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THE POLITICS OF MARS

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ABSTRACT

This paper provides a discussion comparing past and present major accomplishments of the U.S. and the Soviet Union in space. It concludes that the Soviets are presently well ahead of the U.S. in several specific aspects of space accomplishment and speculates that the Soviet strategy is directed towards sending a man to the vicinity of Mars by the end of this century. The paper briefly reviews a major successful multinational space endeavor--INTELSAT--and suggests that the manned exploration of Mars offers a unique opportunity for another such major international cooperative effort. The paper assesses the current attitude of U.S. leadership and the general public as uniformed or ambivalent about the perceived threat of Soviet dominance in space.

INTRODUCTION

As we approach the turn of the Third Millennium, the rate at which the Soviet Union is creating new space capabilities is three to four times that of the United States. These capabilities include those necessary to put cosmonauts in the vicinity of Mars by the year 2000 as well as those necessary to dominate human activities in near-Earth space. This looming dominance must be countered in order to preserve the scientific, economic and political competitiveness of the free world. A national and, if possible, international program to explore and settle Mars is required as the focus of a long-term commitment by the United States to space stations, lunar bases and the human settlement of space.

The last quarter century has witnessed three key events in the evolution of the human species into space. These events mark both physical and political milestones in that evolution. Although discussed below in a different order, the events are, chronologically: August 20, 1964, the signing of the INTELSAT agreements; December 24, 1968, the entry into lunar orbit by Apollo 8; and July 20, 1969, the landing on the Moon by Apollo 11. Other events, such as those marking early human flights in Earth orbit, were important in and of themselves, but were in reality a continuation of many steps that led to these more fundamental events.

EVOLUTION OF THE HUMAN SPECIES

December 24, 1968. Human evolution, rapidly enhanced by modern technology resulting from that evolution, made the terrestrial planets an accessible and survivable part of human kind's sphere of activity. The commitment of the Apollo 8 spacecraft and its crew to an orbit around the Moon marked the modern culmination of the evolution of the human mind and body. With great confidence, but without an absolute guarantee of return, members of the species were committed to a planetary environment entirely different from that in which the species had evolved. From that time on, many of the planetary shores of the solar system's sea came to fall psychologically and technically within the envelope of potential human activities.

How humankind will utilize this new evolutionary status is not yet clear, however, it is clear that many of the young people of the Earth with whom I have spoken believe that the next great human adventure will take place at the space frontier, and that the planet Mars will be the focus of that adventure. There are strong indications that the growth of human politics and emotions, the advance of space technology, and the increase in understanding of human physiology are such that this adventure will begin around, or soon after, the turn of the Third Millennium: the year 2000 A.D.

This "tide in the affairs of men" is the ultimate and inevitable rationale for the exploration and settlement of Mars. This tide will be "taken at the flood" and "will lead on to fortune" for those who recognize it¹.

EVOLUTION OF FREEDOM

July 20, 1968. The evolution of human freedom reached the surface of the Moon as the United States of America placed the flag of that nation at Tranquility Base. The crew of Apollo 11, representing 500,000 Americans motivated by the belief that this was the most significant contribution they would make with their lives, established the beginnings of a tradition of freedom in the solar system sea and on its planetary islands. When faced with a modern challenge of uncertain dimensions from the Soviet Union, these men and women demonstrated, once again, the psychological and technological power of freedom to act on behalf of humankind.

As has always been the case, to the great suffering of vast numbers of human beings, the forces of freedom have slept between great challenges. They are aroused only when once again clearly threatened. While asleep, these forces have been nourished frontiers of exploration and settlement, enterprise and industry, intellect and science, and compassion.

Today, the forces of freedom are dozing off. Neither the threat of dominance by the forces of oppression nor the opportunities of the space frontier have yet significantly disturbed their rest. However, as was the case half a millenium ago in the New World, the political imperative to compete in a new arena is clear. Mars has become the focus of that competition whether or not the political leadership of the United States and the Free World currently choose to recognize this fact.

INTERNATIONAL THREAT

December 24, 1968. With Apollo 8 in orbit around the Moon, the leadership of the Soviet Union began the process of developing a strategy to become the politically dominant power in the solar system sea. The presence of American astronauts around the Moon meant the "Moon Race" was over. The Soviet leadership was embarrassed. Having challenged the United States and its society to the race, and having reaped the heady political and technical benefits of Sputnik and Gagarin, the Soviets found they were not yet a match for the aroused emotions, technology, and industry of Americans. Americans were already orbiting the Moon. There was not much political benefit to being second after having before tasted the sweet wine of being first.

With this bitter lesson understood, I strongly suspect a strategy was devised along several lines. First, continue to publicly emphasize Soviet activity in near-Earth space that would divert the primary attention of the U.S. toward civilian space stations. Such Soviet activity incidentally would lead to the development of capabilities supportive of military dominance in this arena.

Second, provide conflicting public information (or disinformation) about Soviet interest in the Moon, in Mars, and in human exploration of deep space in order to dilute the competitive instincts of Americans.

Finally, undertake the deliberate step by step development of the technical capabilities to put cosmonauts in the vicinity of Mars by the

end of the 20th Century and, preferably, at a time tied politically to 1992. This year will herald the 75th anniversary of the Bolshevik Revolution and, in a perverse twist of history, the 500th anniversary of the discovery of America by Columbus.

If this is the Soviet strategy, it has been implemented well. Look at the evidence:

The only large U.S. civil space program is the Space Station and even its development is being stretched out into the mid 1990's, if then, due to the lack of Executive and Congressional will.

The Soviets are rapidly approaching a permanent human presence in near-Earth space and are accumulating experience in manned spaceflight at a rate far in excess of that of the U.S. (3700 man-days in space versus 1300 for the U.S. as of mid-1985).

The Soviets' capabilities for direct tactical and strategic defense action in and from space exist and are increasing rapidly. The U.S. has no such capabilities and has made no firmly funded commitment to create them.

The Soviets are on the verge of testing a sophisticated heavy-lift launch vehicle, possibly larger than the Saturn V². It is of the class that can support the Earth-orbital construction and launch of a manned Mars spacecraft as well as a rapid expansion of their space station and strategic defense systems. This activity is supported by the construction of several new launch facilities which will greatly extend their already impressively high rate of space launches.

The Soviets are developing and assimilating the technologies necessary for successful manned interplanetary flight, including those for life support, spacecraft maintenance, deep space navigation and scientific activities³. One also must assume that they picked up and matured the cancelled U.S. space nuclear program.

The Soviets have, most significantly, extended their tests of human physiological and psychological adaptation to long duration space flight beyond times necessary or desirable for the efficient operation of space stations. These times are steadily approaching the 250 days required for most one-way flights to Mars.

In short, the Soviets are creating new capabilities related to space in general and Mars in particular at a rate many times that of the United

States. For all intents and purposes, as it did in the 1950's, the U.S. is once again standing still in a much expanded and much more critical space race.

INTERNATIONAL OPPORTUNITY

August 20, 1964. One hundred and nine nations began a unique experiment in international cooperation when the INTELSAT agreement was signed⁴. Through this new entrant on the scene of international organizations, these nations, now one hundred and nine strong, agreed to share both the benefits and responsibilities of managing the technology and opportunities of international telecommunications satellites. This experiment has worked.

The human and technical opportunities that will come with sailing the solar system sea, as well as the political threat posed by the Soviet Union, encompass an even more remarkable opportunity for international cooperation. The turn of the Third Millennium presents an increasingly responsive environment for young men and women from all nations to join in an enterprise unique to our times: a project to establish a permanent human outpost on Mars by the end of the first decade of the new Millennium.

The essential ingredient of such a project is an unequivocal commitment by the United States to undertake the project with or without international cooperation.

With such a commitment, cooperation will follow. Astronauts and cosmonauts from all nations can join hands in this evolutionary and potentially moderating leap into a bright and exciting future.

Without such a commitment, efforts toward cooperative ventures in space will shift from those based on the collaboration of independent peoples to those based on a dominance of Soviet culture and technology.

The unequivocal commitment to this Millennium Project, which is required of the United States, will not come about under present circumstances. Due to the failure of most of our national decision-makers to comprehend either the opportunity or the threat, and the failure of the national media to adequately and regularly report about space, the spectrum of tangible and historical benefits coming from the space frontier goes largely unperceived by the American public. Although excited and occasionally entertained by major events or mishaps in space,

the American public is ambivalent about space as a significant arena for national commitment⁵. When the American public is ambivalent about anything, modern political decision-makers know that they do not have to make commitments. In such an environment, statesmanship becomes an increasingly rare commodity. Past political history would indicate that the unequivocal commitment of the United States to participating in human and political evolution in space depends on the development of an interested, informed, and active public constituency: a constituency every decision-maker will see when looking over his or her political shoulder.

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