

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

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Potential competing interests: No potential competing interests to declare.

I like the idea of biophilic design - and have some connections to people interested in using it in schools and other public places. I would agree that for long-haul flights to other worlds, biophilic design seems like a good idea - and as the authors suggest there would be an added cost to the flight of bringing real plants, soil etc on such an interplanetary flight.

The authors suggest that rather than real plants and soil, such missions could include less bulky visuals. However, while I would agree that the costs would be reduced, I would like to know if having artificial visual stimuli is as helpful, psychologically, as real stimuli? What, for example would be the benefit of incorporating smells into such digital displays - such as soil or plants? Some data on the psychological benefits of incorporating sounds, smells, tactile stimuli, etc would be useful.

I think the article would also benefit from knowing whether there would be benefits of biophilic design on all flights - including orbital, or whether such a technological change would be restricted for much longer-haul flights at some point in the future.

On the very hypothetical front, what might be the outcome of producing very "Earth-like" environments on a population travelling for generations? Would the environment help them recall their ancestral home, or help them forget there was anywhere other than the home they interact with?