

Editorial

To Mars, but . . .

With the possibility that at some time there was life on Mars, proposals for manned exploration of space are again receiving serious interest. Unfortunately, one such proposal, by Robert Zubrin, has been given a great deal of favorable publicity. One can deplore that the media have featured Zubrin, but the scientific community has also been willing to provide him with a platform.

Zubrin received his doctorate in plasma and nuclear physics. With the demise of these fields, he turned his attention to space travel—and then, not to apply his expertise to the perfection of a nuclear- or fusion-powered rocket, but, instead, to propagandize for the use of off-the-shelf technology.

His proposal, which he calls “Mars Direct,” is not only incompetent, but it has the extraordinary feature that if it were ever to be implemented, it would have spaceships traveling to Mars without the fuel onboard for a return trip. Supposedly, the astronauts would rely upon an automated factory to produce fuel for the trip back home. Very likely, this would be a guaranteed one-way trip—hardly a very attractive or inspiring proposal, even for the most dedicated space enthusiast!

The technology specified in Mars Direct is based on using 1960s chemical rocket systems. This would mean that even were the fuel for the return somehow to be made available, the three-year trip would be life-threatening, because of the radiation exposure and other health risks of such prolonged travel. Conceivably, the problems of a prolonged zero-gravity environment might be overcome by the use of centrifugal force, but this is by no means assured.

Why, one might ask, did someone who surely knows better, come up with such a strange proposal? Why hasn't the scientific community exposed Mars Direct as a fraud? The answer is sad, but simple.

Mars Direct is being sold on the basis that it would be cheap enough that Congress would be willing to provide a budget which would allow Mars exploration to continue. In other words, it is a desperate, pragmatic effort to prevent space exploration from being completely stopped by the kind of attrition we now see due

to budget cutting—with the fear of worse to follow. These days, we see scientists in every field forced to scramble for funds sufficient to carry on their research. One immediate effect of this, is to force them to substitute relatively short-term ventures for potentially far more important fundamental research efforts, because short-term projects have a chance of getting funding from industry.

Lyndon LaRouche has written repeatedly about the destruction of fundamental science as a result of the poisonous influence of classroom mathematics—the method promoted by Leonhard Euler and his followers, in the 19th century. This is a serious limitation on all scientific research today; however, bad as the situation has become in areas of fundamental science, technological programs, such as President John F. Kennedy's Apollo program and the earlier Manhattan project, provide an unparalleled impetus to growth and productivity in the economy.

A serious program for the colonization of Mars, such as that outlined by LaRouche in the Winter 1996 issue of *21st Century Science & Technology* magazine, would be a science driver for the whole economy. It would foster the development of a stream of frontier technologies. However, the effect of Mars Direct, even were it feasible, would be exactly the opposite.

Zubrin developed his approach in the wake of the demoralization in the space community, when people realized that President Bush's announcement in 1989, that America would go back to the Moon and on to Mars, was a hoax. Even had Bush not intended to use political power for evil purposes, as was the case, he could not have gotten Congressional approval for a serious space exploration and colonization program, without an honest appraisal of the disastrous condition of the economy.

It is not true that the American economy cannot afford a serious Mars program; to the contrary, we cannot afford not to launch one—and a program even more ambitious than that of President Kennedy. Only that kind of major investment can save the economy, and our entire culture, from devastation.