Hubert Humphrey's Scientific Role: From Ocean Depths to Outer Space

"I sometimes get the feeling that I have been put in charge of everything out of this world."—Vice President Humphrey.

In recent months, Hubert H. Humphrey has entered a new phase in his handling of the responsibilities of the Vice Presidency. During his earlier time in office, Humphrey led a whirlwind existence in which he spent much of his time in political barnstorming.

Some of this activity was made necessary by Humphrey's relationship with President Johnson. In the early part of 1965, Humphrey received chilly treatment from Johnson after the Vice President privately questioned the merit of initiating the bombing of North Vietnam in February while Soviet Premier Kosygin was visiting Hanoi. But by the end of 1965 it became apparent to the President that Humphrey could be used to help combat the growing liberal discontent with the administration's Vietnam policy. Johnson sent the Vice President on two Asian trips in the early part of 1966. Upon his return, the President employed Humphrey, the administration's fastest-firing verbal weapon, in an attempt to mow down his domestic critics on Vietnam. During the past year, Humphrey has regained his place in the high foreign policy councils of the administration.

While pleasing the man in the White House, Humphrey's enthusiastic backing of Lyndon Johnson has not seemed to help him in the country as a whole. Humphrey's popularity has dropped in the polls, especially by comparison with that of Senator Robert F. Kennedy. Much of the liberal community, once Humphrey's strongest source of political support, has become disenchanted by his militancy on behalf of the President's foreign policy. In addition, Humphrey identified himself with a series of losing candidates in the 1966 elections, which included embarrassing losses in his own state of Minnesota.

In the Vice Presidential camp it seemed time for a change in direction. Last autumn the Vice President found himself a new administrative assistant, William B. Welsh. The Vice President himself has assumed a somewhat sedate role. He is now more restrained in his comments on Vietnam. He does less traveling around the country making political speeches. While Humphrey still spends part of his day in his Senate offices, he now spends about two-thirds of his time in the Executive Office Building adjacent to the White House, a shift that seems to symbolize a greater attention to his executive responsibilities.

Of course, the trouble with being Vice President is that the office carries so few real executive responsibilities. The two major statutory positions which Humphrey holds are fairly recent acquisitions of the Vice Presidency—the chairmanship of the National Aeronautics and Space Council and the chairmanship of the National Marine Resources and Engineering Development Council.

Recently, Humphrey has seemed to pay an increasing amount of attention to these jobs. One close Humphrey associate told *Science* that he thought the Vice President's new emphasis was related to his current evaluation of his own political prospects: "Humphrey used to think that the Presidency was in the cards, but I don't think he does any longer. Increasingly, he is devoting himself to oceanography and space—the two places where he can make a little mark in history as Vice President."

Humphrey's staff estimates that he spends as much as one-fifth of his time on oceanography and space. In an interview with *Science* last week Humphrey commented: "I spend a larger part of my time on marine sciences and space than on any other assignments."

At present, the Marine Resources Council takes up the largest portion of the periods Humphrey devotes to questions of science policy. Created last summer as a result of congressional initiative, the council is composed of the heads of government departments which have oceanographic interests and is charged with assisting the President in developing and coordinating a national marine sciences program. Humphrey is scheduled to make public the council's first report within a few days.

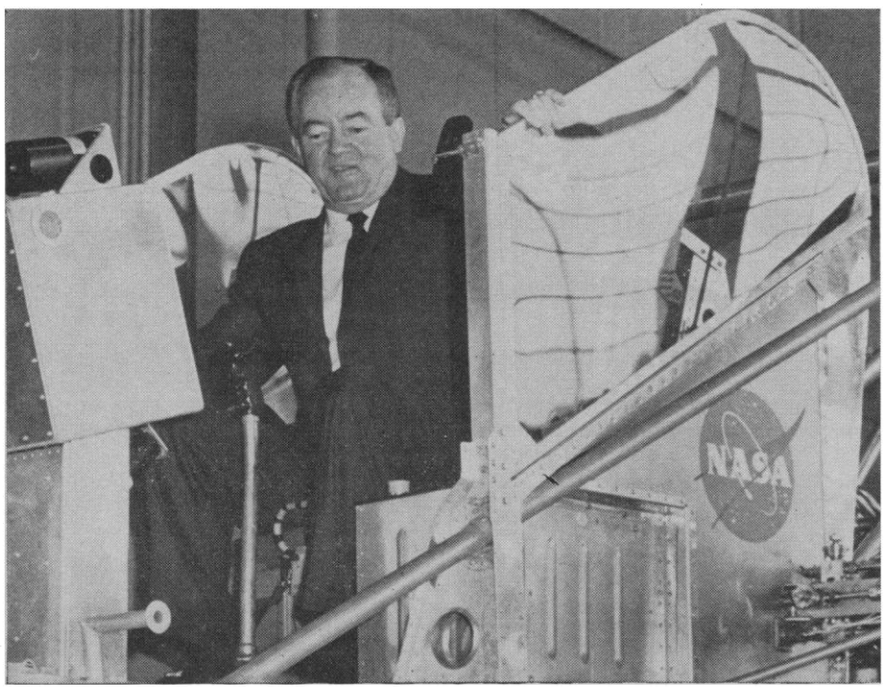
In his Space Council assignment, Humphrey's role is constrained by several impediments, including the fact that the space program is already dominated by an existing agency—NASA. In oceanography, no such obstacle exists; Humphrey is free to throw himself into the subject with his characteristic vigor.

Humphrey's enthusiasm for his new assignment is obvious. "Oceanography has more economic dividends than anything we're doing in the science area," he said, as he explained the potential contribution of the marine sciences in developing new sources of fuels and food and in providing greater knowledge of world weather conditions. He argued for greater research efforts in the marine sciences and commented, "It's a pity that Mohole was lost; it's a great scientific loss, almost a disaster. We should know what's in this terrestrial ball we live on."

Throughout his political career Humphrey has indicated that he believes in supporting basic research, not so much because he believes in knowledge for its own sake, but rather because he believes that such research will yield great returns in improving the living conditions of people. "The money we spend in science comes back to us a hundredfold," he exclaimed. "It's like the story of the loaves and fishes."

In addition to being a means of improving the lives of individuals, science, for Humphrey, represents a prime method of promoting cooperation among nations. "Some of our best international contacts are not political, but scientific and cultural," he explained. "This is true with the Russians, and it can be true with the other East European countries." Humphrey thinks that the world should seek ways to internationalize the exploration and use of outer space and of the oceans, and he seems especially hopeful that the demands of oceanography will require more cooperation between nations.

In the light of Humphrey's long-



Vice President Humphrey sits at the controls of a lunar-landing research vehicle at the NASA Flight Research Center.

standing interest in foreign affairs and in the United Nations, it is natural that he should stress the international aspects of science. The origin of the mission which he took to the Soviet Union in 1958 was a desire to promote closer medical cooperation between the United States and the U.S.S.R. During the visit, Humphrey had his famous 8-hour discussion with Nikita Khrushchev, the first quarter of which was devoted to discussion of U.S.–Soviet medical cooperation on prenatal and infant care.

In his work as chairman of the Space Council, Humphrey indicated, he has continually tried to press NASA to evaluate its projects in the context of international diplomacy and to encourage greater space cooperation with the European nations. Humphrey argues, as a principal justification for the space program, that it does much to enhance American prestige abroad. He takes credit for having promoted foreign travel for American astronauts. "I broke the barrier on astronaut travel abroad," he said; "maybe that's the best thing I've done. The United States received more favorable press attention in Japan during the days of our astronauts' visit there than it had in the whole preceding year."

Even in oceanography and space, areas where he has statutory responsibility, the Vice President must proceed with some delicacy. Formally, the Vice President outranks the Cabinet members and agency heads who are his fellow members on the Space and Marine Resources Councils, but these men are ultimately responsible to the President, not the Vice President. The Vice President can influence these programs principally through the force of his personality and his persuasion.

Humphrey has chaired every meeting of the Marine Resources and Space Councils which have been held since he became Vice President. All available information indicates that he attends with extensive prior briefing and uses the meetings to prod agency heads to move toward common objectives. "He has a politician's style of humoring people and babying them along," said Edward Wenk, Jr.; "When people are dragging their feet on a program, he makes them aware of it." Wenk serves as executive secretary of the Marine Resources Council, and at present is probably Humphrey's principal staff adviser on questions of science policy.

Limited Authority

Humphrey is quick to delineate the limits of his power and responsibility. "I don't try to run these agencies," he said; "NASA has its own momentum. What the Space Council does is try to give some priorities in space, rather than having NASA run pell-mell."

The Vice President is not the administrator of the oceanography and space programs; "I don't claim to have any professional scientific knowledge," he says. Rather, he describes himself as "a coordinator, a catalyst, a mover and shaker, a gadfly stinging people into action." In Wenk's estimation, "The vice president is not so much interested in the scientific problems as in science policy questions. He wants to fight the bureaucracy, hack through the jungle, and rock the boat a little."

Humphrey seems to spend a fair amount of time in conversation with the President, especially on questions of civil rights, education, labor, urban problems, and foreign affairs. Humphrey said that, on oceanography and space, he tends to communicate with the President in writing. "From these councils," he explained, "the President expects us to give him a coordinated view. The views of the different departments are complicated, and I want to present them carefully in writing, rather than orally." Humphrey added, however, that "At the time of the budget, the President and I talked a great deal about science matters." Humphrey illustrated these discussions by saying, "This year we had a tough decision on the size of the space budget, and we finally came out with a healthy piece of cash for space. The President and I talked about this decision."

Humphrey performs other science-related duties in addition to those directly concerned with the Space and Marine Resources Councils. The White House often asks him to talk to foreign ministers and science ministers of other nations about technical questions. He recently conversed with German Foreign Minister Willy Brandt at length about technological disparities between the United States and Europe. Humphrey has given two major speeches on the "technological gap" in recent months and has directed his staff to keep him fully informed of developments and debate in this area.

In addition to speaking to foreign nationals about science policy questions, Humphrey spends part of his time speaking to American audiences on this subject. Such speeches have often been given during the extensive tours Humphrey has made to oceanographic and space facilities since he became Vice President. Late last year he spoke, on his own initiative, to a Washington meeting of all the science attachés who serve abroad in U.S. embassies.

Humphrey also serves as the President's liaison with the mayors and local

government officials of the nation. This job makes him aware of the growing concern among political leaders about air and water polution. Last autumn Humphrey responded to part of this concern by sponsoring a conference on the pollution of the Great Lakes, to which he invited many Midwestern public officials.

Humphrey is careful to point out that his science policy interests should not be too narrowly defined. "I'm not just a space and oceanography man," he said, "I'm very interested in NIH and I've visited there often. Also, there are several plant pathologists in my family . . . I'm very interested in agricultural research." Humphrey also points to his support of mineral research and to his long-standing concern for better science information systems in governmental agencies.

"My interest in science stems from the time I was a boy," Humphrey explained, "I took a lot of chemistry and I liked it. I have a layman's interest in science and technology." His father ran a South Dakota drug store; Humphrey worked as a pharmacist and has a degree in pharmacy (as well as a master's degree in political science). After being elected to the Senate in 1948, Humphrey translated his earlier pharmaceutical experience into a strong interest in health legislation. He held hearings on drug regulation and was one of the principal supporters of measures to give the FDA a greater part in monitoring the drug industry.

Work on Disarmament

While he served in the Senate, one of Humphrey's principal concerns was disarmament and the achievement of a test-ban treaty. To some extent, he is still able to maintain an official role in the arms control field. He is the first Vice President to sit regularly on the Committee of Principals, an interdepartmental, Cabinet-level, coordinating group for arms control matters. By statue, he sits on the National Security Council, where arms control and defense questions are often discussed.

It was at the time of his Senate work on disarmament that Humphrey first became acquainted with Jerome B. Wiesner of M.I.T., who served as President Kennedy's science adviser. Humphrey has continued to see Wiesner with some regularity and, perhaps, relies more on Wiesner for scientific advice than on anyone else outside the government. Humphrey is quick to point out, however, that he talks to many people on scientific matters—to Edward Teller, Herbert F. York, Detlev W. Bronk, and George B. Kistiakowsky, as well as government officials such as Secretary of the Air Force Harold Brown, the staffs of the Space and Marine Resources Councils, and Donald F. Hornig, Presidential science adviser. "I meet with Hornig regularly," Humphrey said. According to staff members, Humphrey is careful to defer to Hornig on questions of government science policy. "Humphrey has a very keen awareness that this is Hornig's ship," one aide noted.

Department of Science

Humphrey's work on the Space and Marine Resources Councils seems to have strengthened his belief that scientific activities are too fragmented within the structure of the federal government. In the later years of the Eisenhower Administration, Humphrey strongly supported creation of a Department of Science within the Cabinet. Last week, Humphrey said he had not given up his ideas: "I think the day will come when we will have a Department of Science and Technology."

In his effort to coordinate the marine science activity in the federal government, Humphrey seems to have concluded that it is necessary to set new organizational policies rather than preserve the programs of individual governmental agencies. Some scientists believe that the work of the marine resources council will result in a new marine sciences agency, already dubbed "a wet NASA." Some officials believe that the current effort to coordinate the marine sciences activities will lead to a general reorganization of governmental science activity, a move Humphrey would seem to favor.

Maurice B. Visscher, head of the physiology department of the University of Minnesota, has worked with Humphrey on questions of science and health since Humphrey became mayor of Minneapolis in 1945. Visscher says he is confident that Humphrey will always be committed to supporting scientific endeavor, because "Humphrey is one of the people who truly understands the role of science in modern society."

Eleven of the 36 Presidents of the United States have come to that office from the Vice Presidency. If Humphrey should ever succeed to the Presidency, he would, it is safe to say, be a firm champion of scientific research. Even if he remains in the Vice Presidency, he will probably have an important influence on some science policy questions, especially in the marine sciences area. Largely by accident, many of the responsibilities of the Vice Presidential office are now in science-related activities. Both by temperament and conviction, Hubert H. Humphrey clearly enjoys these accidentally acquired responsibilities.

—BRYCE NELSON

200 Bev: Harmony Prevails as Physicists Close Ranks

It has often been said that the bomb-born dominance of nuclear physicists in the affairs of science and government has been wilted by time and by the demands of other scientists and elected politicians for a turn on the podium.

Those who dispute this evaluation cite occasional, though unverified, reports that the General Advisory Committee of the AEC still functions; or, like believers in life on Mars, cite indications that the present White House atmosphere could support life in that other once-mighty bastion of the physicists, the President's Science Advisory Committee. Perhaps the best that can be said is, Who knows? Nevertheless, on the basis of events that transpired in recent weeks before the Congressional Joint Committee on Atomic Energy (JCAE), it is necessary to recognize that the alumni of the World War II bomb and radar labs possess a kind of experience-tempered political style and class that have no counterpart in any other segment of the scientific community. If the Mohole proponents had possessed half their savvy, that mighty drilling platform would no doubt be at sea today.

On the agenda of the powerful Joint Committee was the long-fought-over 200-Bev proton accelerator, which the AEC wants to build at Weston, Illinois, and for which it was asking the com-