of nursing care dropped from 85 percent of the desired standard in May 1967 to 77 percent in September 1967 and then partially rebounded to 80 percent in January 1968. The results of a more recent survey are currently being tabulated, and while DMH officials are cautiously optimistic that the latest survey will show further improvement, no one is predicting that the mental hospitals have yet returned to the level they were at in May 1967.

Another outside survey, completed by the California Medical Association (CMA) last February, made numerous critical comments about the hospitals, though the CMA's report was carefully worded so as to placate both sides in the controversy. The CMA generally tried to remain neutral during the budget fight, partly because the organization had other political problems to worry about, partly because its conservative leadership was suspicious of the motives of the more liberal psychiatrists in attacking Reagan. CMA officials say Reagan asked them to conduct the survey to deflect renewed criticism after a Danish mental health

official visited a California hospital for the retarded and declared, "I could not believe my eyes. In our country we would not treat cattle like that."

Though the evidence seems clear that Reagan's budget cuts caused at least temporary deterioration in the level of care at the mental hospitals, some participants in the budget battle believe the hospitals will fare quite well in the long run. They base their optimism partly on the fact that Reagan has pledged himself to a 14-point program to improve mental health care, including the adoption in principle of new staffing standards recommended to the legislature in 1967, partly on the fact that Reagan's budget for fiscal year 1969 makes amends for some of the previous cutbacks and provides the initial money required to reach full implementation of the new staffing standards within 5 years. (CMA officials claim they "negotiated" Reagan's 14point program in return for giving Reagan an advance peek at their survey of the state hospitals, a deal which enabled Reagan, who then had presidential ambitions, to head off possible adverse publicity by announcing his proat 62, just 4 days before the scheduled

Another encouraging sign to many of the combatants is the fact that the legislature this year passed—and Reagan signed—a number of "good" mental health bills, including landmark legislation to strengthen the role of local communities in providing mental health services. The publicity generated by the budget battles, and the anger at Reagan's cuts, are said to have helped in getting the legislation through.

"We had a fair-sized panic, but in the long run the budget cuts have actually generated, in my opinion, more pluses than minuses," says Stuart C. Knox, head of the CMA's mental health committee. And even Irving Philips, a psychiatrist who was considered the chief spokesman for the anti-budget cut forces, now believes that "things are a little better than when Reagan came into office-though to some extent it's in spite of him." It remains to be seen whether Reagan will fully implement his announced programs but some mental health leaders are cautiously optimistic.—PHILIP M. BOFFEY

James E. Webb: NASA's Chief Organization Man Departs

The departure of James E. Webb from the top post of the National Aeronautics and Space Administration comes at a time when NASA is building steadily to Project Apollo's grande finale of putting men on the moon, but when the agency faces real uncertainty about what to do for an encore.

Webb came to NASA shortly after the Kennedy inauguration and presided over the expansion of the space program into a scientific-technical-managerial undertaking unparalleled in peacetime. Relatively speaking, Webb's time as NASA Administrator amounted to 7 vears of plenty for the agency, although the Vietnam war and the urban crisis have cost NASA a decline in budget and in public attention. His successor will have to deal with the question of a mission for NASA in the 1970's, and also with reviving pressures to merge NASA with the Air Force or subordinate the civil agency to the military.

On Capitol Hill Webb has earned a reputation as an energetic administrator and as a well-informed witness in the cause of the space program. His low point personally and as administrator probably came in early 1967 in the wake of the Apollo accident in which three astronauts died. Hill observers say that his sorrow and his effort to defend the program brought out the best and worst in him, as he told legislators more than they wanted to know about the detail of the accident and not enough about who was to blame. The lasting impression, however, seems to have been respect for Webb's shouldering of responsibility and a feeling that effective action would be taken to prevent repetition of the fatal incident.

Webb will leave NASA on 7 October, at 62, just 4 days before the scheduled manned Apollo test flight (NASA Deputy Administrator Thomas O. Paine has been named acting administrator). Announcement of Webb's retirement was made in a rather offhand way as Webb left a White House meeting with the President. In an exchange with reporters, Webb conceded that he thought NASA has been used "as a sort of whipping boy" by Congress, and that the present pace of the U.S. space program "will not bring parity" with the Soviet Union. At the same time Webb said his decision to retire was not linked to cuts in the space program budget, noting that other programs had also suffered deep budget cuts.

Webb became NASA Administrator in the days of the Kennedy "talent hunt," but he seems to have been Vice President Lyndon Johnson's nominee. An attempt was being made to expand the scope and influence of the Vice Presidency, and picking a new NASA Administrator devolved on Johnson, who was head of the Space Council. Webb had spent most of the 1950's as an executive for Kerr-McGee Oil Industries, built by Oklahoma Senator Robert Kerr. Since Kerr had succeeded Johnson in the chairmanship of the Senate Space Committee and moved into a power vacuum in the Senate left by the ex-Majority Leader's departure, there was some criticism that Webb's

appointment was an exercise in patronage.

Webb's credentials, however, stood close inspection for a job that was essentially managerial. A lawyer, he had solid experience in industry and had served as director of the Bureau of the Budget and Under Secretary of State in the Truman years. His experience in dealing with Congress and industry was suitable for somebody taking over NASA, which was then at the takeoff point.

The Eisenhower Administration and NASA's first administrator, T. Keith Glennan, had plotted a course of steady but measured advance for the space program, but Kennedy planners were looking for bold initiatives and for more galvanizing goals. The hatching of Project Apollo in the spring of 1961 has been described rather sourly by critics as a public relations antidote to the failure of the Bay of Pigs landing. But this ignores the strong sentiment for the manned landing that existed in the administration before the Cuban fiasco and-perhaps more to the point -ignores Yuri Gagarin's pioneering orbiting of the earth that spring.

In the days of greatest NASA growth, top management was, in a real sense, a triumvirate. Webb said he would take the administrator's job only if Hugh Dryden, who headed NASA's forerunner, the National Advisory Committee for Aeronautics, was appointed to the top technical job at NASA. What evolved was an arrangement under which Dryden as Deputy Administrator played the role of experienced adviser with close ties to the scientific community and Associate Administrator Robert C. Seamans, who late last year returned to M.I.T., was, in effect, NASA's general manager. Webb built the management structure of the agency and handled its external relations with Congress and industry. It is said that no major policy decision was made until the three men agreed.

That Webb left a personal imprint on the organization there is no doubt. NASA adopted many techniques of management as well as technology from the Polaris and ICBM programs of the 1950's, but hardly applied them slavishly. NASA had to come to terms with its own special circumstances, which characteristically involve a big R&D effort followed by a small production run. In dealing with contractors, NASA developed an "in house" competence intended to make it possible for the agency to oversee projects without tak-



James E. Webb

ing them over. Webb's own personal influence is nowhere clearer than in the development of NASA's research centers, with their extensive autonomy and responsibility.

The space program's tight schedule required that technology perpetually be pressed to its limit or beyond. Operating an "open" program to which it was committed by law, NASA had none of the opportunities to keep failures secret enjoyed by the Soviet space program and the U.S. military space program. Webb and his colleagues have made no bones about feeling that support of the space program is linked to public attitudes toward it, and NASA events have been conducted in the glare of publicity that the agency helped to create.

All this may account in part for the attitude of the American scientific community toward NASA and particularly toward the manned lunar landing, an attitude which can be described as ambivalent. Opinions, of course, range widely, but some scientists were certainly concerned that there would be diversion of money and manpower resources from science into what they regarded as essentially an engineering project. Others mistrusted a massive scientific and technological project not controlled by scientists. Still others had serious misgivings about the impact of space agency research operations on the universities.

Webb, for his part, made it clear from the start that NASA would depend heavily on the universities as well as on industry and indicated he felt it important to protect the universities from possible distorting effects of NASA spending. A key decision was the one against allowing universities to become prime or systems contractors on big projects. Webb seems to have felt that universities might otherwise wander far afield from their proper role. Contracting in universities by NASA divisions mounted to a total of \$80 to \$100 million annually, and to help universities meet NASA demands the agency launched its university-sustaining program, which reached a peak of \$46 million a year before it began a retreat under budgetary pressure to its present level of \$10 million a year.

Webb's interest in the universities goes considerably beyond matters of contracting and recruiting and predates his NASA days. He feels strongly that the university, with its mix of scientific and other disciplines, must develop further as an institution which is a regular source of advice and expertise for government. The stressing of the public-service function of the university is not universally popular today, but it is entailed in Webb's belief that largescale technological projects involving many disciplines could yield experience valuable in attacking other problems of society.

In lectures at Columbia Webb said,

Many great social problems press in on us. We need the effective application of new knowledge through a diversity of skills drawn from many disciplines. We cannot solve the inner city problem without new approaches and new organizing methods. The same goes for air pollution; water pollution; highway congestion; and the increasingly dangerous imbalance in the world population-food ratio. Piecemeal attacks on these problems will simply not work. Neither will limited concepts of systems engineering or systems management.

The advance of technology is proceeding at a pace that defies the capability of the older concepts and methods to organize its effective use, or to keep under control its full effects. The technological revolution that is now so fully upon us is the most decisive event of our times. No nation that aspires to greatness, or to use its power for good, can continue as it has in the past. Unless it purposefully and systematically organizes for technological advance and works the fruits of that advance into the sinews of its society, it will surely fail its citizens.

Summing Webb up is not easy, especially since he was entrepreneur and single-minded advocate of an often flamboyant enterprise but personally a systematically modest man. When all is said and done, however, Webb is likely to look like one of the luckier figures of the star-crossed Kennedy and Johnson administrations, who managed to reach his new frontier.

-JOHN WALSH