



Position paper

Written for the roundtable “Planetary Defense, Cosmopolitanism and the Role of the Small States” with
Pete Worden at the Institute of International Relations

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Background

The Institute of International Relations (IIR) has recently decided to expand its expertise to cover emerging technologies, their possible societal and political impact, help to steer their impact for the benefit of the global community and identify the role of the Czech Republic in this new turbulent age.

The visit of Pete Worden, the former director of NASA’s Ames Research Center and the CEO of the Breakthrough Initiatives¹, to Prague is therefore of much interest to the IIR. One of the projects within the Breakthrough Initiatives is Breakthrough Starshot that aims to visit the nearest star Proxima Centauri in about two decades using a swarm of 1 gram-size spacecraft. If the mission is successful, it will radically change our perspective of humans existence on the Earth, in the Solar System and given the character of the mission even in the Milky Way galaxy.

It is important to mention that the mission to reach the star four light years away in about two decades seems to be fully feasible.²

Political science in an interstellar mission

Human history has been written by turbulent events, in which the social and political status quo was shaken in its foundations, creating space of possible change. For the last century, political science has been particularly focused on wars as they massively impact

what is imaginable from the ethical standpoint. Given the inflicted damage, wars in the 20th century resulted in the creation of unprecedented cooperation modes of relations and cross-checks ensuring a continual well-being. However, ethics do not necessarily have to be invoked only after grievous events, they can be reversely imagined.³ Particular actions can lead to ethical outcomes resulting in new normative foundations of society.

The new wave of ethical security studies⁴ builds on an imperative that security is not only an absence of threats but a broad, enabling environment for further humankind flourishing.⁵ Moreover, endeavors like this have the potential to become decisive in the formation of what Ulrich Beck called the cosmopolitan outlook;⁶ a perspective that our role as individuals matters but has global implications, which comes with universal liberty but also responsibility.

Identifying and imagining on which revolutionary ideas different societies in the global community can work together can be thus understood as the intentional imagination that would lead to the cosmopolitan outlook.

Space missions as carriers of peace

The Apollo program has been perceived variously. Some viewed it as a demonstration of the US technological superiority following the policy of Vannevar

¹ https://en.wikipedia.org/wiki/Pete_Worden

² Philip Lubin, “A Roadmap to Interstellar Flight,” *JBIS - Journal of the British Interplanetary Society* 69, no. 2–3 (2016): 40–72.

³ Anthony Burke, “Security Cosmopolitanism,” *Critical Studies on Security* 1, no. 1 (2013): 13–28, <https://doi.org/10.1080/21624887.2013.790194>.

⁴ Jonna Nyman and Anthony Burke, *Ethical Security Studies: A New Research Agenda*, ed. Jonna Nyman and Anthony Burke (Routledge, 2016).

⁵ Ken Booth, *Theory of World Security* (Cambridge University Press, 2007).

⁶ Ulrich Beck, *The Cosmopolitan Vision* (Polity, 2006), <https://doi.org/10.1007/s13398-014-0173-7.2>.

Bush⁷ and focusing on strategic objectives in the so-called space race with the Soviet Union. However, the perspective of the Czech Republic, for example, would be different as we saw the first men walking on the Moon in less than a year after the 1968 invasion of the Warsaw Pact armies. For Czechs, listening to the famous quote: “*That’s one small step for a man, one giant leap for mankind,*” by the American astronaut delivered a powerful message. It was heard by those, who were just occupied, whose visions of a bright free future were taken away. The cosmopolitan norm to include all, as the Outer Space Treaty from 1967 requires, helps to seed the hope and direction of our liberation efforts. Reaching stars for all on Earth stipulates legitimacy and shared passion of all local communities of the global community.

The STEM community is visibly moving to become the STEAM community.⁸ The ethical implications of the interstellar mission can lead to the possible global united mindset. However, how most actors in the global community finally perceive the mission will be significantly dependent on the fact how the whole endeavor is framed by political discourse. Here, ethically-oriented political science has a lot to say and we believe that the reception by the audience depends on the past of those who formulate the argument. We believe that the Czech Republic can play a very unique role in the shaping of this political discourse.

Humanistic history of the Czech Republic

Our country and its foreign policy has been influenced mainly by two presidents. Philosopher Tomáš Garrigue Masaryk founded Czechoslovakia in 1918 and became the first president of the new republic. His philosophical convictions about humanistic values served as a critical normative foundation of the newly founded democracy in sharp contrast with the Austrian autocracy. *Liberty* enables *equality* before the law – all have the equal rights, while the French expression *Fraternité* enforces the principles of liberty and equality and adds the *mutual sympathy*. For Masaryk, these principles were the best safeguards for the democratic political system and its normative foundation. As such, democracy is not limited to direct elections but to values the society pursues.

Half century later, Václav Havel became famous by drafting, signing and spreading the Charter 77. The 242 signatories of this document criticized the communist government for failing to implement various provisions of

three key international treaties related to human rights that Czechoslovakia signed.⁹ Havel saw the 20th century as a crisis of human identity; as a loss of the moral dimension that should underpin every political action. To keep the moral dimension in political actions, decision should be bounded with responsibility. History in Havel’s perception is about the “*field of human action which permanently provides all possibilities for transcendence in human existence.*”¹⁰

The responsibility as a transcendent ethical value is based on a particular *act of responsibility*, that contributes to human identity as formulated by the philosopher Jan Patočka.¹¹ Havel’s insistence on human rights as a responsibility had a world-wide impact on global politics of the 1990s during the times he was the president of the post-communist Czech Republic. It helped to adopt the Responsibility to Protect norm by the UN and generally made countries think more as members of the cosmopolitan global community.

Big space visions as harbingers of new cosmopolitanism

Space has been since the beginning of the space age a *province of mankind*, as stipulated in the Outer Space Treaty. States may still play a significant role in space; however, the emergence of billionaires such as Elon Musk, Jeff Bezos or others willing to invest everything to reach stars is significantly changing the situation. It is not far-fetched to expect a radical change in the upcoming decade.

Elon could be building cities on Mars soon as his Big Falcon Rocket is expected to lift 150 tons for \$7M. Jeff Bezos does not share similar details about his plans but pours at least a billion US dollars a year into his company Blue Origin. All these activities will require a certain quality of governance to be widely accepted by the global community as a whole. The ideas behind any governance do not arrive without particular philosophical foundations that explain why one should take decision in one or the other way.

The Breakthrough Starshot is a unique example of how a visionary idea can be transformed into a feasible project that writes humankind history without a significant involvement of states. Nevertheless, the project will require a massive laser system to be deployed in order to propel the spacecrafts to Proxima Centauri. Lasers might serve for civilian, scientific or exploratory

⁷ Vannevar Bush, *Science - The Endless Frontier* (Washington D.C.: National Science Foundation, 1945).

⁸ STEM – Science Technology Engineering Math; STEAM adds Arts.

⁹ Final Act of the Conference on Security and Cooperation in Europe (Helsinki Accords, 1975), United Nations covenants on political, civil, economic, and cultural rights (1966) and finally the constitution of Czechoslovakia.

¹⁰ Josette Baer, “Imagining Membership : The Conception of Europe,” *Studies in East European Thought* 52, no. 3 (2000): 203–26, <https://doi.org/10.1023/A:100875951>.

¹¹ Jan Patočka, “The Obligation to Resist Injustice,” in *Philosophy and Selected Writings*, ed. Erazim Kohák (London and Chicago: University of Chicago Press, 1989), 340.

purposes, but in space every technology is inherently understood as dual-use. Therefore, an unprecedented global-wide consensus will be needed for their use in the project. Any other similar efforts will have to be articulated as well with political responsibility in mind.

Framing the laser deployment as peaceful, as a transcendence of human existence, as an action that enables all possibilities and opens a new age of interstellar travel is not only desirable but also inevitable. As the Moon landing gave hope to us in the 1960s, the Breakthrough Starshot can give hope to those who are oppressed today. Hope, regardless the imperfection of the world affairs, that there are people working on projects moving the humankind forward. The Project has a clear potential to ignite the cosmopolitan outlook as described by Ulrich Beck and other followers of the enlightenment thinking beginning with Immanuel Kant.

Topics for the roundtable

1. What are the ideas behind the Breakthrough Initiative and the Starshot in particular?
2. What should be the role of small countries in general and the Czech Republic willing to revitalize Masaryk's and Havel's legacies for the global community linked to the Breakthrough; what should be the role of space-faring countries, multinational space agencies or political entities as the EU?
3. How does the Breakthrough see political implications of the whole endeavor?
4. What should the scientific community in the Czech Republic or anywhere in the world do to participate in the Starshot?