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The Next Objective in Space

The moon-circling flight of Apollo 8 at Christmas was one of man's truly great adventures in exploration. The spectacular docking maneuver of Soyuz 4 and Soyuz 5 and the change from one spaceship to the other by two Soviet cosmonauts further demonstrate how far we of the earth have come in the conquest of space. In a few months, if all goes well, American astronauts will set foot on another world.

Manned exploration of the moon will provide answers to age-long speculation about its nature. Perhaps even more important than what we find will be the fact that we have done it. The event will mark the successful attainment of a goal that demanded technological attainments of unprecedented complexity and difficulty. Our sights were set upon this goal nearly a decade ago by President Kennedy. I was, I confess, one who feared he had asked the impossible.

When this moment of success comes, our nation will have an unparalleled opportunity to take a bold step in another direction in space. Richard M. Nixon can place his stamp of identity on an equally inspiring objective. He can call upon our nation and the world to exploit man's presence in space and his new-found skills in space for the benefit of earth and its peoples. He can call for commitment of the principal thrust of our future space efforts to research and engineering programs designed to explore the earth; to improve the communications links among continents; to study the earth's resources of oil, minerals, forest, and water; to plot the changing, global patterns of the oceans and the air, so that we may better understand, predict, and conserve our atmospheric and oceanic environment.

In making such a commitment, President Nixon will have still another challenging opportunity. By aiming the skills of space toward earth-oriented and peaceful uses, not only can he serve the tangible interests of people in every corner of the globe but he can call for the attainment of this goal through a world-cooperative research and engineering effort in which nations in many stages of development can participate. By this step he will greatly advance international understanding. Everyone will benefit if the Soviets, Americans, and others conduct peaceful space research in concert, with joint planning and joint execution. It is a rare chance for initiative.

Weather forecasting provides one example of the earth-oriented use of space science with great potential human benefit. A fiendishly difficult and challenging problem lies before us—to understand the complex forces that drive the global winds and produce the yet-unpredictable long-term changes of weather and climate. To solve this problem without space satellites of new and sophisticated character is unthinkable. Such satellites, coupled with many other devices, will be required, to monitor the world's winds and clouds and to chart the flow of ocean currents. Supercomputers, a hundred times more powerful than today's best, will be essential to handle the satellite output and to bridge the void between a collection of millions of measurements and a program of systematic research aimed at finding a sound theoretical framework for vastly improved world weather forecasting.

We will not solve this problem unless we can somehow inspire atmospheric scientists of all the world to commit themselves to the goal. The problem, by its very nature, is global. Global cooperation is essential to its achievement. Space technology is perhaps the most important single component of the technology development needed for success. What better use could be found for our incredible talents in space?

After the moon, the earth!

—WALTER ORR ROBERTS, *President, University Corporation for Atmospheric Research, Boulder, Colorado*