Thumos in Space

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Since "The Conquest of Space and the Stature of Man" was first published in 1963, the editors of the "Great Ideas Today" series surely posed their question no later than some time in 1962. What was the state of our "conquest" of space by the end of 1962? The first American communication, weather, and reconnaissance satellites had been launched into orbit. The Soviets had sent two probes to the moon. Both superpowers had placed human beings into Earth orbit. It is true that such achievements were unprecedented and hard won, but one must commend Arendt's restraint at only gently poking fun at the presumption of the question as she attempts to answer it.

In fact, at that time—and even today—the question can only reasonably be posed in a speculative mode: What *will* the conquest of space do to the stature of man? Or better yet, it might be phrased so as to get at the wellspring and consequences of our aspirations: What does our *desire* to conquer space tell us about our selves, our sense of who we are? These are the lines along which Arendt reasonably addresses a question oddly posed as if space had been conquered and the consequences already visible before us.

Some two score years on, Arendt's concerns have by no means been shown to be groundless. She was not wrong to point out the ironic outcome of scientific anti-anthropocentrism, which she believed practically ensured that man "will be the less likely ever to meet anything but himself and man-made things the more ardently he wishes to eliminate all anthropocentric considerations from his encounter with the non-human world around him." Without concerning ourselves with distant future possibilities like space-settlement or terraforming, we can already see a subtle sign of this anti-anthropocentrism in the iconic status of the "blue marble" photographs of Earth from space, which are said to reveal the great truth about our situation in the cosmos. Proudly shorn of all signs of the human world (take that, all you merely conventional map boundaries!) the picture reveals an abstract—in effect, alien—Earth. Carl Sagan could look at Earth photographed from four billion miles away—hardly showing any disk at all—and see "a lonely speck in the great enveloping cosmic dark. . . . To me, it underscores our responsibility to deal more kindly with one another and to preserve and cherish the pale blue dot, the only home we've ever known." What we see in the muted colors and swirling cloud patterns is little more than a projection of our own hopes and fears, a complement to the broader, postmodern intellectual project that imprisons us within our particularity.

Arendt was also right to worry about a scientific worldview disconnected from day-to-day human experience. Some might have argued that any resources extended to space exploration already provide a practical illustration of this disconnect, but Arendt takes a different tack. The scientist wants data against which to test his theories. While the scientist as such does not need or want to go to the Moon to gather the data he needs, Arendt seems to believe that there is almost a compulsion for human beings to go where previously only their imaginations have been able to reach, precisely to try to reestablish the connection between theory and "the world of the senses and appearances."

This divide between abstraction and the sensory world persists in the perennial debate between advocates of manned exploration and advocates of robotic probes. The latter not unreasonably point to the huge extra expense of supporting human life in environments hostile to it, and the supposed diminution of the "data stream" that cleverly-designed robots would otherwise generate. (There is some irony in the fact that much of the information that has already been so generated is instantiated in forms increasingly obsolete and potentially unreadable, but in principle the point remains that if mere *data* is our goal, no human need leave the planet again.)

Arendt warns that if we don't understand what human beings are and do, we may be too ready to assume that a sufficiently sophisticated machine could do the same thing. Maybe data ought not to be the be-all and end-all of exploratory efforts, and there are other grounds to send human beings into space than their (perhaps declining) relative efficiency as data gathers. Although she is not sanguine, Arendt is willing to consider the possibility that human exploration of space could extend the scope of human action in a human way, and remind us of old lessons about our limits by making us face new challenges. But for that to happen, we would have to look at our efforts in space through some lens other than that provided by modern natural science.

Robotic exploration has produced remarkable results based on the deeply dedicated efforts of ingenious human beings. Pictures from the surface of Mars or close-ups of the rings of Saturn can generate wonder in the human mind—from which point, as we too often take for granted, science begins. But recent news stories about how the NASA scientists running the "feisty" Mars rovers Spirit and Opportunity will feel when their craft finally "die" their "honorable deaths" send a message we ought to attend to. The ease with which the robots can be thus "humanized" tells us more about our own wishes for a human connection to discovery and exploration than it does about the degree to which these still rather primitive machines resemble us in the job they do or the way they do it. Of course, if human beings go to the Moon or Mars, they can and must collect rocks, which a robot can do, too. But the non-scientist is likely to remember images of an astronaut bouncing across the surface of the Moon singing a ditty, or kicking up some dust with a lunar rover, either of which it would surely be pointless to design a robot to do. The human explorer manifests his delight, his joy and excitement, at juxtaposing the familiar and the strange; watching, we can, at least in some distant way,

feel with him. (Once, merely reading the reports of explorers would have sufficed.) A robot can fail to attend to commands from the ground, but not out of a desire to stay outside a little longer, prolonging a once-in-a-lifetime experience in a way that stirs in us too the sense of the "urgent leveling of time." And when things go terribly awry, as they have done and will yet do, the grief we share with those truly close to astronauts is a tribute to their courage, their dedicated pursuit of what they loved—and perhaps a spur to aim higher and settle less. Let us hope there will be no memorial services for broken machines.

There is another reason why it matters that human beings explore space. Through the ages, human exploration has been closely linked with competition. Today, some writers seem chagrined or even ashamed by the fact that the Apollo program was so powerfully motivated by international political competition with the Soviets, as if there were something wrong with an effort by free men to illustrate in this realm the superiority of liberty over tyranny. But even accepting this mistaken evaluation reminds us that the desire to explore, like the desire to know, does not exist in a vacuum. Arendt's account, to its detriment, shares in this abstraction. It may be true that the scientist *qua* scientist is indifferent to the fate of the planet, but in a liberal regime the scientist is not accidentally but essentially also a citizen—a free man as the regime understands human freedom, even if he does not, as a scientist, understand human freedom in the same way. While political competition is rarely itself edifying, keeping this tension alive would seem to be a useful way of moderating the anti-anthropocentrism of modern science that so concerns Arendt. From this point of view, the tepid multiculturalism of the U.S. manned space effort since the lunar landings is hardly a step forward in maintaining a fully human presence in space. We might aim at the impressive technologies of manned lunar and interplanetary exploration portrayed in Stanley Kubrick's *2001: A Space Odyssey* and at the same time wish for more full-blooded and less jaded human beings than Kubrick portrays employing them.

Of course, nothing in the human drama absolutely requires manned space exploration, and having human beings in space does not in and of itself necessitate drama, as the early space scenes of *2001* remind us. Yet both of these qualifications deserve to be explored. On the one hand, space travel can be taken for granted and its wonders rendered invisible. It was less than a decade between John F. Kennedy's Rice University speech asserting "We choose to go to the Moon in this decade and do the other

things, not because they are easy, but because they are hard" and Richard M. Nixon's announcement of a shuttle program that "will center on a space vehicle that can shuttle repeatedly from Earth to orbit and back. It will revolutionize transportation into near space, by routinizing it." The upshot of each speech for the manned space program suggests that Kennedy was the better political psychologist. There is certainly room for the private, commercial routinization of space travel, but a *national* effort must continually press outward and find the difficult things to do, and do them because they are difficult. Otherwise, as we have seen for some time now, a manned space program goes nowhere fast, accumulating techniques and experiences that few have any faith will be applied to bigger and better things.

On the other hand, the rise of "extreme sports" suggests both that in the developed world efforts to minimize risk in day-to-day life are increasingly successful and that there remains no lack of young men and women willing to risk their well-being (not to speak of our military forces) even in the pursuit of some narrowly defined and generally useless excellence. If one conceived of astronauts less as technicians and scientists and more as explorers, a nobler expression of the passions that stir such youths would be obvious. When I was a student of Jerry Combee in the early 1970s, he pointed out how the problem of "ultraviolent" young men presented in Kubrick's *A Clockwork Orange* might in a sense have been solved in *2001*: send them to Jupiter. Extreme-sporters are, of course, not inherently so harmful as the ultraviolent (unless you are walking on a trail ahead of a mountain biker), but perhaps they are equally aimless without the challenge of new frontiers.

It is not entirely Arendt's fault that she should have missed the all-too-human side of "man's conquest of space." Her essay dates to the time when astronauts were still largely "spam in a can," and when NASA was actively engaged in making sure the public was not fully aware of what it really meant to have "the right stuff." She does deserve criticism for her blindness to the actual political setting in which it was taking place—a "space race" in the context of a Cold War against the Soviets. But Arendt was too high-minded a political theorist to care very much about real politics. Likewise, the short shrift she gives to space as the next outlet for the deep-seated human impulse to explore ("man, in distinction from other living things, desires to be at home in a 'territory' as large as possible") blinds her to the traits necessary to make such an effort—traits that she, as the champion of the *vita activa*, would surely admire.

To some, this defense of the human exploration of space will seem unrealistic and perhaps merely romantic. But in fact it is realistic *because* it is romantic. It may be that in the present political climate, no large-scale, soul-stirring effort at manned space exploration can be sustained. But the final report of the Aldridge Commission, the presidential commission that in 2004 made recommendations about the future of America's civilian space program, gets it backwards when it notes that "Despite the spiritual, emotional, and intellectual appeal of a journey to space—exploration and discovery will perhaps *not* be sufficient drivers to sustain what will be a long, and at times risky, journey. We must also undertake this mission for pragmatic, but no less compelling reasons." If a serious manned exploratory effort is to be sustained, it will never be primarily on the basis of bringing back more data from Mars, or cost/benefit calculations of educational advantages, employment opportunities, and spin-off technologies. While long after the fact one might have been able to defend the European voyages of discovery on such grounds, most such benefits would at the time have been invisible or, at best, grossly speculative. So too with space. It is the grand vision, the sense of destiny and purpose, the excitement of playing out the widest range of human possibility, which sustains our long and risky journey into the dark.

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