

**Routledge Handbook on Space Policy – Writers’ Workshop
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“Summary of Findings: levelling-up from *New Space* to *Next Space*”

by

Céline Rodrigues
(PhD candidate)

1. Introduction: setting the scene

In the 1960s of last century, movies like Star Trek make the fans dream of getting to space. It turned out to be possible, and science-fiction is a reality. That is why it is possible, in the 21st century, to join writers and editors in a workshop to share ideas, research and experiences. The workshop was co-organised by IJP (host) Universidade Portucalense and ESSCA. Universidade Portucalense located in Porto, Portugal, welcomed a fantastic and exciting group for three days.

By crossing insights, the handbook preparation and connection of topics in different chapters, divided into six sections (*Theoretical structures for an understanding of space policies; The History of Space; Society, Justice and the Human Impact; Governance of Space; Popularisation of Space; New Frontiers in Space and Expansion into the unknown*), can be adequately expressed to the authors. The workshop was opened to general public, in-person and online. Over the three days, the general public had the chance to have access to new insights, information and works being developed in space topic.

Professor Jorge Leite (Vice President of Universidade Portucalense), Professor Wladimir Brito (President of Instituto Jurídico Portucalense-IJP), Professor Bruno Reynaud de Sousa (IJP), Professor Thomas Hoerber (ESSCA – EU*Asia Institute) and Hugo Costa (Portuguese Space Agency) opened the workshop. In the first interventions, it was transmitted that space policy is becoming more relevant internationally, where States work together in a changing world to get a safe and secure earth.

The idea of safety and security was recalled by General Pascal Legai, Senior Advisor to ESA DG, ESA/ESRIN, in the keynotes. The former concept is perceived as the protection of the space, acknowledging the multiple threats such as debris and cyberattacks. The latter relates to the nature of all space activities in space and from space. In that sense, ESA (an independent organisation) has an agenda called “ESA

Agenda 2025". According to the General Pascal Legai, this document observes space being at a crossroads of global changes, highlighting the European Union's capacity to act now. Consequently, and to ensure that Europe will be at the forefront of space in the coming years, ESA defined five priorities as indicated below:

- Strengthen ESA–EU relations;
- Boost green and digital commercialisation;
- Develop space for safety and security;
- Address critical programme challenges;
- Complete the ESA transformation.

To achieve the goals proposed by this organisation, the cooperation shall occur at different levels: local, regional, national and European with a focus on peoples and citizens, so they can have a better future. In that sense, a new concept arises: *New space*. An idea of the 21st century that decentralises the role of the State and is part of the 4th wave of analog missions. Will space be considered a common heritage of humankind like oceans are? If that is to happen, the space room needs to be cleaned and prepared for the future. Much work remains, for instance, how to define space traffic or debris management. There is no doubt that space has been helping to identify, study and understand climate change. Observation is a consensus word regarding the proper use of the information received from space through satellites (Galileo, Copernicus) that help to monitor oceans and prepare populations for climate change. Can space help mitigate climate change and how? Is humankind trying to colonise space, as explained by Nikola Schmidt in his work "Cosmopolitan theory for space"?

2. Expert discussion: levelling-up in key areas?

During the first roundtable, entitled "Perspectives on New Space" and chaired by Mariel Borowitz, the speakers and writers, Dr John B. Sheldon (AstroAnalytica), Benjamin Pothier (The Explorers Club / i-DAT the University of Plymouth), Hugo Costa (Portuguese Space Agency) shared their personal experiences and discussed, in a seeming consensus way, the different new trends of space, where investors and private sector are gaining room to act as they want so far, demarcating from the traditional space where the state was the only actor/presence. With the creativity of outsiders from governments, there is a change of paradigm that allows to have:

- space tourism;
- private space station, in a near future, that will improve new suits with a new technology and for entertainment;
- space pharma;
- space medicine.

Many analog missions are held in extreme conditions in which civilians are cautiously selected to be part of research in an intense and unique context living with few people in a challenging milieu and a small space, a personal experience shared by Dr Benjamin Pothier.

As the new trends allow civilians to be up there, it is relevant to understand the purpose of those experiences and question how States can come together to create boundaries/agreements through the exchange of experiences and knowledge that allows seeing where the law is not acting as well as analysing doubts of how and what to do regarding air policy/strategy that countries shall define and think about to reduce gaps and achieve sustainability on Earth and space. In the case of Portugal, a space strategy was first created to step into the next stage of defining a space law with a consequent evolution to space governance to be discussed in Portugal in 2024. For some people, it might be unclear to talk about space and sustainability (recalling the Brundtland report 1987, *Our Common Future*), but it is what professor Thomas Hoerber has been analysing in the past three years with a revision of literature. A critical observation is that economy is always present and only economy is in the space policies. In the case of space, sustainability is understood not only from the perspective of sustainability of the Earth but also of the universe, meaning that when referring to that concept, then political sustainability shall be added to the definition of sustainability, which already includes economic, environmental and social. If a new space treaty is to be put in practice, then, during its preparation, sustainable development, associated with growth in different sectors, shall be considered and included. Particularly if the colonisation of space is on the table due to the continuum growth of humanity. If it is a scenario that can be real, agreements or treaties are to be defined in a short period of time with the presence of diplomacy to be of use while negotiating conditions and elaborating document(s). A historical review states that there are four moments, as follow: 1950s to 1980s, 1990s to early 2000s, 2000s to 2014 and 2014 to present-day. By analysing those

periods, the conclusion is that there is a shift from the role of the State that was the only player. Over time, especially in the 21st century, the private sector has been able to place itself as the leading player in space (contributing to the concept of New Space) which also expresses the evolution and shift of space as the use of security matters from governments during the Cold War to commercial and the rise of “Space Pharaohs” since the end of the Cold War.

How to look, then, at international law in space? It seems like soft diplomacy, soft law and soft space have been driving commitments in outer space, where it is known that there is a lack of democratic control. But until when will it be possible to fly through space in those conditions? Perhaps, to avoid future disagreements and piracy in space, the present moment is the time to explore the global governance of space to prevent the control of *space powers* (status) in *spacepower* (capacity/ability), as explained by Marco Aliberti (ESPI) and colleagues.

So far it is unclear how green and human security can be granted. Science fiction is not fiction anymore, but instead becoming a reality, though there is a consciousness of the writers of the Routledge Handbook that there is work to do, especially in global governance, so no doubts and conflicts arise up there, as well as space literacy shall be communicated in an understandable way to citizens.

3. Next steps

At the end of the workshop, there is a feeling of accomplishment in sharing ideas and experiences, a better understanding of what can still be done and deepened and opening perspectives and thoughts for other research topics. The discussion of ideas and knowledge also puts on the table questions such as: what can be the contribution to developments in outer space? How can it help improve humankind’s conditions and tackle climate change? Can space become a global common/ heritage alike ocean? The debates also lead to other questions that will allow more research works and interconnection of the topic with many different areas, such as International Relations, security (non-traditional) and climate change.

Another encounter of writers will be held in Prague in May 2023 for the final comments, so that the edition will be published by the end of 2023 / beginning of 2024.

There is a way out of every box, a solution to every puzzle; it’s just a matter of finding it.

Captain Jean-Luc Picard, Star Trek