WHAT MR. WEBB SHOULD DO

It is sad that the three American astronauts should have been killed at Cape Kennedy a week ago. They were brave men. Like everybody else, they knew that there must be a fatal accident sooner or later. Indeed, it is a wonder that it has not happened before. Even the irony that the accident now should have happened at a rehearsal, not the real thing, is not entirely unexpected. In the circumstances, of course, it is quite inevitable that Mr. James Webb, the administrator of the National Aeronautics and Space Administration, should have announced that the Apollo programme will continue. Now that so much effort has been spent, it would be folly to turn back.

But what are the chances of success or failure? Mr. Webb would be the last to conceal the uncertainties which remain. Indeed, for several years he has left Congress in no doubt of how the Apollo programme has been trimmed down to its bare essentials, chiefly so as to keep the budget within acceptable bounds. It is no surprise that some of the tasks which remain to be performed before a man can travel to the Moon are almost hair-raising in their difficulty and novelty. The Saturn V rocket still has to leave the ground as an integrated assembly; so far, only the booster has flown on its own. It is unlikely that the landing of Surveyor rockets on the Moon has already provided a good understanding of the difficulties of using rockets as a means of settling gently on a distant surface—though in this respect the intervention of men could be a help and not a hindrance. The problems of arranging for bits and pieces of rockets to reunite in orbits about celestial objects are unfamiliar, to make the lightest of them. Yet hazards such as these have been obvious for some time. The accident a week ago, by contrast, has not previously been given much public attention. Inevitably, the way ahead must now seem even more hazardous than at the end of 1966. If Mr. Webb were now to go to Congress for more money, the chances are that he would have a sympathetic hearing. His difficulty is that he is short of time as well as money. Making the Apollo programme more deliberate would probably imply that the old target of "before the end of the decade" would have to be forgotten.

But would this be a tragedy? Would it matter if the first American to reach the Moon did not arrive until 1970? Or 1971? Or even 1981? The truth is that the objectives which the Apollo programme has set itself are largely arbitrary. They are numbers out of a hat. There may have been something in the argument frequently advanced by NASA at the beginning of the Apollo programme that a tighter programme would be better co-ordinated and even cheaper, but that was always founded on the assumption that the plan proposed was feasible and safe. Now what force it may have had is substantially diminished. The promise of incidental technological benefits for industry in the United States has not been fulfilled. The side effects there have been do not match in any way the cost of the Apollo programme, and most of those that have some substance are attributable to the whole programme of rocket and satellite development and not just to the part of it concerned with sending men away from the Earth. It is also clear that international prestige is neither dependent on nor won by success in launching men with rockets. The real world is more subtle and more interesting than that, and it has changed a lot in five years. But now even the old Everest argument that Americans must travel to the Moon "because it is there" will seem a little less like courageous daring. Its essential irrationality will be more apparent. In the circumstances, if Mr. Webb has to go back to Congress for a substantial revision of the Apollo programme, he will find more outright opposition as well as more sympathy.

What then should happen? Given the existing commitment to the Apollo programme, it is only sensible to continue. At the same time, however, any means of making the programme more deliberate should be seized on. The extra cost and time involved in mounting more test launchings of the critical pieces of equipment would not be outrageous. If the target of a landing on the Moon sometime this decade should become unattainable, nobody should be made to feel ashamed. But such lessons as there are to be learned from the accident at Cape Kennedy will bear on future programmes, not Apollo. They will serve to reinforce the tendency already apparent in the United States to shy away from spectacular programmes. The budget for NASA for the financial year beginning in July (see page 431) shows that the Administration has taken a sober view of what should lie ahead. There are no funds for further spectacular adventures. Instead, NASA is to be encouraged to make the fullest use it can of the rockets that will have been developed by the end of Apollo. This is sensible, and in line not merely with the recommendations published a year ago by a committee of the National Academy of Sciences in Washington, but also with the growing disenchantment with space travel among people and politicians. In the years since Apollo was begun there has grown up in the United States a healthy preoccupation with real problems on the surface of the Earth. Inevitably, the surface of the Moon has come to seem less exciting and less important. That is entirely as it should be.

UNIVERSITY GRANTS

The latest report of the University Grants Committee (see page 434) has done very little to clarify the relation-