Mars or Bust!
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For almost thirty years, as a futures-oriented political scientist (and a politically-oriented futurist) I have taught, researched, and consulted about political design--the invention, design, and creation of new systems of governance. I have taught political design classes at both the undergraduate and graduate levels. I began teaching political futures studies at Virginia Tech in 1967, and continued at the University of Hawaii since 1969.

After several years, I felt my undergraduate students were becoming too conventional and uncreative. I despaired at my inability to free my students from their firm but unsubstantiated myths about the present political system (especially in the US).

I finally, in the early 1980s, I said, “Well, forget about Earth and its political history. Let’s go to Mars. Let's design for a settlement there. Almost everything on Mars is different from Earth. So just leave your Earthly baggage at home and let's start afresh." At first, I didn't know anything about Mars or really intend that they would design for Mars. It was just a heuristic to shake them out of their crackpot realism.

But over the years, I began to learn more and more about Mars, and space settlements per se. In the late 1980s, the University of Hawaii created a system-wide space committee that brought together all of the many space-related teachers and researchers on campus--about 150 of them in all. I joined that committee with the very few other space-oriented fellow social scientist--Ben Finney in Anthropology, David Swift in Sociology, and Don Topping, who represented the PEACESAT operations.

This happened to be during the time the International Space University was being created by three bright young graduate

students at MIT. Ben Finney taught at the very first ISU summer session in 1987, and the UH space committee considered (but ultimately rejected) competing to be a host campus for ISU. But we did help fund the attendance of some of our students to the earliest summer sessions of ISU.

So I knew about ISU from its very beginning. When Ben was invited to head the Space Humanities division of ISU, he asked me to serve as his co-director. I began my direct involvement in ISU in the Summer Session of 1994 in Barcelona, and in the Master of Space Studies program in Strasbourg, France, when its first classes began in 1995, and have continued teaching in both programs since.

It turned out, much to my surprise, that almost no one in the space community was thinking about NEW systems of governance for space. While the issue had certainly been explored by many science fiction writers (Kim Stanley Robinson's *Mars* trilogy was in the process of being published at this time) most thinking about space governance seemed content just to export intact or to modify only slightly existing systems of governance, usually relying entirely on one's own political experience, which is to say either the dangerously unsatisfactory Presidentialist system of the US, or else the more common, somewhat better, but nonetheless utterly obsolete parliamentary system.

Even worse, space law overwhelmed space governance. That is to say, while there were academic centers and journals devoted diligently to seeing that current Earth law and lawyers extend their deadly tentacles into space, there was not a single center or journal (not even the one titled *Space Governance*) devoted to imagining and designing completely new systems of governance for 21st space settlements or beyond.

As Kim Stanley Robinson has a character complain in the early pages of *Red Mars* (and I am in debt to Wendy Schultz for providing me this quote, and introducing me to the book):

"I can say only this!" Arkady said, staring at her bug-eyed. "We have come to Mars for good. We are going to make not only our homes and our food, but also our water and the very air we breathe-

-all on a planet that has none of these things. We can do this because we have technology to manipulate matter right down to the molecular level. This is an extraordinary ability, think of it! And yet some of us here can accept transforming the entire physical reality of this planet, without doing a single thing to change our selves, or the way we live. To be twenty-first-century scientists on Mars, in fact, but at the same time living within nineteenth-century social systems, based on seventeenth-century ideologies. It's absurd, it's crazy, it's-- it's--" he seized his head in his hands, tugged at his hair, roared "It's unscientific! And so I say that among all the many things we transform on Mars, ourselves and our social reality should be among them. We must terraform not only Mars, but ourselves" [p. 89].

It is absurd and it is unscientific, but it is the situation. So at the University of Hawaii, I teach my undergraduate political design class, Polsci 371, "Governance Design for a Mars Settlement," every spring semester. My ISU workshop is just one half of one day each in the Summer Session and in the MSS programs.

The substance of my undergraduate class is roughly one fourth about governance (past present and futures), one forth on futures studies, emphasizing the theories and methods of political design (This is a course which is part of my undergraduate and graduate program on Alternative Futures in the Department of Political Science), one forth about space programs past and present, and one fourth about Mars per se. There is also a strong ethical component running through all of this: What are humans (Are we primarily Space children or Earth children? Are we a little lower than the angels or cancer cells on Mother Earth)? How should humans behave? Should we be wasting our time and resources thinking about much less going into space when we have so many problems here on Earth? What about the accumulating space junk? How should we treat the environments of space? Is it ethical to terraform Mars, for example, or should we leave it alone? And what if we find life? Do we trample and destroy it, study and investigate, or leave it entirely alone? Are humans planet eaters for whom one planet is more than enough? Or should we boldly go?

My Mars design course is basically a lecture/discussion class. I use lots of handouts and videos, but no textbook. There are many group and individual projects, and heavy use of an online listserv to which students must post items everyday. In recent years, I have taught this as a Writing Intensive class, and the topic of another paper is how the increased use first of the listserv and more recently of the Internet have transformed my teaching and the student's learning styles over the years. Over the years I have become less and less in charge of the class. I am pretty much just one of the guys trying to get a word in edgewise like everyone else.

But my class is not very innovative in terms of format. I do not use simulation like Reed Riner does, though his students and mine have tried to interact, sometimes successfully in the past.

Recently some students from ISU have taken their so-called "placement" in Hawaii for a few months in the middle of the Spring semester. There presence has greatly enriched the experience of my Hawaii students.

The focus of all class work is a major project that takes two forms. One is a group presentation and the other is an individual report. I place students in one of six groups. Each group has a predefined task on Mars and is sent to Mars by a different group.

For example:
1. Established by ESA alone, funded by EU government alone. Purpose: minimally intrusive scientific exploration of Mars.

2. Established by NASA alone, funded by the US government alone. Purpose: to terraform Mars as quickly as possible.

3. Established by former UH and ISU students alone, funded by a consortium of non-profit and space-oriented nongovernmental organizations, worldwide. Purpose: to create a branch of UH and ISU on Mars.

4. Established by a multinational mining corporation. Purpose: mine Mars for resources for further space exploration and exploitation (NOT for export to Earth).

5. Established by a global, "new age" spiritual group. Purpose: to create a community where they can practice their unpopular and unconventional spiritual beliefs freely.

6. Established by a multinational Chinese hui. Purpose: to create a popular resort for tourists from Earth.

The specific task of each group is to design a governance system to carry out the assigned task in balance with what they consider to be preferred behavior of the settlers and the best governance system to enable that behavior.

I give the students very detailed and lengthy instructions about design issues they should address, and the design methods they might use to address them. But I leave the question of how they think people will WANT to behave on Mars entirely up to them, stressing that this is their opportunity to think about how people would like to behave, if they were free to choose, and how governance systems might be designed to enhance preferred behavior. I am happy to give my syllabus, the handouts, and the detailed design instructions to anyone interested.

But what have been the results of this class? Have the students come up with any great political designs?

No. I regret to say they have not. Neither my undergraduate students in Hawaii nor my graduate students at ISU have impressed me with their designs.

First of all, except for a few truly unusual students, it is almost impossible for most of them really to think of living on Mars in the futures instead of living on Earth now. They still assume that there will be a lot of things on Mars that exist on Earth but are not likely to exist nor are necessary on Mars--such as paper, or money, or spouses. And they often fail to consider some things that are different on Mars, such as weaker gravity or dust storms. Not many think of Martian governance in terms of how things like breathable air and drinkable water are managed.

I strongly encourage (but do not require) them to assume the co-existence (or even exclusive existence) of highly advanced artificial intelligences and genetically engineered beings, but most of them just use AI and robots for doing either the hard thinking or the hard working for humans. They treat AI either as gods who decide everything for humans or as slaves who do all the work for humans. They have no regard for the emerging rights of robots, or for issues of cooperation and competition among various intelligent beings. Moreover, for most of my students, the humans on their Mars settlements are just like humans now, with no modifications from genetic engineering.

There is obviously an economic, as well as a political, dimension to their political design, but the students overwhelmingly come up with something very much like their imagined present capitalist system. They assume that people on Mars will have to work and will have to GO to work, get paid for their labor, purchase the goods and services they want, and own private property.

While I spend quite a bit of time showing (from both an historical and a futuristic viewpoint) how truly exceptional current political economic systems are most of my students remain pretty much stuck in the present.

Unless they come into the class as committed libertarians, they are not likely to leave it as enthusiasts of self-governance. Most resist electronically-mediated governance systems, and don't like true electronic direct democracy at all. At best, they prefer representative systems, and will often break large populations down into small face-to-face units, which will then elect delegates (in the Burkean sense) to larger units, and they to larger units, and so on up the top of a government pyramid.

Justice is often draconian and swift. The most depressing design characteristic from my point of view is their willingness either to expel or to kill deviants (or to alter them via electronic implant or genetic engineering). Rare is the design that extols deviance or views it positively. The moons of Mars are typically seen as good places for penal colonies, but they would prefer sending troublemakers back to Earth.

This willingness to use repressive systems is enhanced by the fact that, in spite of everything I try to do to get them to view Mars as a wonderful, fun, liberating place to be, they perceive the environment as hostile and easy to sabotage. So many design a benevolent, semi-enlightened dictatorship which strictly limits behavior, rather than the happy anarchist communities I hope settlers will create on Mars.

Finally, I set the students in to groups with different tasks and different Earthly bosses in order to see how they consider those features when they design. Their governance systems do tend to differ on that dimension to some extent. For example, the NASA terraformers and the multinational industrial miners tend to have dictatorial governance systems, while the UH/ISU scholars and the ESA scientists tend somewhat more towards self-governance.

But regardless of the purpose of their settlement, there is no longing among most of my students for liberty, equality, and fraternity. None proclaim, give me liberty or give me death! Indeed, many--even some of the students at ISU--are not even keen on leaving Earth at all. Just give them a nice little down-to-Earth home, with a good job downtown, a spouse who stays at home, and two children (one, older and male, and the other younger and female), all obedient and submissive, and they will be forever happy and content.

Well, who wouldn't?

I wouldn't: give me Mars, or bust! But hey, I'm just an old-fashioned guy.