

## **NR** *Wokeists Assault Space Exploration*

*Robert Zubrin*

*In October 2020, NASA’s Planetary Science and Astrobiology Decadal Survey committee received a manifesto from its Equity, Diversity and Inclusion Working Group (EDIWG). Written by NASA Ames Research Center public-communications specialist Frank Tavares — along with a group of eleven co-authors including noted activists drawn from the fields of anthropology, ethics, philosophy, decolonial theory, and women’s studies — and supported by a list of 109 signatories, “Ethical Exploration and the Role of Planetary Protection in Disrupting Colonial Practices” lacks technical merit.*

*It is, nevertheless of great clinical interest, as it brilliantly demonstrates how the ideologies responsible for the destruction of university liberal-arts education can be put to work to abort space exploration as well.*



*Carlos Jasso/Reuters NASA Advanced Space Suit Engineer Kristine Davis wears the xEMU prototype space suit during a presentation at NASA headquarters in Washington, D.C., October 15, 2019.*

*With praiseworthy clarity as to their bias and intent, the EDIWG authors say that human space exploration must be stopped because it represents a continuation of the West’s tradition of resource development through free enterprise.*

*“All of humanity is a stakeholder in how we, the planetary science and astrobiology community, engage with other worlds,” they say.*

*“Violent colonial practices and structures — genocide, land appropriation, resource extraction, environmental devastation, and more — have governed exploration on*

*Earth, and if not actively dismantled, will define the methodologies and mindsets we carry forward into space exploration. . . . It is critical that ethics and anticolonial practices are a central consideration of planetary protection. We must actively work to prevent capitalist extraction on other worlds, respect and preserve their environmental systems, and acknowledge the sovereignty and interconnectivity of all life.”*

*The EDIWG authors are equally clear as to the means by which human space exploration and development can be stopped: the “planetary protection” bureaucracy.*

***“Our primary recommendation is . . . developing planetary protection policies . . . to establish a robust reevaluation of the ethics of future crewed and uncrewed mission to the Moon, Mars, and other planetary bodies with the intention of developing anticolonial practices.” [Bold type in original]***

*“Planetary protection” was originally proposed for two purposes. One was to assure that life-detection experiments sent to other worlds did not return false positives resulting from the transport of terrestrial microbes along with the spacecraft. The other was to avert the possibility that dangerous microbes from other worlds might be transported back to Earth. These two contingencies are known as forward and back contamination, respectively.*

*The risk of back contamination — by disease organisms returned by Mars missions in particular — is the planetary-protection concern that generates most of the coverage in popular journalism and entertainment media. However, it has no rational scientific basis. There cannot be pathogens on Mars because there are no plants or animals there for them to infect.*

*As for free living microorganisms that might conceivably exist on Mars, we know that these cannot be a threat to the Earth’s biosphere because there has been natural transport of billions of tons of Martian materials to Earth for the past 4 billion years.*

*In fact, it is estimated that every year, approximately 500 kilograms of rocks ejected from Mars via meteoric impact land on our planet. Close examination of these rocks has shown that large portions of them were never raised above 40 degrees Celsius during their entire career of ejection from Mars, flight through space, and reentry and landing on Earth. They were therefore never sterilized, and if any microbes had existed in them when they left the Red Planet, they readily could have survived the trip.*

*If there are, or ever were, microbes on the Martian surface, they have long since arrived here in large numbers, and continue to do so today. So the very expensive alterations to Mars sample-return mission designs demanded by the NASA Planetary Protection Office to preclude release of Martian microbes on earth are as nonsensical as ordering the border patrol to search all cars crossing our northern border to make sure that no one is importing Canada geese.*

*The issue of forward contamination has been of greater concern to the planetary science community. It is true that a good life-detection experiment requires a sterile apparatus. But this can be provided by experimental discipline, rather than by attempting to sterilize or quarantine an entire planet. Indeed, quarantining Mars is no more possible than quarantining the Earth, because just as Martian materials have been coming to Earth, terrestrial rocks have been traveling to Mars since the dawn of the solar system.*

*In order to allow any Mars surface science missions to proceed at all, NASA's Planetary Protection Office has relaxed its sterilization requirements for missions that do not include life-detection experiments. But rather than assist in the search for life on Mars, the PPO's more stringent requirements for such missions has simply prevented them, with no life-detection experiments being sent to Mars since 1976. The situation has gotten so bad that a group of leading astrobiologists wishing to send a life-detection experiment to the Red Planet has had to propose it as a sterility-certification experiment, to identify a location without life to serve as a science-free reservation for astronauts.*

*The idea that after half a century without a life-detection mission being sent to Mars, NASA should spend billions of dollars of the taxpayers' money and a decade's worth of the efforts of a talented team of scientists and engineers to create one, only to send it to a place where it is least likely to find life, is patently absurd. Yet this is what the planetary-protection program has reduced us to.*

*The early Mars was a warm and wet planet, not unlike the early Earth. It could have evolved life, but did it? If it did, is that life still there, and does it use the same DNA/RNA information system that governs the design, reproduction, and evolutionary capabilities of all terrestrial life? Or does it use an entirely different system? These are questions of extraordinary scientific and philosophical interest bearing on the potential prevalence and diversity of life in the universe.*

*Accordingly, we should certainly send life-detection experiments to Mars, targeted, of course, to locations where they are most likely to find life, not least likely. And if they do detect life, that is precisely where we should send astronauts, to do, on site, the kind of complex research needed to properly characterize Martian life that only human scientists can do.*

*The planetary protectionist objection that if astronauts go to Mars there is no way one could know if any microbes they found were native or transports is without merit. Human explorers on Mars could know that any life they found was there before them by the same means that human explorers on Earth know there was life here before us: fossils.*

*Any Mars native life found in the present must also have been there in the past, and if it were, it would have left fossils or other biomarker residues. To deny that such fossils prove the existence of prehuman life, the planetary protectionists would need to argue, as creationists do, that Mars was created with fossils embedded in its geology in order to test our faith. Rather than expose themselves to mockery by making such a case, however, they have simply chosen to act arbitrarily.*

*Existing planetary-protection rules essentially preclude humans landing on Mars, because there is no way one could ever assure that a crewed spacecraft wouldn't crash, distributing human-carried microbes all over the landscape.*

*This is a real problem for NASA's human-exploration ambitions. Indeed, NASA's Apollo moon-landing program would have been quite impossible under recent planetary-protection guidelines. For this reason, NASA administrator Jim Bridenstine authorized a commission headed by New Horizon Pluto mission principal investigator Dr. Alan Stern, which issued a set of recommendations to liberalize planetary-protection rules to make human lunar missions possible again.*

*The EDIWG authors are clearly upset about this development and concerned that it might be extended to allow human missions to Mars as well. However, since planetary protection can't really be defended on scientific grounds, they insist that alternative criteria be adopted. Specifically, they recommend a combination of ancient pantheistic mysticism and postmodern socialist thought.*

*As a methodology for understanding the natural world, mysticism has been displaced for some time by Western rationalism. The EDIWG authors therefore devote a good part of their paper to defaming Western civilization, basing themselves on the authority of the 1619 Project and similar post-rational scholarship.*

*"Colonial expansion and the trans-Atlantic slave trade have been foundational to our present world," they say, ignoring the fact that it was actually the scientific and industrial revolutions which were foundational to our current world that liberated humanity from the various forms of slavery which characterized all preceding societies.*

*"What we call globalization" they continue, "is the culmination of a process that began with the constitution of America and the colonial/modern Eurocentered capitalism as a new global power. The result is a world where political and economic systems, namely capitalism, prioritize profit over human welfare, producing an environmental crisis, and vast inequities further compounded by climate change," etc., etc.*

*Western civilization is certainly not innocent of all crime, particularly against the native populations of colonial domains. But the root of such crimes was failure of the West in some instances to stand by its own revolutionary principles setting forth inalienable rights for all of humanity. In contrast, while striking an anti-imperialist pose, the EDIWG authors deeply degrade indigenous peoples by describing them as a part of an ecosystem, making offenses against them not violations of human rights, but a form of environmental damage.*

*On this basis, they advance the thesis that harming microbes would be as immoral as anything that was done to Native Americans or Africans. "There must be further discussion of what moral consideration microbial life on other worlds should have, beyond their scientific significance," they say.*

*"Consideration of 'intelligence' or 'non-intelligence' should not be used as a framework in this discussion. Not only do biological distinctions of intelligence have*

*a racist history, they do not hold scientific merit. It is clear that microbiology is foundational to Earth as we know it, and microbes are deserving of moral consideration.”*

*Having embraced an ethical system that would preclude the use of antibiotics, thereby imperiling modern civilization on Earth, the authors propose to abort it on Mars altogether:*

*A human presence on Mars will bring bio contaminants and irreversibly contaminate the planet, both with whole organisms and their chemical constituents. This poses extreme concerns for the ability to conduct sound astrobiology to identify ancient or present life, but a larger moral concern as well. . . . **Therefore, it is of paramount importance to consider the ethics of any crewed mission to Mars prior to such an expedition, including an assessment of the structures supporting the project and their intent, to ensure mission design can be impacted by these considerations.** [Bold type in original.]*

*But what if Mars should prove to be lifeless, could we settle it then? Sorry, no dice. “Even if there is no extant microbial life on Mars or beyond, we must consider the impacts of our actions on geological timescales,” they say. “A human presence on an astrobiologically significant world could disrupt evolutionary processes already in place. What moral obligation do we have towards potential future life that our presence on Mars could impact, or to hybrid forms of life that our presence could potentially create? These questions must be addressed by planetary protection policy.”*

*Planetary-protection policy, the authors say, must not be limited to consideration of actual life or potential life. “Aesthetics should also be considered. If Moon mining is to be an extensive enterprise as planned, these changes will be visible from Earth,” they claim, “fundamentally changing one of the few communal human experiences of gazing at the Moon. In addition, the Moon and other planetary bodies are sacred to some cultures. Is it possible for those beliefs to be respected if we engage in resource utilization on those worlds?”*

*In posing this issue, the EDIWG authors have embraced the arguments of other contemporary putative ethicists who have advanced the claim that extraterrestrial bodies such as the Moon have a “right” to remain unchanged. But clearly the Moon is a dead rock. It cannot do anything, or desire to do anything. So such discussions are not really about establishing rights for the Moon, but denying them to humans.*

*Furthermore, if the self-proclaimed representative of any tribe anywhere can stop space development by claiming that it violates their ancient sacred teachings, such development is unlikely to proceed. The authors are fine with this. As they put it, “[it] is worth questioning whether our current mode of extractive capitalism is something we should take with us when interacting with other worlds.”*

*Furthermore, helping to meet the needs of humanity by entrepreneurial development of resources from space would be a bad thing, because “enabling those with the wealth to privately engage in space exploration efforts could exacerbate already extreme wealth inequality in the immediate future.”*

*The fundamental issue at hand, the authors make clear, however, is not merely suppressing human enterprise in space, but on Earth as well. “Ultimately, we must build a better, moral, and livable future because that is how we will survive on our own planet. . . . Dismantling the structures that govern our current world and building new ones will not be easy. We are calling on the decadal committee to engage in that fight.”*

*In his play, *The Birds*, the ancient Greek satirist Aristophanes described an avian plot to take over the universe by building a wall across the sky. This, the birds hoped, would cut the gods off from their essential nourishment of sacrificial smoke, thereby forcing their surrender.*

*The birds were trying to lock the gods out, the EDIWG authors want to wall humanity in. But as the failure of the birds’ plot shows, that job can’t be done using bricks. So planetary protection is the answer.*