Paper ID: 82159
oral
student

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Space Culture: New Processes of Public Engagement in Space through Culture and Art (9)

Author: Ms. Julie Nekola Novakova
Charles University, Czech Republic

POPCULTURE FOR SCIENCE OUTREACH: THE CASE STUDIES OF 'STRANGEST OF ALL' AND 'LIFE BEYOND US'

Abstract

Are we going to find traces of life on Mars? How does searching for life beyond Earth impact our lives on this planet? Could space exploration pose any risks for beings on Earth or elsewhere? These are just a few of the questions sparking the public interest in space, and at the same time questions feeding into popular culture narratives, especially science fiction in all types of media. The public often encounters scientific concepts as portrayed by popculture, accurately in some cases or heavily distorted in many. Popular culture used in outreach can serve as a way to familiarize people with science, spark interest and facilitate further learning and exploration. Public engagement with science and technology may be strongly influenced by science fiction portrayals, and popculture has been previously suggested as having an untapped potential for outreach [1, 2, 3].

I will present the European Astrobiology Institute (EAI) projects Strangest of All and Life Beyond Us, science fiction anthologies augmented with science essays. The stories - by world-renowned authors such as Stephen Baxter and Mary Robinette Kowal as well as emerging international writers focused on science-driven fiction - all include elements of astrobiology that are explored in the follow-up essays. Their topics range from planetary protection, Titan exploration or exoplanet and exomoon detection to proposed exotic biochemistries and more.

While there have been previous anthologies with outreach goals, these are unique in using the approach of combining stories with related science essays by experts, also being augmented by freely available educational materials for each story-essay pair. The first piece has already been published on EAI's website [4] and contains high school-level and undergraduate-level classroom exercises and questions related to the opening story and essay of Life Beyond Us, concerning planetary protection in Mars missions. This way, the project target group extends from the general public to secondary/tertiary education as well.

I will briefly outline the practical aspects of creating the books, especially the more voluminous, print anthology Life Beyond Us, lessons learned and recommendations for future projects. Finally, since reading is just one of many ways of consuming popculture, proposed follow-up projects using video, podcast, theatre, comics, speculative bio-art and other adaptations of the material will be discussed.

[1] Eichmeier et al. (2023). Journal of Science Communication, 22(1), A08.

[2] Ivanov, V. D. (2023). arXiv preprint arXiv:2312.16254.

[3] Froehlich et al. (2019). 70th International Astronautical Congress.

[4] https://europeanastrobiology.eu/wp-content/uploads/2023/10/LBU-Edu-resources-1-PLANETARY-PROTECTION.pdf