

Space Accord: NASA's Enthusiasm for East-West Cooperation Is Not Shared by Pentagon

The budding space cooperation between the United States and the Soviet Union has intensified strains between this country's civilian and military space programs.

In viewing the prospects for East-West space cooperation, it would be incorrect to ascribe any decisive weight to the apparent lack of enthusiasm in some parts of the Defense Department, especially among Air Force men. Kennedy is personally committed to, and intimately involved in, the development of a space accord; regardless of Defense Department sentiments, the U.S. is vigorously pursuing agreement on a number of joint space efforts with the Soviets. At the same time, however, the Defense Department's concern over the military implications of space are exerting a difficult-to-measure, but still significant, influence on the position the U.S. is taking in the formative days of East-West space cooperation. With the preliminary talks at the U.N. further buoying hopes for an early start on some joint efforts, the Air Force does not seem to share the enthusiasm of the National Aeronautics and Space Administration, which is eagerly inclined to explore any cooperative endeavor in which the Russians seem interested.

Friction over the assignment of civilian and military space roles has existed since the dominant position in space exploration was assigned to civilian authority, with the Air Force given a supporting part. The division of responsibilities has been an unappetizing one for the Air Force. With varying intensity, many of its leaders have argued that the Soviets see no distinction between civilian and military space capabilities. This viewpoint was recently reflected by Air Force Chief of Staff Curtis LeMay—something of a latecomer to the advocacy of space development for military purposes—who stated that "the Soviets already have recognized the importance of these new (space) developments and they are moving at full speed for a decisive capability in space. If they are successful," LeMay warned, "they can deny space to us." The Air Force, which is quite reasonably not oriented toward cooperative endeavors with the Soviets, takes little comfort from efforts to join hands with the Russians

Editor To Become Vanderbilt Dean

Graham DuShane is resigning the editorship of *Science* to accept appointment as Professor and Chairman of the Department of Biology and Dean of the Graduate Sciences at Vanderbilt University. The latter position is a newly created one that will give Dr. DuShane responsibility for graduate research and education in the natural sciences, engineering, and medicine. He will go to the new post on 1 September.

After receiving his doctorate in zoology under Ross G. Harrison at Yale University in 1934, Dr. DuShane held a research associateship at the University of Iowa and a National Research Council fellowship at Stanford. From 1936 to 1946 he taught at the University of Chicago, and in 1946 became professor of biology at Stanford.

In 1956 he came to the AAAS as editor of *Science* and *The Scientific Monthly*. Under his editorship the two journals were combined, and the



resulting *Science* has grown steadily in quality, influence, and readership. We who have worked with him on the AAAS staff have much reason to know that his new colleagues at Vanderbilt are to be congratulated.
—DAEL WOLFLE.

in a barely explored area that seems certain to have great military potential.

The NASA-Air Force conflict was reflected in this country's decision to exclude the data on Lieutenant Colonel John Glenn's orbital flight from the data submitted to the U.N. space register, a directory of space launchings that was initially proposed by this country and was endorsed by the Russians. Press reports last week erroneously stated that the United States had reversed its position and had submitted the data from the Glenn flight to the register. What actually was involved, however, was a hair-splitting operation of great delicacy: data on the flight were submitted to the U.N., but the submission was not to the register.

The exclusion and the subsequent submission of data to the U.N. were justified by the State Department on the grounds that the resolution establishing the register deals only with objects launched "into orbit or beyond"—language which the State Department says the U.S. interprets as covering only those objects that are in space at the time of registration. NASA officials say privately that this interpretation is

preposterous, and they apply that description to the State Department's explanation that the sole purpose of the register is to assist in tracking operations by telling the world what is aloft, and just where it is. The State Department—which is the mouthpiece for these interpretations, not their originator—also offers the theory that any other view of the register's function would make it into a historical record of space launchings, and this, the theory continues, was not the U.N.'s intention. (Carrying through with this interpretation, the United States, in its periodic submissions to the register, has not submitted data on objects which are no longer in orbit.)

Insofar as the actual registration data are concerned, the decision to exclude Glenn's flight was meaningless, since the register consists of nothing more than information on the purpose of the launching, the date of flight, apogee, perigee, and the angle of inclination to the equator—information that was broadcast to the world. As if in contrition, following a caustic editorial in the *New York Times* and a hint of protest from the Russians (who

had registered the orbital flights of Gagarin and Titov), the U.S., when it did submit the data on the Glenn flight, gave far more details than it does in submitting the regular registration data. Nevertheless, the U.S. stands on its original position, leaving NASA officials appalled by what they regard to be a tortured and not very useful interpretation of one of the first successful steps toward cooperative space efforts with the Russians. Whatever functions may be attributed to the space register, they feel, its most important is that of helping to establish a pattern of cooperation and agreement, not a new stage for quibbling.

The Air Force quite properly has had nothing to say publicly on the subject of space cooperation. Its motivations in selecting the register as a point of issue remain obscure and even constitute a source of puzzlement for some officials of the high-level arbiter of the space effort, the National Aeronautics and Space Council. One official of the Council offered the opinion in an interview that the registration decision "makes little sense," and "probably reflects nothing more than the military idea that given a choice between being secret and open, you choose to be secret."

Data Withheld

The first draft of the U.S. space data, he said, included data on the Glenn flight, but "then there was concern in Defense about setting a pattern. By holding out this information, even though it was available otherwise, Defense felt that the way would be left open for the United States to withhold data in the future if it felt it was necessary. Again," he concluded, "it doesn't make much sense."

This explanation is an extremely uncharitable one, and it should be kept in mind that however bizarre the position may appear on the surface, it held up when it was reviewed in top levels of the Administration. The final in-ning, however, may not yet have taken place. NASA officials say they plan to seek a review at the Space Council, which, coincidentally, now has under review a similar conflict involving NASA and the Defense Department. This involves the long-delayed geodetic satellite survey program, at one time a joint NASA-Defense project for employing a satellite with a predetermined flashing light for making far more precise earth

surface measurements than are now possible.

These measurements are of considerable interest to the military, which finds missile aiming complicated by the inaccuracies of conventional mapping methods. In 1960, the Defense Department's appreciation of the geodetic satellite's military implications led it to place a secret security classification on the project, an act which caused NASA to withdraw from the project. (NASA from the start has been acutely gun-shy of being associated with military endeavors, but especially so after the "cover story" for the U-2 incident depicted the aircraft as an errant NASA weather plane; one outcome of this was that many neutral nations suddenly turned cool toward cooperating with NASA in tracking operations and other space activities, and NASA has strived ever since to protect its peaceful image.)

Review Ordered

The Defense Department's insistence on maintaining a security classification on the geodetic satellite was placed before the Space Council by Kennedy last month after a number of scientists expressed their concern before the House Science and Astronautics Committee. Among them were George B. Kistia-kowsky, presidential science adviser under Eisenhower, who argued that the power of nuclear weapons made precision in aiming relatively unimportant.

"Considering the radius of damage from thermonuclear weapons, it is perfectly obvious that the accuracy for targets is already adequate," he said. "Being able to provide an accuracy of something like 25 to 50 feet is quite unimportant, redundant and unnecessary from the point of view of military target locations, but has a tremendous importance in the study of the earth as a completely unclassified world-wide effort."

NASA's concern about maintaining its peaceful image is heightened by growing evidence that Soviet scientists are beginning to succeed in prevailing upon their political chiefs for closer contacts with the West. It can be argued that the shift toward cooperation reflects nothing but a new Soviet appraisal of selfish national interest. But whatever the motivations may be, the cooperative space efforts that Kennedy has urged since his first day in office are predicated on the assumption that it is in the U.S. national interest to involve the

Russians in joint scientific efforts, in space and elsewhere.

The most conspicuous indication of the Soviets' shift has been in their willingness, perhaps eagerness, to rejoin the U.N. Space Committee after a 2-year boycott. One outgrowth of that decision is the participation of their weather experts in the current World Meteorological Organization meetings in Geneva, where, among other things, satellite weather forecasting is under discussion. The subject, incidentally, is one that the Russians were invited to discuss in Washington last November at an international meeting sponsored by NASA and the U.S. Weather Bureau. The Soviets' unexplained absence from that meeting, after having accepted an invitation, was recently alluded to by a Soviet representative, who remarked that the shift in policy was in the works at the time, and if the meeting had taken place a few weeks later, the Soviet delegation could have attended.

Another indication of the shift is in a sudden spurt in communications from Soviet scientists to their Western counterparts. One American who some time ago requested a Soviet colleague to supply some data reports that after a lengthy and unexplainable delay, the data recently arrived. One swallow does not make spring, but this particular incident is interpreted by some Administration officials as representative of a new and hopeful attitude on the part of the Soviets toward scientific cooperation with the West.

The U.S. civilian space program, which is a technological cousin of the military space effort, is deeply concerned with toeing a line that will not give the Soviets any pretext for regressing to their previous shut-in policies. The Soviets, of course, do not require a pretext if they choose to revert, but NASA is determined to prove that it is going into space cooperation in good faith.—D. S. GREENBERG.

Federal Aid to Education: How Much and Where It Is Going Now under Study by House Committee

How much money does the federal government spend annually on education and where is the money going?

It would seem to be a reasonable assumption that somebody has the answers, but the conclusion of people who have looked into the matter is