

Space technologies, resources and "multi-planetary" communities: Space exploration and the imaginaries of living in a climate-changing world

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We have long known about the impact of Earth's photographs taken during space missions – those pictures of a lonely, smaller or bigger "blue dot" (see *Figure 1*) shaped the ecological awareness of social movements and sometimes entire societies since the 1960s. For the first time, they portrayed an image of our planet as an oasis of life amid the dark vastness of the outer space. From an ecological perspective, it was a place that needed to be preserved so that it could harbour life for as long as possible. Today, when many regions in the world are struggling with the effects of climate change, our imaginaries about living on a climate-changing planet are undergoing another transformation. We are no longer going back, like we did 50 years ago, to those photos of a fragile, blue dot. Instead, countries such as the United States and India as well as many private companies are making significant steps towards space exploration, including the eventual colonisation of Mars and resource extraction on the Moon. These endeavours may make humanity a "multi-planetary" species – they could allow humans to live on more than one planet. Although the scope and diversity of the current space missions is unprecedented – even when compared to the Cold War period – we know very little about the



Figure 1: "Pale Blue Dot" - a photograph showing Earth as a small blue dot. The photograph was taken by the Voyager 1 space probe from beyond Pluto's orbit. NASA/JPL-Caltech

impact that space exploration has on the imaginaries and environmental awareness of contemporary societies and about its influence on the lives of various communities across the globe. Meanwhile, new space technologies may, like 50 years ago, become a model for dealing with the environmental limits of our planet. However, we do not know how the creators, enthusiasts and "users" of contemporary space technologies imagine future living on Earth while they are perhaps creating the possibilities for leaving it. These imaginaries are not universal or objective but culturally and socially produced and they may shape the ways in which we will tackle climate change and other problems on Earth for years to come.

Despite the intensity of space activities, knowledge about the ways in which space tools and technologies shape how we live on a climate-changing planet is fragmented and focused mostly on the perspectives of scientists; it also does not concern the current period of a growing interest in manned missions and resource exploration on other celestial bodies. Thus, in the planned project we will explore how new space technologies shape our imaginaries of living on Earth and beyond it. During the project, we will develop and test "planetary ethnography" – a new method to study vast issues and contexts that usually escape the bounds of normal everyday experience. We will conduct research on all continents, with particular focus on the development of space missions in the United States and India. To close a gap in space anthropology, we will focus on three main groups of stakeholders: scientists and engineers who develop space tools and technologies; activists and lobbyists who advocate new directions in space exploration and local communities, including indigenous tribes, that live near space infrastructure.

Our project will lead to a better understanding of the impact that space missions and technologies have on the imaginaries of living on Earth. Thanks to our research, we will be able to present a critical analysis of the social, cultural and political factors that are shaping the needs and underlying assumptions of contemporary space activities. We will be in a position to identify any cultural models of society that may be embedded in space technologies and analyse who could benefit from such models and who would bear their main burden.