-a word of explanation. On my understanding, the relevance of philosophy today is based in the claim that the societal problems facing us are rooted in philosophic problems—in particular, in our most basic understanding of the nature of reasoning. This is not a common position today. But it underlies the following remarks concerning the governance of space.

In 2005 Mark Bullock, Carl Mitcham, and I created the Center for Space Exploration Policy Research (CSEPR), a collaborative effort of the Southwest Research Institute’s Department of Space Studies and the University of North Texas’s Department of Philosophy and Religion Studies. The goal of this new center is to bring the discipline of philosophy, and more generally the humanities, to bear on space science policy discussions. In the few minutes available today I’d like to briefly explore what the tradition of political philosophy might contribute to the idea of the governance of space, whether in near orbit or in the exploration of Mars and other planets.

In what follows I want to emphasize the difference between the two basic
traditions of western political philosophy, ancient and modern. The ancient
tradition goes from Plato and Aristotle through medieval Jewish, Christian, and
Islamic philosophy. Modern political thought—from the 16\textsuperscript{th} century onward—
emphasizes the social contract tradition and Marxist thought. The crucial figure
marking the shift between these two traditions of how to think about governance is
Niccolo Machiavelli.

For all their differences, earlier political philosophers shared one element in
common: they emphasized the importance of virtue for governance. The right to
rule was tied to having the correct understanding the proper ends of human life.
After Machiavelli we have sought to exclude questions of moral authority and
legitimacy from political decision-making and political judgment. The belief—still
true today!—was that we cannot speak of virtue: ethical questions have no “real’
answer, for ethics and politics are both simply subjective expressions of opinion.

Note here the decisive effect of the modernist understanding of the nature of
truth. Modernity is defined by the development of a new definition of what counts
as truth: whatever is discovered through the scientific method. The scientific
method, in turn, is based on the ideas of repeatability: truth is defined as those
matters that can be \textit{demonstrated}, AND what can be demonstrated on \textit{demand}.
Of course, the definition of truth as that which is repeatable and demonstable
on demand requires the ability to set a piece of the world aside from the rest of the
world—what we call the controlled experiment. Note that by definition this
excludes anything in our personal experience or political life from counting as
ture—for both personally and politically we can never neither completely control
or repeat initial conditions.

For 300 years we have sought to build political systems without relying on
the appeal to virtue. We have made questions of the good life matters of private
conscience. This is essentially a libertarian philosophy. The reasoning goes like
this: since we cannot figure out rationally what people should do, we design our
lives so that everyone can do whatever they want. The classic formation of this
position was offered by John Stuart Mill at the end of the 19th century. The only
restriction he put on our freedom is when the pursuit of our freedom conflicts with
or interferes with another’s pursuit of their own freedom.

Set aside for the moment the epistemological claim here (epistemology: the
nature of knowledge)—that only science can identify real truths, and everything
else, ethics, politics, metaphysics, and the like, are subjective. Instead, note the
ecological assumption embedded in Mill’s libertarian political philosophy—that
we will have enough room and enough resources, and that technology will be small
enough—that it is possible to act upon our wishes without impacting others. In other words, modern political philosophy was built on the idea of an infinite frontier of resources.

Now consider outer space. It comes as no wonder that, as we have heard at our Ames conference, the business sector interested in outer space has a strong libertarian bent. Outer space seems like a great place to exercise such feelings, given the increasing regulation of our planet, as we run out of room and resources, and our technology extends our reach so that we are constantly affecting one another. But it likely to turn out to be naïve.

The question is whether outer space is really a ‘frontier’ in the sense that it represents a space where we can pursue our own personal desires in a manner untrammeled by others—that is, without trammeling others. In a word, I think not. The basic point is that a libertarian political philosophy only works in conditions of an effective infinity of resources (say, with the discovery of the New World in the 15th Century). But while outer space appears infinite, it is in many ways a quite restricted and finite space. We need only consider how small the space surrounding the Earth is, and how easily it is getting filled with satellites, space debris, and possible weapons. Similarly, the use of the Moon or Mars: in both cases there is likely to be severe limitations on some resources.
My conclusion, then, is this. The finitude of outer space will force us to the same point that we are slowly approaching here on Earth considering political philosophy: the reconsideration of the politics of virtue. By this I mean simply that we will be forced to devise means for rationally adjudicating questions other than science—in particular, questions of ethics, politics, and metaphysics. My own suspicion is that we will find ancient philosophy surprisingly relevant here. For thinkers like Plato and Aristotle worked very hard to identify ways to have rational conversations about such matters. Their own terms for these alternative types of political rationality were dialectic and phronesis. I do not have time today to describe what these alternative possibilities to scientific rationality. But my sense is that the politics of virtue will end up trumping libertarian approaches to space governance.

A reminder from Abrahamson:
"treaties don't work unless they are of interest to a deep river of humanity..."
Abrahamson