

Review of: "A Case for Nature in Long-Haul Space Exploration"

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This article draws from prior work establishing the beneficial relationship between nature exposure and cognitive function to advocate for the incorporation of artificial nature stimuli in crewed spaceflight. Although whether and how long-duration spaceflight impacts cognitive performance is not well-understood, we may infer both from the literature on isolated and extreme environments as well as from analogous research into the physiological consequences of long-duration spaceflight that countermeasures to its psychological toll will be valuable if not necessary for mission success. Offering nature exposure as one such countermeasure, the authors propose a relatively cheap but potentially effective solution to some harms involved with life in this hostile environment.

The authors' proposal additionally implies investigating the circumstances under which artificial nature exposure confers cognitive benefits. Implementing a meaningful degree of artificial nature on crewed missions entails an understanding of what that degree is, and a rigorous effort to reveal this parameter could advance our general understanding of how and why exposure to nature benefits cognitive performance. Reaching this understanding is an intriguing prospect with as many potential applications in the modern urban environment as in space.

More broadly, this article develops the idea that safeguarding our spacefarers' cognitive performance should be a priority should humankind seek a future in space. This article and others like it portend a nascent but rapidly-developing space psychology. The basic challenge of crewed spaceflight is the crew, and specifically its protection. This challenge has traditionally been framed in terms of physical systems and their deterioration; however, the reason we would send poets into space has less to do with physiology than psychology. Investigating whether and how long-duration spaceflight impacts human psychology represents an essential goal for any mature space program.