



Frontiersman

Facing the truth, however great the cost.

December 2021

Mars

Sam Aurelius Milam III

Various people have been advocating that we should colonize Mars. That might or might not be a good thing to do in the far distant future. I believe that it's a bad thing to do in the near future.

We've learned a few things about some of the physiological harm that can result when people live at 0 G. If we draw an imaginary line between 0 G and 1 G, then we might get some idea of the physiological harm that could result from living at about 1/3 G, which is the gravitational force on Mars. Actually, I expect that the effects of long-term exposure to 1/3 G would be more harmful than the effects of short-term exposure to 0 G. There's another problem with living on Mars. It's atmospheric pressure is only about 1/10 of that of the atmospheric pressure on Earth. So, people who live on Mars will be restricted to sealed habitats, or to wearing pressure suits and oxygen tanks. There's another problem. Mars is cold. A normal human society would be difficult to sustain on Mars. Given our short-term thinking, and our propensity for quick results, it seems to me that the most likely response to the problems that Martian conditions present will be to genetically engineer people to stay healthy in those conditions. That's a bad idea.

Martians — The genetically engineered people on Mars would be different from us. They might be so genetically different that they wouldn't even be able to interbreed with us. Even if they could interbreed with us, the resulting hybrids, if they were viable at all, might not be able to live on either planet. Given time for the genetically modified people on Mars to adapt on their own, they'd eventually end up being even more genetically different than they were at first. They'd probably tend to be taller, due to the lower gravity. They'd probably have pale skin, because of the weak sunlight. They'd have large chests, because of their larger lungs. I don't know how they'd adapt to the cold but their entire physiology would be different from ours. They wouldn't look like us. They wouldn't be like us. They'd be a whole new species. They'd be Martians.

Xenophobia — Throughout our known history, different groups of us have failed to peacefully coexist, regardless of how trivial the differences between the groups might have been. Imagine the hostility that will develop between two completely different species. I expect that the Solar System isn't big enough for both us and the Martians. One species will eventually exterminate the other. Then, whichever species survives will have one useful planet and one useless planet. It seems to me that the best solution to that problem is to make sure that there are never any Martians. To accomplish that, we need to terraform the planet, so that the people living on Mars can be genetically the same as us. They might become a different race but at least they'll be the same species. Although our history suggests otherwise, we might be able to peacefully coexist with a Martian race, as opposed to a Martian species.

Terraform — If we allow Martians to come into existence before we terraform the planet, then terraforming it will become politically impossible. The Martians will object. Therefore, the terraforming must be done prior to the colonizing, giving Mars an earthlike biosphere. That biosphere must be self-sustaining, a biosphere that can exist without the support of technology. That's true because human societies collapse. When they collapse, their technologies collapse with them. Therefore, it will be necessary, as a precaution, to make sure that the people on Mars will have a biosphere that can sustain itself without technology, and in which they can live off of the land, if necessary. Otherwise, humans on Mars might become extinct.

The necessary first step to achieve an earthlike biosphere on Mars will be to increase the gravitational force of Mars to the same as that of Earth. That's true because an earthlike biosphere can't be self-sustaining at 1/3 G. The only way to increase the gravitational force of Mars is to increase its mass. The mass of Mars is only about 1/10 of that of Earth, so a mass approximately equal to 90% of the mass of Earth must be dropped onto the surface of Mars. Sufficient material is abundantly available in the asteroid belt. Moving it to Mars is merely a technical problem.

The biosphere must have an appropriate atmosphere, and suitable oceans. Water for →

the oceans is abundantly available in the Kuiper belt. Extracting it and moving it to Mars will be merely a technical problem. The best way to add an atmosphere to Mars would be to initiate widespread volcanic eruptions. The eruptions would provide the initial gas. Environmental and genetic engineering can transform the original volcanic gas into an atmosphere that we can breathe. So, after increasing the mass of the planet, the next step in terraforming the planet will be to establish a lot of volcanic activity.

A lot of internal heating will be necessary in order to create the desired level of volcanic activity on Mars. Internal heating of Mars can be caused in exactly the same way that it's caused in Earth, by the tidal forces of a large satellite. So, it will be necessary to construct a large satellite for Mars. Since our Moon does an adequate job for Earth, it seems reasonable that the new satellite of Mars should have about the same orbital radius from Mars as the Moon has from Earth, and the same mass as the Moon. Again, sufficient material is abundantly available in the asteroid belt. If we want to avoid volcanoes on the satellite, then it's rotation should be adjusted so that it always has the same side facing Mars. Thus, there won't be any tidal forces inside of the satellite.

The temperature on Mars is too low for an Earthlike biosphere to be self-sustaining. Mars might be made habitable at its present distance from the Sun but it would remain so only by

the careful and constant technological maintenance of its biosphere. The only way to provide a self-sustaining biosphere is to increase the temperature on Mars to the same as that on Earth. A good way to do that would be to move Mars closer to the sun. The chunks of material that will be dropped onto the surface, to increase its mass, can be useful for that purpose. Although they'll be dropped in relatively small pieces, the cumulative effect will be substantial. That will be useful because energy and momentum are conserved, even in small amounts. If the chunks of material are dropped at the right times, in the right places, and at the right speeds, then they can be used to nudge Mars out of its present orbit and into a Lagrange point in Earth's orbit.

Moving Mars closer to the Sun will solve the temperature problem. While that's being done, the masses might also be used to adjust the axial tilt of Mars, and its rotation period, to more precisely match those of Earth. They're already pretty close but it might be nice for Mars to have exactly the same seasons, length of year, and length of day, as Earth.

There's one last step in the terraforming of Mars. Its new satellite must have a name. Although Phobos and Deimos might possibly be lost from Mars during its trip to its new orbit, there's clearly, obviously, only one possible name for the new satellite. It's the only name that's even worthy of consideration. The new satellite of Mars must be called Uppermos. 🦋

This issue marks the completion of 28 years of continuous publication of this newsletter.

Porters

Sam Aurelius Milam III

I see a lot of climate activists yelling, waving signs, and blocking traffic. They appear to be demanding that the various governments solve the climate problem for them, so that they don't need to solve any problems for themselves. The fact is that there are many things that can be done to reduce our needless waste of energy, and the associated needless generation of CO₂, without waiting for a fascist police authority to make such things mandatory. Here are three small examples from among many possibilities.

All over the nation, the owners of all of those buildings could replace those automatic doors with the kind that you push to open, just like our ancestors did. At the airports, they could turn off all of those slidewalks, and let people walk to their boarding gates, just like in the early days of passenger aviation. In the department stores, they could turn off the escalators, converting them to stairs, and let people walk up and down them.

<p>Current World Population https://www.census.gov/popclock/world Population Curve http://frontiersman.org.uk/Population/Curve.html</p>
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People movers of all kinds use energy needlessly. That corresponds to the needless release of CO₂. Turning them off might not lead to a big reduction of CO₂ generation, but the benefit of such small changes will accumulate. Also, all of that walking might reduce the need for so many exercise machines in people's homes, many of which also use electricity.

Handicapped people, and others who can't walk up or down the stairs, can hire people to carry them. People who can't walk the distance that they need to walk, or carry the luggage that they need to carry, can hire people to carry them, their luggage, or both. In fact, this is an opportunity for a whole new service sector, a workforce of unskilled laborers who make a living by moving people and carrying luggage. Now, we just need to figure out what to call them. 🦋

Yea Verily Even Thereunto

Sam Aurelius Milam III

Here's an article for people who believe that America is a Christian nation, and for those who like to claim God-given rights. Shown below are the numbers of occurrences of certain words in the King James Version of *The Holy Bible*. As is explained in the statement from the Revised Standard Version of *The Holy Bible* that I quoted in *Raving Over Time*, the King James Version is obsolete. Even so, that version is still the favorite of the Bible thumping evangelists. It's also the version that's used in my 1990 edition of Strong's concordance. That edition is *The New Strong's Exhaustive Concordance of the Bible*, copyright © 1990. Different numbers will result from using different concordances or different versions of *The Holy Bible*.

Word	Number of Occurrences
command	104
democracy	0
freedom	2
king	2229
kingdom	335
law	518
liberty	27
obey	69
rights	0*
servant	473
serve	238

* *Rights* is a tricky word. See *The Right Rite* in the December 1994 issue of this newsletter, and *Rights Galore*, in the May 2010 issue.

Strong's 1990 edition shows 357 uses of the word *right*, but they're mostly about somebody's right hand, probably in connection with smiting and slaying. There isn't any mention at all of *rights*, as a political concept.

Given those numbers, I speculate that *The Holy Bible* has more to do with commands and obedience than it does with liberty, freedom, or rights. It's mostly concerned with an Almighty God (Big Brother and centralized control) who knows all and sees all (surveillance), who rewards the faithful (entitlements and welfare programs) and who punishes sinners (tough on crime, mandatory sentences, and three-strikes). There are commandments (prohibitions and regulations) and required attitudes (political correctness). There's only one path to salvation (patriotism). Here's the most frightening speculation of them all. Given the comparisons just noted, maybe the Christians are right. It would be a sorry situation but, if America isn't already a Christian nation, it seems to be getting closer all the time. 🦅

Sound-Check

Sam Aurelius Milam III

Toleration is a good thing but I have the impression that most of the people who keep trying to forcibly impose it onto everybody else are just as biased as everybody else is. It seems to me that they want us all to tolerate their own favorite factions but they're not willing to tolerate us. Just as an example, it seems nowadays to be pretty much required that everybody must praise and admire the LGBTQ crowd. People who don't like them are condemned. Why are the LGBTQ people entitled to unconditional toleration, but people who disapprove of them aren't? The social reformers don't apply the same requirement for toleration to themselves that they apply to everybody else.

A standard of equal treatment, which the various social reformers appear to advocate, would suggest that one faction should get the same toleration as its opponents, regardless of who's right and who's wrong. Besides that, as often as not, the right and the wrong of a social dispute is a matter of arrogance, false assumptions, or ill-informed and misguided opinion, on both sides. So, if we don't like the members of some gang of social reformers but we tolerate them anyway, then they should tolerate us, even though we don't like each other. It seems to me that the kind of selective disapproval that appears to be standard practice for social reformers has less to do with high-flown principles than it does with whoever is in the position, at the moment, to make the most noise. 🦅

Letter to the Editor

Sam,

Keep up the good fight.

Enclosed are some stamps.

—J. M., of Northridge, California

The Rubbin' Out

Sam Aurelius Milam III, Thursday, August 17, 1978

With thanks to Omar Khayyam

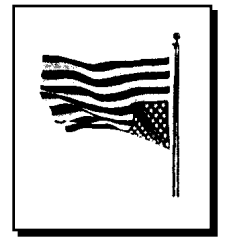
The Moving Grader bites; and, having bit,
Moves on: nor all your Piety nor Wit

Shall lure it back to cancel half a Lane,
Nor all your Tears wash out a Curb of it. 🦅

Stray Thoughts

Sam Aurelius Milam III

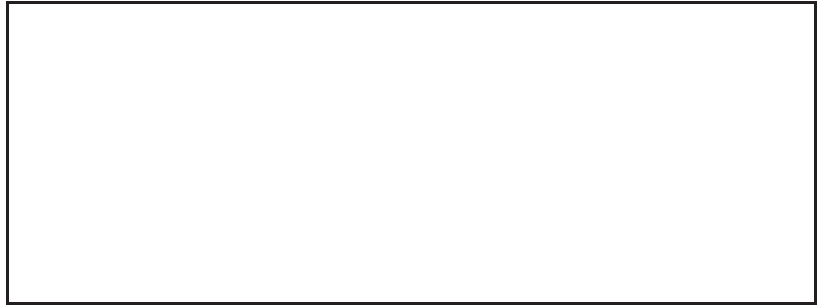
- We need more smart people and fewer smart devices.
- Civilization is a theoretical condition that we've extrapolated from some of the idealistic imaginings of dreamers.
- It's a bad idea to reward people who don't work and, at the same time, penalize people who do. 🦅



Nation in Distress

We cannot but pity the boy who has never fired a gun; he is no more humane, while his education has been sadly neglected.

—Henry David Thoreau
in *Walden and "Civil Disobedience"*



Acknowledgments

My thanks to the following: El Dorado Bob; Betty; and J. M., of Northridge, California.

—editor

Websites

<http://frontiersman.org.uk/>
<http://moonlight-flea-market.com/>
<http://pharos.org.uk/>
<http://sam-aurelius-milam-iii.org.uk/>
<http://sovereign-library.org.uk/>

Humorous Quotes

Original Source Unknown. Forwarded by Marilyn B.

- I was married by a judge. I should have asked for a jury. —Groucho Marx
- Santa Claus has the right idea. Visit people only once a year. —Victor Borge

Signs That You're a Hillbilly

Original Source Unknown. Forwarded by Don G.

- The taillight covers of your car are made of tape.
- Your car has never had a full tank of gas.
- Your mother has been involved in a cuss fight with the school principal.
- You think a subdivision is part of a math problem.
- You've bathed with flea and tick soap.
- The flood history of the area can be seen on your living room walls.
- Your wedding was held in the delivery room.
- Your baby's first words were "Attention K-Mart shoppers."
- None of your shirts cover your stomach.
- Your family tree doesn't fork.
- Your mother has been involved in a fist fight at a high school sports event. ∞

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—Sam Aurelius Milam III, editor

The glass blower hiccupped and got a pane in his stomach.