News and Comment

Defense Secretary McNamara Says Strength Now Gives U.S. Chance To Cut Arms Race Costs and Perils

The Kennedy administration has now had 2 years in which to reshape the nation's defense establishment, and one measure of its progress is the appearance of increasing unrest in congress and in some parts of the military, especially the Air Force.

A great deal of this unrest arises from the same bread-and-butter reactions that have followed all attempts to change defense policies and expenditures. During the Eisenhower administration, for example, the massive-retaliation doctrine produced ample funds for the Air Force, and impoverishment and anguish for the Army and Navy. Since Kennedy came to office, the Army and, to a lesser extent, the Navy have been on the up-swing, and the Air Force, its contractors, and congressmen with affected constituents are understandably worried about the future.

The present unrest thus has the standard economic element, but, as in the past, a large measure of the dissatisfaction is based on differing concepts of what should be done to assure the nation's security, regardless of whose nest is feathered or de-feathered in the process. And it is on this point, rather than on pure economics, that the Kennedy administration, far more than its predecessors, is stirring up opposition. For Kennedy and his advisers came into office with defense concepts substantially different from those of their predecessors, and these concepts are now resulting in a far-reaching realignment of the nation's defenses.

Materially, the realignment has been accompanied by an enormous increase in defense expenditures—from the $41 billion defense budget Kennedy inherited from Eisenhower to a projected $53.7 billion for the fiscal year that starts next July. At the same time, the administration is deeply convinced that while weakness is a hazard, the arms race itself is also a hazard; that nuclear war resulting from accident or miscalculation is indistinguishable in its effects from nuclear war resulting from deliberate action; that in evolving policies aimed at producing what we consider to be desirable behavior on the part of the Soviets, salvation does not necessarily lie in accumulating increased destructive power; and, finally, that once a certain level of military capability has been reached, the perils of the arms race should be accorded increasing attention. That level, in the administration's opinion, has now been reached or is within sight, and, accordingly, the administration is now forcefully stating the conviction that it does not consider armaments to be the end-all in assuring the nation's security.

On the basis of this conclusion it has produced a number of decisions about the importance of various technological uncertainties in the arms race, and it is here, principally, that it parts ways with its critics, who maintain that since we cannot be sure of what the Soviets are up to, prudence calls for massive support of every reasonable possibility that could affect the military balance. The critics, for example, call for an expanded military space effort, contending that the Soviet space program is military in nature. The administration responds that the military potential in space is not yet clear, outside of such areas as reconnaissance, navigation, and communications, and it refuses to assign the Air Force any significant role in space, although it permits it several hundred million dollars annually for military space research that it calls "technological insurance." It has simultaneously offered public assurances that it is not going to lead the arms race into space, presumably hoping that this forebearance will have a beneficial effect on Soviet intentions. The effect on the Soviets is yet to be discerned; the effect on the Air Force has been a sense of estrangement between it and the administration's civilian military planners.

In the Skybolt controversy, differing evaluations of technological uncertainty again govern the dispute between the administration and its critics. The Air Force argues that the airborne missile would extend the life of the manned bomber and thus burden the Soviets with the need to maintain a costly air defense effort. The administration replies that a buried missile is faster, cheaper, and more stable—hence more responsive to political control—than a missile carried by a highly vulnerable aircraft. The Air Force counters that Skybolt would be another arrow in our quiver, and the administration replies that the benefits are not worth the cost.

In all cases, it is the civilians of the executive branch who hold the checkbook for new weapons, and short of impeachment, which simply is not in the cards, Congress cannot compel them to buy what they do not want to buy. Congress, however, can get at the administration through public opinion that can manifest itself at the polls, and, in anticipation of a forthcoming

James D. Ebert, president of the American Institute of Biological Sciences, has issued an appeal for contributions to assist AIBS out of its financial difficulties (*Science*, 25 January).

Ebert said that he "must notify the National Science Foundation not later than 25 February whether AIBS can fulfill its financial obligations."

AIBS needs, he said:

1) At least four unencumbered gifts, from foundations or public-spirited citizens interested in the future of biology, of $25,000 each.

2) At least 1000 unencumbered gifts, from biologists and friends of biology, of $100 or at least one day's salary.

3) At least 5000 sustaining memberships at $25 each.

4) At least 20,000 individual memberships at $10 each.

Contributions should be sent to: AIBS Sustaining Fund, 2000 P St., NW, Washington 6, D.C.

effort to arouse this opinion, the administration has gone to considerable lengths to publicize the philosophy underlying its defense policies. Last week, for example, Defense Secretary McNamara appeared before the House Armed Services Committee to discuss the administration's new defense budget, and, in addition to telling the committee just what the administration proposed to do, he devoted a substantial amount of time to telling it just what it was *not* going to do, and why.

"As the arms race continues and the weapons multiply and become more swift and deadly," he said, "the possibility of a global catastrophe, either by miscalculation or design, becomes ever more real. More armaments, whether offensive or defensive, cannot solve this dilemma. We are approaching an era when it will become increasingly improbable that either side could destroy a sufficiently large portion of the other's strategic nuclear force, either by surprise or otherwise, to preclude a devastating retaliatory blow. This may result in mutual deterrence," McNamara continued, "but it is still a grim prospect. It underscores the need for a renewed effort to find some way, if not to eliminate these deadly weapons completely, then at least to slow down or halt their further accumulation."

Having expressed the administration's concern for the perils of the arms race, McNamara then went on to acknowledge that this nation's defense effort must be based on an assessment of Soviet power, and that any such assessment is bound to be filled with uncertainties. It involves, he said, "attempting to anticipate production and deployment decisions which our opponents, themselves, may not yet have made." But, he pointed out, although the Soviets can do many things, their economy does not permit them to do everything, and "it may be that the strain of . . . competing claims on the Soviet economy will tend to limit the size and help determine the character of the Soviet military program, at least over the next few years."

While this assessment of military reality may provide sustenance for those who contend the administration has adopted a "soft" approach on armaments, an examination of the budget and McNamara's management of the defense establishment shows that not much hope is being pinned on Soviet goodwill. (For example, last year McNamara announced that the Minuteman force would consist of 800 missiles; the total has now been raised by 150 to compensate for the demise of the Skybolt.) Each postwar administration has boasted that it was obtaining unprecedented values for its defense expenditures—Truman "cut the fat and left the muscle," and Eisenhower gave a "bigger bang for a buck." Later revelations have taken the glow off these optimistic appraisals. However, on defense matters, Kennedy is, first of all, outspending his predecessors by a wide mark, and under McNamara's regime the Defense Department has trained a vast amount of intellect on the problems of increasing the returns on expenditures.

> "Research and development expenditures . . . have been mounting steadily over the years, but too much of this effort is not producing useful results. What we want are weapons and equipment that the fighting man can use. We are not interested in supporting the intellectually challenging, but militarily useless engineering 'tour de force.' If we are to make optimum use of our available scientific and engineering manpower resources, we must plan our program carefully and concentrate these resources where they will make the greatest contribution to our military posture." *Defense Secretary McNamara, on military research and development, before the House Armed Services Committee.*

The results may not be as rosy as McNamara makes them out to be, but it is a fact that very little, if anything, of a costly nature is now being done by the Defense Department without a thoroughgoing analysis of why it is preferable, usually in terms of cost, to the available alternatives. This process has led some military men to charge that the Kennedy administration is going in for the same arbitrary ceiling-setting process that it deplored in the Eisenhower administration. The charge is difficult to sustain in view of the great increase that has taken place in defense expenditures. There is no doubt, however, that while there may be no ceiling on military spending, there is a domineering interest in keeping costs down, often at the expense of foregoing what would unquestionably be an improvement in certain military capabilities.

The justification for this, Defense officials contend, is that the United States has developed such an overwhelming military superiority that from now on it can pick and choose among alternatives, and thereby spare itself the premium that is usually involved in trying to keep all military capabilities close behind technology.

This principle, McNamara said, also extends to research and development, which has been plagued by "poor planning, unrealistic schedules, unnecessary design changes and enormous cost increases over original estimates. . . ."

"We have often paid too little attention to how a proposed weapon system would be used and what it would cost," he said, "and, finally, whether the contribution the development could make to our forces would be worth the cost. . . . Pencils and paper," he added, "are a lot cheaper than the termination of programs. By a more thorough and complete study and assessment of the facets of each new development—prior to major commitments—we can reduce the number of expensive projects which might otherwise later have to be reoriented, stretched out or terminated."

There are exceptions to this rule, he noted, but only for "developments which can add a new and unique dimension to our capability, like the A and H bomb developments and the ICBM. When the potential payoff is extremely great, correspondingly great costs and risks are justified. But developments which meet this test are rare. . . . We believe that the substantial increase in the Defense program initiated during the last two years has put us in a position where we can now afford to move more carefully in the initiation of new major weapon systems developments."

While the state of the nation's armaments may justify this concept, the state of the Democratic party is not such that the administration can afford to give its critics a field day on the emotionally charged issue of whether our defenses are being properly looked after. Defense officials insist that technical value is to be the guiding star in weapons decisions, but, as one of them pointed out, "if they make it too hot for us politically on some particular point, the thing to do is to put a few bucks into someone's pet scheme." No one will acknowledge that this has been the operating principle in responding to the Air Force's anxious pleas for a manned role in space. But coincidentally

or not, just as the Republicans had begun to assail the administration for limiting the Air Force's space role, the administration announced that Air Force astronauts will be given a chance to ride along with their civilian counterparts in the two-man Gemini capsule.

The aerospace trade press, which frequently thinks like the Air Force but does not have to contend with McNamara's blue pencil, has raised the question of whether the Gemini role is nothing more than hush money. Whatever the answer may be, the fact is that any assault on the administration's views of the military potential in space is now considerably undermined because a few Air Force men are scheduled to go into orbit.—D. S. GREENBERG

Population: National Academy Group Nearing Completion of Study

A 9-member group appointed by the National Academy of Sciences as a Committee to Consider Population Problems is nearing the completion of its studies and expects to report to the Academy sometime this month.

The committee, which was appointed without announcement last fall, is headed by William D. McElroy, chairman of the Department of Biology and director of the McCollum-Pratt Institute, Johns Hopkins University. The committee has surveyed the state of knowledge on population problems and the existing means for disseminating this knowledge. Its report will include recommendations for research and other activities affecting population problems. The study was undertaken at the initiative of the Academy.

Postscript to Portland's Penguins

The machinations employed by the Portland (Oregon) Zoological Gardens to obtain a flock of penguins from Antarctica were described in this space last 26 October. The penguins, it can now be reported, were delivered to Portland on 1 December. At last count, according to zoo director Jack Marks, 16 of 42 had died, apparently of respiratory ailments. The National Science Foundation, which sanctioned the penguin lift against its own judgment and under pressure, has no comment.—D.S.G.

Education: President's Program Provides More Room at Top

Hearings began Monday before the House Education and Labor Committee on an administration bill which combines more than a score of proposals for education legislation. Congress over the past 2 years has failed to give final approval to any of several aid-to-education measures which the administration has given high priorities, and the decision this year to resort to an omnibus bill has not been received as a tactical masterstroke by either foes or friends of federal aid on Capitol Hill.

Tied together in the bulky National Improvement of Education Act of 1963 are major programs to benefit higher education, elementary and secondary schools, and vocational education, along with help, on a smaller scale, for such allied causes as adult education and community libraries.

The administration's all-purpose bill mingles proposals which would probably command majorities if they could be steered successfully to the floor with others afflicted by the controversies over federal control, race, or religion which have made federal aid to education the most hagridden of national issues.

Many of the proposals in the 24 principal sections of the bill have led previous lives as separate legislation, but the bill cannot be fairly described as a mixture of old wines in a big new bottle. New programs have been added, old ones have been modified, and the package has been carefully assembled to meet both the wants and the objections of the special-interest groups which have demonstrated their power to block education legislation.

The strategy of the big bill appears to have two main objectives: (i) to provide something for nearly everybody so that most will acquiesce in the total program; (ii) to confront Congress, and particularly the House and Senate education committees, with the whole range of education problems, together with proposals to attack these problems.

Hearings on the omnibus bill opened this week before the full House Education and Labor Committee—a rather unusual course of action, since a combination bill would ordinarily be broken up and parceled out to appropriate subcommittees for hearings.

The new Commissioner of Education, Francis Keppel (*Science*, 7 December), is reported to have sought full committee hearings because he felt they afforded a forum which would enable Secretary of Health, Education and Welfare Celebrezze, himself, and other administration advocates to tell the whole story to the group which would have to report out education legislation. Customarily, a full committee is inclined to accept legislation more or less in the form in which it is approved by one of its subcommittees. Often, only four or five subcommittee members have attended hearings with any faithfulness.

It is expected that when the more prestigious witnesses have had their say, the bill will be cut up into its component parts and these will be turned over to the responsible subcommittees for action.

Objections to the omnibus approach have been voiced by Republicans on the Education and Labor Committee, who charge that the President has made it more difficult to pass any education legislation this year by failing to set priorities. The Republicans offered some priorities of their own by proposing action in three areas: a program of grants and loans for construction of academic facilities for colleges and universities; extension and expansion of the National Defense Education Act, which includes a variety of programs for both higher education and elementary and secondary schools; and continuation of assistance to federally "impacted" areas where relatively large numbers of children of federal employees attend schools. Both NDEA and impacted-areas legislation will expire this year, but legislation in these