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Roger G. Harrison
Roger.g.harrison@edu.edu

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Publishers Corner Manned Space Exploration: America's Folly

Roger G. Harrison

Advocates of manned space exploration have some explaining to do.

If we want to assess the benefits of human space exploration, particularly to Mars, who better to consult than the good folks at MIT, a place presumably bristling with engineering knowledge and human genius. Fortuitously enough, the "Space, Policy and Society Research Group" at MIT has produced a study on "The Future of Human Space Flight" for our edification and enjoyment. It is six years old at this writing, but the facts have not altered appreciably: the humans who would have to be transported to, sustained on, and returned from the red planet are the same frail and physically limited homo sapiens they have always been; they are still carbon-based life forms, and therefore dependent on oxygen and water; and they are still as certain to deteriorate and die after relatively short periods of exposure to gamma and other radiation at strengths present in space and (especially) on the surface of Mars.

What are the justifications for flinging such creatures into the vastness of space? The MIT report purports to provide some. Though the product of scientists, the study is not, in a strict sense, scientific. It is, rather, a piece of advocacy whose authors are intent on demonstrating that human space exploration is worth the admittedly high cost in lives and treasure. Still, there are obvious things that even these advocates feel constrained to accept. Hence their conclusion that, whatever the case for human space exploration might be, it does not include the advancement of scientific knowledge on the one hand, or the prospect of turning an honest dollar on the other.

This is the burden of the Study's identification of supposed "primary" and "secondary" objectives of human space travel. Interestingly, the authors identify as "secondary" all the possible tangible benefits, and as "primary" the intangible ones. By this reckoning, "science, economic development,

new technologies and education" – in short, those things most widely touted as the "pay off" from vast investments necessary for human space travel – are "secondary" objectives, which the authors conclude do not justify the cost and risk to human life. By this account, you space miners, you builders of self-sustaining H₃-extracting settlements on the moon, you Hiltons of space with your orbiting hostels, even you tourist promoters eyeing brief near-space junkets for the rich – all of you are promoting projects that are economically unprofitable, scientifically unjustified, and morally dubious.

No less a pundit than Neil deGrasse Tyson seems to have reached a similar conclusion. He argues that governments rather than private industry will have to sponsor the first human trips to Mars. Industry won't do it, Tyson says, because it will be hugely expensive, with high probability of fatalities and no economic return. If he means that only governments are misguided, lobby-ridden, and morally obtuse enough to engage in such activity, I agree. But even governments cannot escape the problem of moral hazard without some overwhelming purpose to justify the sacrifice of human lives that even the most optimistic admit will be required.

On this point, the MIT study purports to come to the rescue. If tangible benefits do not meet the moral hazard or even the economic test of human space flight, what does? Intangible benefits, of course – those which the Study disingenuously identifies as the "primary" goals of space travel. Why primary? Because the authors say so! The great benefit of intangible goals to any piece of advocacy – especially one written by scientists – is that they are not quantifiable. In the great scales of ethics and economics, they can have any value you choose to give them. Things you can

measure are recalcitrant; they don't yield to the political narrative. Intangible returns, on the other hand, can explain, balance, and justify anything. Chief among the intangible "primary goals" of human space exploration, the MIT study identifies "international prestige," and who can say they're wrong? Once intangibles enter the door, science flees out the window, and suddenly we are in a fantasy land of national narrative, quest sagas, and public relations – and never mind that Buzz Aldrin has taken to doing underwear commercials.

I'm not a scientist, but I am willing to trust the MIT investigators. I accept the idea there is no economic or scientific benefit in human space flight that will offset the cost in lives and treasure it involves. I would go further. Boosters have been overpromising the benefits of human space flight for fifty years, and it is past time to call their bluff. Where are the promised scientific achievements from human habitation of the space station? I can answer that question: always sometime just after the next budget cycle. What might have been done with the 120 billion dollars in construction costs for the space station, or with the 500 billion – at least – that another manned venture to the moon and Mars would cost? It would go a long way toward easing the budget squeeze on those charged with improving our nation's missile and space defenses, not to mention repair our rotting terrestrial infrastructure. I have to admit: as I contemplate NASA's heavy launcher to nowhere, and its silly plan to tether

men to asteroids, I can't help thinking what building a more humane, more enlightened, better-paved, and better defended nation would do for our international prestige!

In short, human space exploration is a jobs program for the few, and an impediment to both national defense and the expansion of human knowledge. It might be thought of as the modern equivalent of flagpole sitting: once we put aside xenophobia and national exceptionalism, the only point seems to be to find out how long someone can stand it.* Even the nationalists and xenophobes are destined in the end to be disappointed. However specious the reasoning, our species will eventually send a few sacrificial humans to Mars. The first of them will step on *terra nova* long after I join the choir celestial; but it doesn't take a seer to predict that the flag she plants will not be that of any one nation but rather a pastel creation (think UN blue) representing a consortium of nations and industries and probably designed by Elon Musk, one of whose companies will have purchased all the film rights and logo space on the lander.

*For the record, the disputed record for flagpole sitting is 68 days, claimed by one John "Shipwreck" Kelly. The verified record for time in space is 438 days by the Russian Valeri Polyakov. Polyakov's record involved some trillions of dollars of infrastructure investment; Kelly required only a pole, a rope, two buckets, and an assistant whose name is lost to history.