

CAN DEEP ALTRUISM SUSTAIN SPACE SETTLEMENT? J. Haqq-Misra, Blue Marble Space Institute of Science (jacob@bmsis.org).

Summary: Elon Musk’s ambitious plan for sending humans to Mars is becoming increasingly technologically feasible. Efforts by SpaceX, Deep Space Industries, Planetary Resources, and other private space corporations now fall in rank with government space agencies such as NASA, ESA, JAXA, IRSO, RFSA, and CNSA. Many of these private and government entities are developing successive plans to visit asteroids or Mars in the coming decades, which are beginning to show prospects for economic gain in addition to scientific return. These recent developments all suggest that Musk’s vision of our civilization becoming a ‘multiplanetary species’ could be realized in the coming century.

Technological advances that will allow humans to settle on another planet or extract resources from planetary bodies must be matched by parallel advances in our civilizational ethics. The ‘problem of the commons’ articulated by ecologist Garret Hardin [1] and others (e.g. [2]) is at the root of many of our systemic global problems. Hardin argues that solving the population crisis “requires a fundamental extension in morality,” while similar arguments can be made about failed efforts to address climate change, poverty, and other sustainability issues on a global scale. The lack of moral progress risks the danger of perpetuating this problem of the commons and other harmful colonial attitudes as our civilization ventures in to space. We need to invest in developing our ethics in tandem with our technology prior to the establishment of space settlements.

Here I examine the concept of ‘deep altruism’ that could allow space settlement to succeed over intergenerational timescales. I draw upon historical examples of benefactors acting with interests approaching a deep altruism for the benefit of future generations, including similar efforts by modern donors and organizations. I begin outlining the requirements of an ethical framework for the concept of deep altruism that would motivate the funding of long-term projects that do not provide any direct benefits to the donor. I then discuss practical aspects of deep altruism, identify potential donor profiles, and assess the feasibility of establishing a space settlement based upon such a funding model [3].

Crowdsourced models of deep altruism could also provide sustained funding for space settlement or SETI. Specialized financial products could be tailored toward individual scientific objectives or development goals, such as a ‘lottery bond’ debt security [4]. Such a

product, with effective management, could provide a regular stream of income to ambitious projects while also providing consumers with a more direct return on investment.

The success of a commercially-driven space settlement will inevitably require tremendous financial foresight that could benefit from a donor or group willing to invest in the distant future of humanity. Further work is needed to develop the concept of ‘deep altruism’ that could allow such a bold endeavor to succeed.

References: [1] Hardin, G. (1968) *Science*, 162, 1243–1248. [2] White, L. (1967) *Science*, 155, 1203–1207. [3] Haqq-Misra, J. (2016) *The Boston Globe*, 08 May. [4] Haqq-Misra, J. (2013) *arXiv*: 1311.2467.