusion of Adam McKay's star-studded film Don't Look Up (2021). Americans seem to have reached a near cultural consensus that space travel and colonization are escapist fantasies reserved for the privileged and ultra-rich. Demonstrating not only the coincidence but also the entanglement between spaceflight and enduring racism in America. Black scholars and artists have largely debunked fantasies that technological progress will solve or transcend racism, putting to rest what Alondra Nelson has called 'the raceless future paradigm.' At the same time, Black artists ranging from Sun Ra to

Namwali Serpell have looked to the stars with ambivalence, skepticism and hope about the possibility of establishing alternatives to racism, imperialism and patriarchy by traveling (either literally or imaginatively) beyond earth's limits. By turning to biographies and memoirs of Black astrophysicists (including Chanda Prescod-Weinstein and Neil DeGrasse Tyson) and astronauts (including Ronald McNair, Mae Jemison and Ed Dwight), this paper addresses an unresolved tension in science studies and science fiction studies between narratives of outer space as utopian departure from earthly oppression (for example, in some works by Ursula Le Guin and James Tiptree Jr.) and outer space as recapitulation or continuation of racist histories (for instance, in fiction by Octavia E. Butler and Samuel Delany). What can the grounded Afrofuturism of Black professional stargazers teach us about the cosmic arts of escape?

20 BIOGRAPHIES

Saskia Abrahms-Kavunenko (Copenhagen)

Saskia Abrahms-Kavunenko is an anthropologist at the Center for Contemporary Buddhist Studies at the University of Copenhagen. She has carried out extensive research on Buddhism and other religious traditions in Mongolia, Australia and India, and is the author of Enlightenment and the Gasping City (2019). Her current research project 'Impermanent Imperishable: Plastics and Praxis among Buddhists in Oceania' looks at how Buddhists in Oceania relate to radical permeability and toxicity amidst the changing ecosystems on the planet, Saskia Abrahms-Kavunenko has undertaken research projects at the University of Edinburgh, Universität Erfurt. NYU Shanghai and the Max Planck Institute for Social Anthropology in Halle. She is the co-founder of Cenote, a traveling multi-disciplinary residency program.

Helen Ahner (Berlin)

Helen Ahner works at the Center for the History of Emotions at the Max Planck Institute for Human Development in Berlin. She studied cultural and historical anthropology and rhetoric at Universität Tübingen and received her PhD in 2021 with a thesis examining the history of experience in the planetarium. Her book Planetarien: Wunder der Technik – Techniken des Wunderns will be published in 2023. In her current research, Helen Ahner explores sport emotions with a particular focus on the history of female ambition.

Thore Bjørnvig (Copenhagen)

Thore Biørnvig is an historian of religion based in Copenhagen. His research focuses on religious aspects of spaceflight, SETI and science fiction. He has contributed to two volumes on European astroculture, edited by Alexander Geppert. and co-edited a special issue of Astropolitics on spaceflight and religion together with Roger Launius and Virgiliu Pop. Thore Bjørnvig's most recent article is 'Leaving the Cradle: Apocalypse. Transcendence and Childhood's End,' in Andrew M. Butler and Paul March-Russel. eds.. Rendezvous with Arthur C. Clarke: Centenary Essays (2022).

John Brewer (Pasadena/ Cambridge, MA)

John Brewer is Eli and Edythe Broad Professor Emeritus in the Humanities and Social Sciences at the California Institute of Technology and Faculty Associate of the History Department at Harvard University. He has taught at Cambridge, Yale, Harvard, UCLA, where he was Director of the Clark Library, the European University Institute, and the University of Chicago. He has held visiting professorships or fellowships at Ecole des Hautes Etudes in Paris, Radboud University, the University of Pittsburgh Humanities Center, the Institute for Advanced Studies at the University of Munich, and the Institute for Advanced Studies, University of Durham. John Brewer is the author and editor of a dozen books and his

work has appeared in six different languages. He has received fellowships and Grants from the N.E.H, the Getty Trust, the Guggenheim and Mellon foundations. His *The Pleasures of the Imagination* won the Wolfson History Prize in 1998 and was nominated for a National Book Award. His most recent book, *Volcanic: Vesuvius in the Age of Revolutions*, will appear in October.

tional law in the twenti Book Award. His most recent book, Volcanic: Vesuvius in the Age of Revolutions, will appear in October.

Vladimir Brljak (Durham)

Vladimir Brliak is Associate Professor in the Department of English Studies at Durham University and is currently visiting the Warburg Institute on a Frances A. Yates Long-Term Fellowship. His primary specialization is in English literary history, 1500-1700, with wider interests in the long history of poetics and hermeneutics. He also works on the literary and cultural history of outer space. His current project in this field, When Did Space Turn Dark?, examines the shift from bright to dark space in the Western cosmological imagination. Vladimir Brljak has held the Thole Research Fellowship at Trinity Hall, Cambridge, as well as visiting fellowships and grants at the Bodleian Library, Huntington Library and Durham's Institute of Advanced Study.

Stephen Buono (Cambridge, MA)

Stephen Buono is an Ernest R. May Fellow in History and Policy at Harvard University's Belfer Center for Science and International Affairs. In the fall, he will take up a position as Harper and Schmidt Collegiate Assistant Professor in the Social Sciences at the University of Chicago. His first book, *The Province of All Mankind* narrates the birth of outer space as a realm of US foreign relations and international law in the twentieth century. He is at work on a second book, commissioned by NASA, about the history of lunar governance.

Christoph Conrad (Geneva)

Christoph Conrad studied social and economic history, philosophy and Islamic studies in Berlin, Bonn. Paris and at Brandeis University. He received his PhD at Freie Universität Berlin in 1992. From 2002 to 2022 he was full professor of contemporary European history at the Université de Genève in Switzerland. As a fellow or guest professor Christoph Conrad was invited to the EHESS in Paris, Harvard, Humboldt and Freiburg universities and other places. He has published on business history and consumer society, the history of aging and historical demography, comparative welfare state research. and on the history and theory of historiography. Christoph Conrad serves on the editorial boards of Geschichte und Gesellschaft and Le Mouvement Social. His current research interests include global population history of the twentieth and twenty-first centuries and the challenges of global aging.

Olga Dubrovina (Padua)

Olga Dubrovina is a research fellow at the Department of Political Science, Law and International Studies (SPGI) at Università degli Studi di Padova in Italy. She holds a PhD in Humanities from Università deali Studi di Modena e Reggio Emilia (2015) and a PhD in contemporary history from Moscow State University Lomonosov (2017). In 2020/21 she participated in the Horizon 2020 proiect InsSciDE (Inventing a shared Science Diplomacy for Europe) taking Russian science diplomacy throughout the Space Race during the Cold War as her case study. Olga Dubrovina's recent publications include "Welcome, Sputnik is Open to Everyone!" International Aspects of the Soviet Space Myth.' in Mondo contemporaneo (2020); and 'Space Diplomacy in the Cold War Context: How it Worked on the Soviet Side.' in Claire Mays et al., eds., *Inventing* a Shared Science Diplomacy for Europe: Interdisciplinary Case Studies to Think with History (2022).

Oliver Dunnett (Belfast)

Oliver Dunnett is a senior lecturer in human geography at Queen's University Belfast, specializing in cultural, historical and political geography. His research focuses on the ways in which the cultures and politics of outer space, science and technology are connected to questions of place, landscape and identity in a variety of local, regional and (inter-)national contexts. Oliver Dunnett is the author of *Earth*.

Cosmos and Culture: Geographies of Outer Space in Britain, 1900-2020 (2021) and has published on topics such as the moral geographies of light pollution, the ethics of space exploration and the history of outer space in geography. He has further research interests in literary geographies, critical geopolitics and the geographies of popular culture.

Greg Eghigian (University Park)

Grea Eghigian is Professor of History and Bioethics at Penn State University. He is a historian of science and medicine, specializing in the history of the human sciences and psychiatry. Most recently, he has been conducting research about the history of the global fascination with unidentified flying objects and aliens. His latest article (co-authored with Matthew McAllister) entitled 'Flying Saucers and UFOs in US Advertising During the Cold War, 1947-1989' was published in Advertising and Society Quarterly in 2022. Greg Eghigian's history of the UFO and alien contact phenomenon is scheduled to be published in 2024. His next book project will examine the roles of truth, trust and trauma in claims of alien abduction.

Alexander C.T. Geppert (New York/Shanghai)

Alexander Geppert is Associate Professor of History and European Studies at New York University, with a joint appointment at NYU New York and NYU Shanghai. From 2010 to 2016 he directed the Emmy Noether research group 'The Future in the Stars: European Astroculture and Extraterrestrial Life in the Twentieth Century' at Freie Universität Berlin. He has held the Charles A. Lindbergh Chair in Aerospace History at the Smithsonian National Air and Space Museum, served as the Eleanor Searle Visiting Professor of History at Caltech and will be scholar-in-residence at the Deutsches Museum in 2023/24. Alexander Geppert's publications include a trilogy on European astroculture, consisting of Imagining Outer Space: European Astroculture in the Twentieth Century (2nd edn 2018, ed.); Limiting Outer Space: Astroculture after Apollo (2018, ed.); and *Militarizing Outer* Space: Astroculture, Dystopia and the Cold War (2021, co-ed.). Alexander Geppert is currently at work on a special journal issue on "rocket stars" in the Global Space Age and two monographs, The Future in the Stars: Europe. Astroculture and the Age of Space. and a sequel. Planetizing Earth: An Extra-Terrestrial History of the Global Present. He also runs the 'NYU Space Talks: History, Politics, Astroculture' lecture series (space-talks.com).

Laurence Guignard (Paris)

Laurence Guignard is Associate Professor of Contemporary History at Université Paris-Est Créteil and a researcher at the Centre de recherches en histoire européenne comparée (CRHEC). She is a historian of knowledge in the nineteenth century with a particular interest in scholarly practices, visual culture, material history and bottom-up

approaches. Since 2012 her work has focused on the history of astronomy. From 2018 to 2022 she co-directed Amateurs en sciences en France. 1850-1950: une histoire par en bas, a research project funded by the Agence nationale de la recherche. Laurence Guignard's publications include Les images de la Lune: Archéologie d'un objet celeste, a forthcoming book on scientific imagery of the Moon, 1610-1912, and two special journal issues. L'Astronomie au XIXe siècle (2014) and Libido sciendi: Le goût du savoir, 1840-1900 (2018). She is currently co-authoring Panorama de l'amateurisme, 1850-1950 and co-editing two further special issues, The Amateur Scientist's Workshop. 1800-1950: A History through Objects (with Sylvain Venayre) and L'aventure spatiale. XVIIIe-XXIe siècles (with Laurent Martin and Elsa De Smet), both forthcoming in 2024.

Michael Hagemeister (Bochum)

Michael Hagemeister is a historian and slavicist. He has published widely on Russian philosophy and history, particularly apocalyptic and utopian thought. Hagemeister was employed at universities in Germany, Austria and Switzerland. He is currently involved in a research project at Ruhr-Universität Bochum on anti-Western and anti-modern thought in Russia. His publications include *Die Neue* Menschheit: Biopolitische Utopien in Rußland zu Beginn des zwanzigsten Jahrhunderts, eds. Boris Groys and Michael Hagemeister (2005/2016); 'Konstantin Tsiolkovskii and the

Occult Roots of Soviet Space Travel,' in Birgit Menzel et al., eds., The New Age of Russia: Occult and Esoteric Dimensions (2012); and 'Le "cosmisme russe", "philosophie de l'avenir?",' in Françoise Lesourd, ed., Le cosmisme russe: I. Tentative de définition (2018).

Ian Klinke (Oxford)

Ian Klinke is a political and historical geographer at the University of Oxford. His research covers the history of geopolitics, war and the intellectual far right. He has written two books: Cryptic Concrete: A Subterranean Journey into Cold War Germany (2018) examines West Germany's now abandoned nuclear military landscape. Life, Earth, Colony: Friedrich Ratzel's Necropolitical Geography (2023) illuminates Ratzel's ideas and traces their reception from the late nineteenth century to the present. lan Klinke also co-edits the book series Geopolitical Bodies, Material Worlds.

Jörg Kreienbrock (Chicago)

Jörg Kreienbrock is Professor of German and Comparative Literature at Northwestern University. He received his PhD in 2005 from the Department of German at New York University with a thesis examining representations of the small and minute in the prose works of Robert Walser. His research and teaching interests include German literature from the eighteenth to the twenty-first century with an emphasis on literary theory, poetry and poetics, and the history

of science. Jörg Kreienbrock is the author of four books: Kleiner. Feiner. Leichter: Nuancierungen zum Werk Robert Walsers (2010); Malicious Objects, Anger Management, and the Question of Modern Literature (2013); Das Medium der Prosa: Studien zur Theorie der Lyrik (2020); and Sich im Weltall orientieren: Philosophieren im Kosmos 1950–1970 (2020).

James Lowder (Glasgow)

James Lowder is a third year PhD student in the School of Geographical and Earth Science at the University of Glasgow, funded by the Scottish Graduate School of Social Science. His current research considers the material and cultural relations humans have with outer space, including the influence of cosmic forces on the earth. In practice, the project utilizes the textual analysis of film, an autoethnography of night sky photography and engagements with planetary scientists tracking down meteorites. On a more theoretical level, James Lowder's work considers ideas related to the Anthropocene, the Solar System's deep past and the earth's far future. He is especially interested in solar catastrophes, including in fiction. popular science and philosophy.

Haitian Ma (Amsterdam)

Haitian Ma is an interdisciplinary researcher and conservator of timebased media. This fall, she will take up the position as Lecturer in Film, Television and Cross-Media Culture at the University of Amsterdam. She received an M.A in Preservation and Presentation of the Moving Image from the Universiteit van Amsterdam, an M.A. in Comparative Literature and Critical translation from the University of Oxford and a B.A. in Humanities with honors from NYU Shanghai. Haitian Ma's research interest spans across literary translation, archiving and the documentation of live art. Her recent publication 'Towards an Aesthetics of Ephemerality: Curating Documentation Footage at the Eve Filmmuseum 2021 Exhibition All about Theatre about Film' with Amsterdam University Press presents a curatorial aesthetics of theatrical documentation that accentuates the condition of ephemerality. Currently, she also researches the history of Indian spaceflight with a focus on the image-making of Indian space scientist Vikram Sarabhai, Haitian Ma is the recipient of an Amsterdam Merit Scholarship (2021-2023), a Clarendon Scholarship (2020/21) and an NYU Shanghai Senior Award for Excellence in the Arts (2020).

Michèle Matetschk (Berlin)

Michèle Matetschk studied history and English literature at Humboldt-Universität zu Berlin. Her M.A. thesis Astronautin sein: Erzählweisen innerhalb eines männlich konnotierten Berufes im späten zwanzigsten Jahrhundert focuses on the self-identification of U.S. female astronauts oscillating between traditional gender roles and professional expectations in the late twentieth

century. Her areas of interest include gender history, history of science and knowledge, historiography, psychology and history of communism. Michèle Matetschk has published on the history of the late GDR and divided Berlin, gender history and the culture of memory. Michèle Matetschk is a research assistant to Alexander Geppert and also works in civic education.

Piero Messina (Paris)

Piero Messina is a senior member of the ESA Director General's Cabinet in Paris. He has extensive experience in space program management, international affairs in the space sector and strategic communication. He has held leading positions in ESA initiatives including the European exploration program Aurora, the Moon Village concept and, more recently, the Agency's new Revolution Space vision. He has been involved in the ESA History Project and supports the management of ESA's Historical Archives in Florence, Piero Messina graduated in political science, attended the International Space University in Strasburg and holds a degree in history and philosophy of science from the EHESS in Paris. Piero Messina is a strong advocate of a greater involvement of the social sciences in studying and appraising space activities and their impact on society and has taught at several universities. He aims to combine his practical experience with academic reflection on the impact of, and motivation for, human spaceflight.

Ben Van Overmeire (Kunshan)

Ben Van Overmeire is Assistant Professor of Religious Studies at Duke Kunshan University, a liberal arts joint-venture university located in Kunshan, China. A comparatist, he examines how Buddhist genres and ideas are understood today. particularly in popular literature. He recently finished a book manuscript on American Zen autobiography, describing how and why such narratives incorporate koan. Zen riddles revolving around seemingly unsolvable questions such as 'What is the sound of one hand clapping?'. Ben Van Overmeir's next project examines the Buddhist imagination of outer space. His work has appeared in *Religions*. Contemporary Buddhism, The Journal of Popular Culture and Buddhist-Christian Studies, among other journals.

Stefan Pedersen (Sussex)

Stefan Pedersen is Honorary Research Fellow at the Centre for Advanced International Theory in the Department of International Relations, School of Global Studies. University of Sussex. He is also a research fellow with the Earth System Governance Project (Universiteit Utrecht), where he is co-lead of the Taskforce on Planetary Justice. Stefan Pedersen completed his PhD in political theory at POLIS, University of Leeds, where he subsequently taught international relations and political theory. He also has a MSc and a BSc in Political Science from the Norwegian University of Science and Technology. Stefan Pedersen's current work is primarily on planetary politics – from studying its early inception in the twentieth century to theorizing its present and future prospects as a new means of grounding the collective institutions of humankind. He has published in *Environmental Philosophy*, *Globalizations* and *Journal of Political Ideologies*.

Gabriela Radulescu (Berlin)

Gabriela Radulescu is a PhD student in history of science at Technische Universität Berlin. Her dissertation project investigates the Soviet contributions to radio astronomy's engagement with extraterrestrial intelligence during the Space Age in an international context. The project focuses on the scientific communication across the Iron Curtain as well as the dynamic within the scientific community of the Soviet Union (between Russia and Armenia). Gabriela Radulescu's previous education background is in history of ideas and science (M.A., University of Iceland), social anthropology (M.A., National University of Political Studies and Public Administration, Bucharest) and philosophy (Bucharest University).

Rory Rowan (Dublin)

Rory Rowan is Assistant Professor of Geography at Trinity College Dublin. His research spans political ecology, geopolitics and intellectual history, and currently focuses on the changing geopolitics of outer space and the environmental governance of 'space resources.' He is the author, with Claudio Minca, of *On Schmitt*

and Space (2016), a book exploring the spatial theory of the controversial German legal and political philosopher Carl Schmitt. Rory Rowan has also explored the political consequences of the Anthropocene and the production of the planet as an object of governance, in Progress in Human Geography, Society and Space and e-Flux. He regularly contributes to academic journals and art publications.

François Rulier (Toulouse)

François Rulier is a PhD student at Université Toulouse Jean Jaurès under the supervision of Jean-Marc Olivier and Alexander Geppert. He works on the history of space law, focusing on space lawyers as a global epistemic community. He is also editorial secretary for the academic journal Nacelles: Past and Present of Aeronautics and Space. François Rulier's research focuses on the construction of space law doctrine, considered in its intellectual and historical context, and the birth and consolidation of a network of space lawyers within academic, professional and astronautical organizations, and aims to contribute to better understanding the roots of the international commons projects. He approaches this epistemic community as both a producer of ideas and a force trying to influence the construction of positive law, notably within the United Nations. Of particular interest are the links between technicist ideology, astroculture, legal culture, internationalism and pacifism.

Bronislaw Szerszynski (Lancaster)

Bronislaw Szerszynski is Professor Emeritus of Sociology at Lancaster University. His research draws on the social and natural sciences, arts. and humanities in order to situate the changing relationship between humans, environment and technology in the longer perspective of human and planetary history. He is co-author, with Nigel Clark, of Planetary Social Thought (2021); author of Nature, Technology and the Sacred (2005); and co-editor of Risk, Environment and Modernity (1996), Re-Ordering Nature (2003), Nature Performed (2003) and Technofutures (2015). As well as academic publications, his outputs also include performances, creative writing, art-science exhibitions and events, and experimental participatory workshops. Bronislaw Szerszynski was co-organizer of the public art-science events Between Nature: Explorations in Ecology and Performance (Lancaster, 2000), Experimentality (Lancaster/ Manchester/London, 2009/10), and Anthropocene Monument, with Bruno Latour and Olivier Michelon (Toulouse, 2014/15).

Anna Szolucha (Krakow)

Anna Szolucha is the principal investigator of the ARIES project (Anthropological Research into the Imaginaries and Exploration of Space) at the Institute of Ethnology and Cultural Anthropology at Jagiellonian University in Krakow, Poland. Her research focuses on the intersections of technology,

natural resources and society. Anna Szolucha is also the editor of *Energy, Resource Extraction and Society* (2018). Her current project investigates the role of space resources and technologies in creating and sustaining imaginaries of 'multi-planetary' communities.

Brad Tabas (Brest)

Brad Tabas teaches philosophy and cultural studies in the Department of Social and Human Sciences at the École Nationale Supérieure de Techniques Avancées Bretagne (ENSTA). His research interests include critical theory, the philosophy of outer space, ethics, ordinary language and the philosophy of education, Brad Tabas' recent writings on astrocriticism - the term here referring to critical thinking bearing on our changing historical relationship to the extra-terrestrial - have appeared in Ecocene, Ecozon@, Resilience, Cosmos and History, and Conversations.

Helmuth Trischler (München)

Helmuth Trischler is Head of Research at the Deutsches Museum, Professor of Modern History and History of Technology at Ludwig-Maximilians-Universität München and Co-Director of the Rachel Carson Center for Environment and Society. He is a member of Germany's National Academy of Sciences Leopoldina and also of the National Academy of Science and Engineering acatech. His research foci are innovation cultures in international comparison, environmental

history and aerospace history. In recent years, Helmuth Trischler has also worked on the concept of the Anthropocene as a challenge to the history of science, technology and the environment, and has curated the world's first major exhibition on the issue, Welcome to the Anthropocene: The Earth in Our Hands (2014–2016) at the Deutsches Museum.

Arthur Z. Wang (Philadelphia)

Arthur Z. Wang is a scholar of contemporary fiction, media, and feminist science and technology studies. His work focuses on how scientific concepts travel across contexts and assert universal applicability. His current book project, Minor Theories of Everything, is an interdisciplinary inquiry into the proliferation and propagation of scientific universalisms about human sociality since the twentieth century and their surprising uptake by feminists and writers of color. Arthur Wang's second book project, tentatively titled Making Scientific Lives, investigates the co-formation of biographical media and the modern sciences, and traces tensions between ideals of scientific impersonality and the vibrant circulation of scientists' life stories in academic and popular cultures. Currently a Provost's Postdoctoral Fellow at the University of Pennsylvania's Annenberg School for Communication, he received a PhD in English from Yale University and, before graduate school. worked as a software engineer.

Bernd Weisbrod (Göttingen)

Bernd Weisbrod is Professor Emeritus of Modern European history at Georg-August-Universität Göttingen. His main research interests are political culture and political violence, post-dictatorial transitions and the public sphere, cultures of poverty and welfare reforms, the history of generations and the politics of memory. He has held visiting professorships at the New School in New York, Magdalen College in Oxford, the Hebrew University in Jerusalem, the European University Institute in Florence, Rutgers University and the Zentrum für interdisziplinäre Forschung (ZiF) in Bielefeld and has been Gerda Henkel Visiting Professor at Stanford University. Until his retirement Bernd Weisbrod directed the Göttingen graduate school Generations in Modern History project and the Association for Contemporary History in Lower Saxony (ZAKN). He also served on the board of the Buchenwald-Dora memorial foundation and the Koebner Centre for German History at Hebrew University in Jerusalem, Bernd Weisbrod is a corresponding fellow of the Royal Historical Society.

30 PARTICIPANTS

	Name	First Name	Institution
1	Abrahms-Kavunenko	Saskia	Københavns Universitet
2	Ahner	Helen	Max-Planck-Institut für Bildungsforschung
3	Bjørnvig	Thore	Independent scholar
4	Brewer	John	California Institute of Technology/Harvard University
5	Brljak	Vladimir	Durham University
6	Bülow	Ralf	Independent scholar
7	Buono	Stephen	Harvard University
8	Conrad	Christoph	Université de Genève
9	Dubrovina	Olga	Università degli Studi di Padova
10	Dunnett	Oliver	Queens University Belfast
11	Eghigian	Greg	Pennsylvania State University
12	French	Aaron	Universität Erfurt
13	Geppert	Alexander	New York University/ NYU Shanghai
14	Guignard	Laurence	Université Paris Est Créteil
15	Hagemeister	Michael	Ruhr-Universität Bochum
16	Jerratsch	Anna	Max-Planck-Institut für Wissenschaftsgeschichte
17	Klinke	lan	University of Oxford
18	Kreienbrock	Jörg	Northwestern University
19	Lowder	James	University of Glasgow
20	Ма	Haitian	Universiteit van Amsterdam
21	Matetschk	Michèle	Humboldt-Universität zu Berlin
22	Messina	Piero	European Space Agency
23	Mienert	Marion	Senat von Berlin, Senatsverwaltung für Stadtentwicklung, Bauen und Wohnen
24	Nieber	Hanna	Max-Planck-Institut für eth- nologische Forschung
25	Obermüller	Alexander	Universität Erfurt
26	Obiegbu	Chigozie	NYU Berlin
27	Pedersen	Stefan	University of Sussex
28	Radulescu	Gabriela	Technische Universität Berlin
29	Rauchhaupt	Ulf von	Frankfurter Allgemeine Zeitung

Email
s.abrahms.k@gmail.com
ahner@mpib-berlin.mpg.de
thorebjoernvig@gmail.com
jbcaltech@yahoo.com
vladimir.brljak@sas.ac.uk
ralfandreas@web.de
sbuono@hks.harvard.edu
Christoph.Conrad@unige.ch
olga.dubrovina@unipd.it
O.Dunnett@qub.ac.uk
gae2@psu.edu
aaron.french@uni-erfurt.de
alexander.geppert@nyu.edu
laurence.guignard@u-pec.fr
Michael. Hagemeister@ruhr-uni-bochum.de
ajerratsch@mpiwg-berlin.mpg.de
ian.klinke@ouce.ox.ac.uk
j-kreienbrock@northwestern.edu
j.lowder.1@research.gla.ac.uk
hm1592@nyu.edu
matetscm@hu-berlin.de
messina.piero@gmail.com
mmienert@gmx.de
nieber@eth.mpg.de
alexander.obermueller@uni-erfurt.de
chigozie.obiegbu@nyu.edu
sp675@sussex.ac.uk
gabriela.radulescu@campus.tu-berlin.de
u.rauchhaupt@faz.de

	Name	First Name	Institution
30	Reid	Lauren	Freie Universität Berlin
31	Rodríguez Lanuza	Luis Fernando	Universidad Autónoma de Querétaro/Universidad de Buenos Aires
32	Rowan	Rory	Trinity College Dublin
33	Rulier	François	Université Toulouse Jean Jaurès
34	Schmölders	Claudia	Humboldt-Universität zu Berlin
35	Siebeneichner	Tilmann	Zentrum für Zeithistorische Forschung Potsdam
36	Szerszynski	Bronislaw	Lancaster University
37	Szolucha	Anna	Uniwersytet Jagielloński
38	Tabas	Brad	Ecole nationale supérieure de techniques avancées Bretagne (ENSTA)
39	Trischler	Helmuth	Deutsches Museum
40	Van Overmeire	Ben	Duke Kunshan University
41	Wagner	Lygia	NYU Berlin
42	Wang	Arthur Z.	University of Pennsylvania
43	Weisbrod	Bernd	Georg-August- Universität Göttingen

E	Email
I	auren@lauren-reid.com
1	ferolanuza@hotmail.com
ı	rowanro@tcd.ie
1	francois.rulier@univ-tlse2.fr
(c.schmoelders@online.de
t	tilmann.siebeneichner@fu-berlin.de
ŀ	bron@lancaster.ac.uk
ć	anna.szolucha@uj.edu.pl
ŀ	brad.tabas@ensta-bretagne.fr
ŀ	h.trischler@deutsches-museum.de
ŀ	ben.van.overmeire@duke.edu
I	lygia.wagner@nyu.edu
ć	arthur.wang@asc.upenn.edu
ŀ	bweisbr@gwdg.de

