POLARIS

ETHICS, POLITICS AND EFFECTIVENESS

BY

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This article is reproduced from Navy, *the magazine of the Navy League. The Author, an eminent submariner, was at one time Flag Officer, Submarines.*

The introduction of few new weapons has been attended, both in Service and civilian circles, by so much controversy as Polaris. The Royal Air Force has, understandably, been reluctant to lose its main striking power to the Royal Navy. The Navy, in its turn, has hesitated to take on this complicated and expensive organization which many of its officers believe is not their business and opposition ranges over a wide field. There are those who feel that Great Britain cannot compete with the nuclear super-powers and is better with no independent deterrent, and others whose political sympathies are such that they are not interested in whether this country can defend itself or not. The strongest opposition is probably from those who believe that it is morally wrong to even possess weapons capable of such appalling destruction. They are closely followed by those who think that we are more likely to become involved in a nuclear holocaust if we have strategic nuclear weapons than if we have not. To see why,

in spite of all this opposition, we have decided upon Polaris, it helps to go back in history and trace the various steps which have led to its adoption.

The Threat in the Past

Up to the First World War, provided we commanded the sea, the people of this country were safe from direct attack, which could only come in the form of an invasion. In 1915, bombardment from the air first became a reality, but the Zeppelin raids were eventually defeated by aeroplanes firing incendiary bullets and the damage caused by them was very small. Between the wars, the bombing aircraft increased in size and endurance and the majority of the Royal Air Force had to be deployed, in an orgainzation known as the Air Defence of Great Britain, to meet it. In the Second World War, the German bombing offensive was again defeated, this time by the combination of radar and high performance fighters assisted by anti-aircraft guns. This same combination was able to compete with the German V1 'buzz-bomb' attack but proved no defence at all against the V2 ballistic missiles. The V2 missiles would have proved extremely serious, if not decisive, had the Allies not been in a position to drive the enemy from the areas from which they were launched soon after the bombardment began.

Policy of Deterrence

The advent of nuclear weapons in 1945 left few in doubt that their use would be decisive in a future war. It was soon realized that, in spite of tremendous strides with air defence, using guided missiles and jet fighters, it could never be sufficiently complete against nuclear weapons to prevent devastation on an unacceptable scale. Furthermore it was clear that it was only a matter of time before ballistic missiles were developed to carry nuclear warheads and which would be of such a range that defence by occupation of their launching areas would be out of the question. Not only was the threat greater than ever before but it seemed that there was now, for the first time, no defence against it all. To meet this predicament the Royal Air Force devised the policy of deterrence. With a force of V-bombers armed with nuclear weapons we were able to say to a potential enemy: 'If you atom bomb me, I will atom bomb you'. No one, therefore, could use nuclear weapons against this country without bringing down an equal disaster upon himself. This policy had the immense advantage that it was equally effective whether the enemy used bombing aircraft or ballistic missiles. Unfortunately the security won by a policy of deterrence based on manned bombers was short-lived. The development of ground-to-air guided missiles threatened to prevent even V-bombers from reaching their targets. It therefore became obvious that if a policy of deterrence was to continue to be effective, this country would have to develop inter-continental ballistic missiles and this was the reason that the Blue Streak project was embarked upon.

Blue Streak, Minuteman and Skybolt

In the early stages of the development of Blue Streak, serious doubts began to be felt about its effectiveness as a way to mount the deterrent in this country. The positions of the launching sites would inevitably become known and be pinpointed by the enemy. In a surprise attack, therefore, they were in great danger of being destroyed on the ground: they would have to be fired so quickly that danger of nuclear war by mistake would become a distinct possibility. Even if their launching sites were so-called 'hardened', that is, protected and placed underground, the near misses in an attack on them would cause appalling damage to the country.

The American mobile missile Minuteman, even though its position could be changed frequently and to a certain extent be concealed, would obviously suffer

from much the same disadvantage in such a small country as Great Britain. The choice therefore lay between the other two American mobile launching systems, Skybolt and Polaris, which could be kept either in the air or at sea and so were unlikely to be knocked out in a surprise attack. Skybolt was chosen at first because it was believed at the time that the V-bombers would be able to carry it, but when it was found to be too expensive even for the U.S. to develop, there was no alternative but to fall back on Polaris.

Polaris

Polaris was therefore adopted because there was no logical alternative. This was, in fact, very fortunate, as it is the ideal method of mounting the deterrent for this country. By keeping as many of the submarines at sea as possible the chance that the enemy can destroy them in a surprise attack before they can launch their missiles is reduced to a minimum. Furthermore Polaris, because its 'teeth' are at sea, will not draw fire onto this country to the same extent as Blue Streak or Minuteman or indeed the V-bomber force. The time factor in a nuclear attack therefore becomes of far less importance and so the chance of a nuclear war by mistake is reduced. Above all, retribution on an enemy who attacks this country with nuclear weapons will be inevitable and so the chance that such a catastrophe will ever occur is lessened. With the 2,500-mile A3 Polaris missile, any country in the world can be brought within range so there is less to fear from the spread of nuclear weapons. New nuclear powers would have to assume that retaliation, possibly not immediate but nevertheless certain, would be the result of any offensive use of their nuclear weapons against this country.

Polaris, like the other deterrent systems, has not therefore been conceived as an aggressive weapon, waiting for a chance to destroy whole cities and millions of women and children; its purpose is to prevent an enemy doing just this to us. It is the direct descendant of the various air defence systems of the past and it has the entirely new feature of a weapons system that if it ever has to be used it will have failed completely.

Ethics of the Deterrent

There is therefore nothing unethical in possessing Polaris for this defensive purpose which it is able to achieve *without being used.* The fallacy in the thinking of people of high moral principles who oppose Polaris is that they cannot understand that this really is a weapon which can be completely effective without ever being used: that Polaris in our hands is a wholly defensive system which there can be nothing morally wrong in possessing. It must be admitted that the fear that some future government may use Polaris aggressively to coerce a non-nuclear country cannot be ruled out entirely. People who harbour this fear, however, would do better to seek reassurance politically by voting for a government which they are sure will not use Polaris in this way, rather than by anti-Polaris propaganda which could result in depriving the country of its only valid air defence system in the nuclear age. This use of Polaris would, in any case, be a dangerous strategic course to take. If the bluff was called and Polaris had to be used, the country would be deprived of its air defence leaving it wide open to attack by any other nuclear power which might be waiting for just such an opportunity.

It is odd that so many otherwise intelligent people really believe that if we possess Polaris we are more likely to become involved in nuclear war than if we do not. This fear is surely based on muddled thinking. Polaris, as we have seen, is less likely to draw fire onto this country than any other system. The Japanese are the only people so far to have suffered atom bomb attack: they did not possess a deterrent force and would certainly not have been attacked if they had. One of

the surest ways of getting this country atomized is to forgo our deterrent force and so our complete defence against nuclear attack.

Cheap at the Price

There is, of course, also much opposition from those who grudge the money spent on a deterrent force. Polaris, like its predecessor the V-bomber force, is not in fact as expensive as is sometimes believed. The initial cost is fairly high but less than this country spends in a year on drinking, smoking and gambling. The running costs are astonishingly low and constitute only a small proportion of the total defence Vote. Polaris is certainly no more expensive than its rivals Blue Streak with hardened sites or Skybolt with a new generation of V-bombers. At the price it is a very reasonable insurance policy.

The argument that our Polaris force is so small that it constitutes no deterrent at all is often used against it. As a deterrent it undoubtedly is small, at most 32 missiles at sea and at worst only 16. Nevertheless the damage that this could cause is gigantic, the complete destruction of a dozen cities or more is surely enough to make even a super-power think before risking it. The remedy certainly does not lie in abolishing what we have—nothing will certainly deter nothing—but if anything in increasing it. The probability that in the next decade there will be more, and probably less responsible, nuclear powers is enough to justify its retention alone. The extra conventional forces that could be provided if we scrapped Polaris would be marginal and could not conceivably compare in importance with the need to provide a defence against nuclear attack, which is the greatest threat of all.

Concealment

So much for the ethical and political questions and it remains to consider two of the more technical problems. One often hears doubts expressed about the ability of Polaris submarines to remain concealed at sea. It is probably the defeat of the U-boat in two world wars which has prompted these thoughts. One must first realize that the area of sea available in which they can patrol is enormous. The 2,500-mile A3 missile permits attack on Moscow from anywhere in the Atlantic north of the line joining the tip of Greenland to Cape Finisterre, as well as from the whole Mediterranean. It is not therefore necessary to penetrate into enemy waters to use Polaris. In both world wars it was found to be useless for anti-submarine forces to patrol the sea at random searching for U-boats and success was only achieved by concentrating on the focal points, in areas of high probability and around the convoys, where the U-boats had to reveal their presence when they attacked. For a Polaris submarine there are no focal points after it has left its base and it does not have to reveal its presence at any time before firing its missiles. It would then be too late to counter-attack it and retaliation would achieve nothing. Many of the most effective anti-submarine measures of the past depended on detecting the U-boats when they had to surface to use their mobility or to charge their batteries. Polaris submarines are nuclear propelled and never need to surface or even use a snort. They are therefore completely immune to detection by radar which was probably the most effective anti-submarine device of the last war. They can indeed be detected by asdics in the same way as any other submarine but although the detection range has substantially increased since the war, it is still comparatively short. Moreover they can hear the transmission of asdic-fitted vessels at a far greater range than they can be detected. They can then use the mobility conferred by nuclear propulsion, which is as great as any ship, to keep their distance. It can therefore be said with confidence that present anti-submarine measures, in spite of their improvement since the Second World War, are very unlikely to detect a Polaris submarine.

Future Counter-Measures

It is of course conceivable that in the life of our Polaris submarines some radically new and effective anti-submarine device could become available. If it proved possible for them to be tracked continuously it would lay them open to destruction by an enemy before they fired their missiles. In this case the whole principle of Polaris would, of course, be undermined and we would be forced to keep them in harbour where they would have to function in the same way as Minuteman with all its disadvantages. Although there has been an immense expenditure on research into anti-submarine measures since the Second World War, however, there does not seem to be any really revolutionary new system in sight indeed it is true to say that the nuclear submarine has advanced more quickly than the counter-measures and it seems probable that it will hold or even increase this lead during the life of our Polaris force. We can take comfort from the fact that Great Britain and the U.S.A. have a substantial lead in anti-submarine research and that Russia has a long way to catch up.

Anti-Missile Systems

There is a second development which could upset the use of Polaris—or indeed any other missile system—and that is the development of an effective anti-missile defence system. This has recently come into prominence as the Russians have announced their intention of providing such a defence for Moscow. It is, of course, very difficult to assess the effectiveness of an anti-missile system and the Russians may be bluffing. It is certain, however, that a missile defence system would be fabulously expensive and would probably involve the diversion of nuclear explosives from the attacking role. Even so it seems unlikely that it could do more than cut down the damage in a nuclear attack and would not provide a complete defence. Enough would probably get through to constitute a deterrent. Nevertheless the deterrent value of a given number of missiles would be decreased and this would bear disproportionately on the small nuclear countries. In the absence of precise information on how these systems work one cannot be certain of one's ground but it seems reasonable to assume that the shorter the time of flight of the attacking missile, the shorter the time available to detect and destroy it. The problem would also be complicated if the starting point of the attacking missile, and so the direction from which it will approach, is not known. Polaris therefore with its shorter time of flight and unknown starting point would seem to be harder to counter than the longer-ranged inter-continental fixed systems.

The Case for a Fifth

It has been published that our Polaris force is to consist of four submarines, a fifth was cancelled by the present government soon after they came to power. The justification for this cancellation was that our Polaris force was not independent but constituted a part of the western deterrent. The result is that there will sometimes be two but at other times only one submarine at sea. Our deterrent, and therefore our defence against nuclear attack, will therefore on occasion be halved, with the real danger that accident, defect or a chance detection by the enemy could reduce it to nothing. The building of a fifth vessel would enable two Polaris submarines to be kept permanently on patrol and, with the overheads for the force already paid for, would not be a great additional expense. No doubt many arguments would be advanced against this course, but these would probably be based on prejudice rather than logic. If we are to have a deterrent force, however, it should surely be a viable one at least able to operate independently. In the event of a closer political and therefore defensive union with the rest of Europe, Great Britain and France are the only countries capable of providing a European deterrent force. There is a case

therefore to expand our Polaris force with this possibility in mind.* The best answer to those who say that the Polaris force is so small that it deters nothing—or those who think it can be rendered impotent by an anti-missile system or indeed those who think that the submarines will be detected—is not to abolish it but to make the force larger so that it can keep more submarines permanently on patrol. Therefore the sooner a fifth submarine is built the better.

Polaris and Sea Power

The great naval writers of the past have not only shown the immense influence of sea power in war but have also been careful to define its limits. The addition of Polaris to the instruments of sea power adds defence against nuclear attack to the protection of sea communications and other conventional tasks of the Navy. Although the Royal Navy can be accused in the past of coveting Coastal Command, they never intended to usurp the functions of the bombers. This inheritance from the R.A.F. was, however, dictated by the facts of science and geography and was inevitable. It must now be recognized not as an undesirable addition to the Navy's tasks but as a great extension of sea power. It must be accepted that Polaris is now the Navy's primary and most important task which more than compensates it for the phasing out of its carrier force.

*Written before the exchange between the Prime Minister and Mr. Heath in the House of Commons on 9th May, 1967.