

THE ROLE OF AIR POWER



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Air power used to be a provocative and controversial subject. In its beginnings, its advocates violently overstated their case in a deliberate and sometimes successful attempt to attract the support necessary to allow air forces to demonstrate their abilities. Latterly, of course, nuclear weapons have given air power such a fantastic capability as to incite public apprehension and horror, and certainly to provoke wide-spread interest. Since nuclear weapons dominate the military and political scene, any general discussion of the roles of the Armed Services must be based on an examination of the weapon itself. I propose therefore to start with a brief discussion of the effects of the advent of nuclear weapons, and to develop from there the type of tasks that air forces may be called upon to play.

The principal weapon of an air force is, of course, the bomb. The airman has always believed that he could force a decision by strategic bombardment. In World War II, which was the first and only opportunity he has had to prove this contention, the airman is forced to admit that he did it the hard way. He did it the hard way because he lacked experience and precedent, and consequently made time-consuming mistakes in his choice of target systems and because he entered the war unprepared to carry out effective bombing. In 1939 his largest bomb weighed 500 pounds, had been made in 1919, and sometimes exploded when it should. It was not until 1943 that even a 1,000 pound bomb was produced. By the end of the war, a 22,000 pound bomb was in use and a 45,000 pound one was under development. Similarly, his bomber force was too small, too slow, and could not find its target. So the first four years of the war were lost in developing a respectably sized bomb and building up an effective force which could find its target. During the last two years

of war the combined British and American bomber commands really went to work and dropped some two million of the total of 2,700,000 tons of bombs released on Germany throughout the entire period of the war.

This drawn-out time factor is important to remember. The airman's concept has always been that he does not first have to disarm the enemy's military forces but that he can strike immediately at the enemy's industrial complexes. By systematically [sic] destroying these, he can reduce the enemy's means, and hence his will to continue the war. The airman

claims that the bomber will always get through. But the longer the period over which the bomber must continue to get through owing to an inability to force a quick decision, then the more time the enemy has first to build up a reaction to the attacking force and second, to repair the damage.

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The enemy's reaction, of course, introduces the air battle. It was obvious, that while our bomber forces were directed straight to the enemy's heartland, nevertheless they had to battle the enemy's air forces to arrive at their targets. The Battle of Berlin, for example, lasted four months and cost the RAF 300 four-engined aircraft. It was this air fighting which would decide whether the RAF was going to continue to be able to bomb Berlin or whether we should have to give up. Certainly having to fight the battle, reduced the effectiveness of our bombing. Conversely, preoccupation with this battle, the outcome of which meant life or death, caused the enemy to re-allocate his forces, from bombers to fighters, from offence to defence, from front-line troops to fire fighters, with far reaching effects on his production plans, and on his over-all conduct of the war. From the airman's point of view: since he did not have the weapon to knock out the enemy's production

quickly, then the continuing air battle provided the occasion to exert a powerful influence on the enemy's conduct of the war.

The long drawn-out nature of the air campaign against Germany has permitted doubt as to air power's decisiveness. As we have seen, destruction was necessarily spread over several years and inflicted by concentrating on one place at a time. This manner of attack gave a determined and resourceful enemy the opportunity to do repairs and as we know now, to convert the easy-going peacetime economy, with which he had hoped to finish the war, to full-out war production. These two factors made the effects of destruction difficult to evaluate and lead to the US government appointing a strategic survey team comprising civilians and military personnel to make an unbiased report. The findings which are probably well known to you were summarized as follows: "Allied air power was decisive in the war in Western Europe. Hindsight inevitably suggests that it might have been employed differently and better in some respects. Nevertheless it was decisive." By decisive, the survey meant that in the closing months of the war, air bombardment reduced German armament production 50%, the output of coal (the key to the German economy) 90%, dried up the flow of oil, made a complete mess of transportation, grounded the German Air Force, stopped the tanks, and in short, brought the German machinery of production to a grinding halt. So much for decisive. Finally, the survey emphasized that air power during World War II was still in its adolescence and would obviously go on developing.

A pre-requisite to the success of the bomber offensive against Germany was the availability of the UK as a highly-developed industrial base close enough to the target areas to permit the growing bomber forces to sustain their attacks with enough frequency and power to saturate the enemy's defences and thus gain freedom of access to the target. When we consider attack against Russia, we do not find the same situation since the Allies do not possess an industrial area within easy reach. In terms of conventional HE, it is extremely doubtful whether an air

attack could be made sufficiently heavy and sustained to force a decision. Probably the airman would go on making his claims but he would be hard pressed to support them.

Unfortunately, there now exists a weapon which eliminates the need to get in close and to visit a target more than once. If we modernize the figure by putting in a decimal point we realize that the 2.7 megatons of bombs poured on Germany during the whole of World War II is but the equivalent of a small hydrogen bomb.

The importance of this comparison lies once again in the time factor. The fire power applied by two tremendous bomber forces working around the clock for several years can now be matched by one bomber dropping one bomb in one awful night. To be sure, one bomb can only be dropped on one place. But that place can be reasonably large. The 1954 Bikini tests showed lethal radiation from a single hydrogen bomb spreading over 7,000 square miles. The total area of England is only 51,000 square miles. Our Air Defence Command considers that in terms of cities, one bomb will destroy one target. This then gives a small attacking

force the capability of achieving with no warning a much more complete destruction and over a wider area than resulted from the cumulative campaigns of World War II.

This destructive power comes at a time when the high-speed, jet bomber force has a marked advantage over the defence for a number of technical reasons which do not need to be enlarged on here. Moreover, our experience of defence has been against sustained attacks where there was time to take toll of the attacking

force - anything better than about 10% attrition would do the trick, in time. But today in the face of this instantaneous and complete destruction there is no time. We need to inflict an attrition of something much better than 90% and, of course, every effort is being made to develop such a defence. But we do not have it. We conclude, therefore, that, at the moment, we cannot prevent an attacking bomber force from creating more damage, physical and psychological, to our populated area than we are capable of absorbing. Hence, the best defence, indeed the only defence, is a retaliatory offence.

There is another factor that must be added. Unfortunately, the Russian has the initiative to strike first. There is often talk of a preventive war on

our part, but such premeditated action hardly seems compatible with our Western conscience. Hence I believe that we must give the enemy the advantage of being allowed to strike the first blow. Since an apprehensive enemy would obviously give consideration to aiming at least a part of this blow at our strategic bomber force, then protective measures must be taken to ensure that the force can indeed get on its way. By such measures as dispersal of the bomber force on a multitude of strategically located bases, early warning networks and active defences, there is reason to believe that the security of a reasonable portion of the bomber force can be assured. Fortunately this same air defence system serves the populated areas. How much air defence is necessary, how much we can afford, are matters of fine judgment - of political judgment. The minimum required, however, is that measure of defence which can give assurance of the strategic bomber force being able to make its retaliatory attack in the face of a prior onslaught by the enemy.

If both sides subscribe to the truism that after war comes peace, then it must be admitted that the simultaneous suicide committed by a thermo-nuclear [sic] war profits neither the original aggressor nor the supposed victim who is in a position to retaliate. So long as the Allies are able to pay back in full, there is just no incentive for the Russian to strike first. Thus, the Allied strategic air forces stand as the deterrent force against atomic war. Since it is unreasonable to suppose that the Allies could beat the Russians with conventional weapons in the face of the disparity of forces that now exists, then strategic air forces armed with nuclear weapons stand as a deterrent to major war of any nature. This then is the prime role of air forces today - to act as a deterrent force against another world war.

This deterrent role postulates a continuous effort of research, development and production to maintain in being a striking force which can give clear evidence of being able to reach enemy targets and a system of defence which assures that an adequate proportion of this force will get safely on its way even in the face of an initial, surprise attack by the enemy.

This deterrent concept, if you accept it, introduces some disturbing changes in our traditional thinking. It points to a radical revision in our ideas of timing, mobilization, use of reserve forces, and general allocation of resources. It suggests, for example, that we reveal to the enemy in time of peace what we can do instead of maintaining our usual security. It points to a force in being rather than to one in prospect, and hence to a far greater military preparedness in peacetime. Air forces are bringing their two essential ingredients of attack and defence to a continuous state of 24-hour readiness - a heavy commitment in resources and in nervous strain. The deterrent force which has kept Russian military power within bounds during the dangerous post-war period of Allied disarmament is proving a hard task-master.

Of course, this is only a part of the story. This deterrent force plays the role of an expensive insurance policy. And like all insurance, as long as things go well it seems to return nothing and we begrudge the heavy premiums. While the policy will save us from being wiped out financially, there are a dozen and one small items of small print which are not covered and which we have to make good ourselves.

The small war is one of these items in the small print. It would appear that unless other measures are taken, the application of the deterrent force concept does not protect us against the possibility of the local war, after the pattern of Korea. In fact, human nature being what it is, we might suspect that once the major war is removed as a way of achieving political aims through other means, we would be tempted to turn to the small war.

A small war is normally one in which the use of air is deliberately restricted; otherwise it would not remain a small war for very long. Hence, the onus of fighting the small war falls on ground and air forces working together and supported by sea forces. The contribution made by air forces depends certainly on the size and efficiency of the air formations but also upon the time and space in which they are permitted to operate. In Korea, for example, when

the Allied ground forces were pushed to the bottom of the peninsula and air was allowed the full sweep to the Yalu, the contribution was effective and made up for the disparity of numbers on the ground. However, when our forces had pushed north to the limits of North Korea, at which point the Chinese Communists swept in, then air forces which now had no room nor time to take effect were not able to do very much. This kind of limitation is a very important factor in fighting small wars.

The small war provides us with the lesson of the importance of recognizing clearly our political objectives. In a local war these will of necessity be of a limited nature and often of a very special nature. It is most important, therefore, that the overall campaign be conducted strictly to achieve these aims. These political objectives as well as the relative capabilities and limitations of ground versus ground and air versus air should decide whether air forces will be employed in support of the ground situation or whether ground forces should be used to exploit to the full the air situation. This recognition of air as an equal partner to ground forces in fighting the small war will make for a more flexible and more economical use of resources than does the widely-held rigid concept that considers air solely in the form of an adjunct to the ground forces.

This being the case, air forces will be carrying out the normal tasks of attacking enemy airfields, air fighting, reconnaissance, interdiction, close support, air evacuation, air supply, and so on. Again, the overall objectives, the opportunities and vulnerabilities will indicate the proper apportionment of effort between interdiction, which the airman favours, and close support which the soldier always feels that he requires. This then is a second role of air forces - to combine with ground forces in fighting the small war.

These small wars are not proving of advantage to the Allies and there may be an important way whereby air forces can help to prevent them. The present trend is towards building up strategic reserves of combat forces. When aggression is obviously stirring in a certain area,

large numbers of these combat forces could be moved in, practically overnight, by the mass use of air transport. The sudden change in the balance of military forces might shock the would-be aggressor into changing his intentions. The bold, swift move of large forces from one side of the world to the other would be accompanied by positive propaganda explaining these measures as necessary to keep the peace. The Berlin Airlift provided an example of how the timely use of air transport can thwart a sinister political manoeuvre which might have led to a shooting war. We have not had the occasion to repeat that successful exercise. But the bold and imaginative use of the carrying power of air forces, properly exploited by skilful propaganda, should be kept in mind as a means of playing policeman in troubled areas.

A surer way of preventing small wars is accomplished by the regional alliance - as exemplified by the North Atlantic Treaty Organization. Here, the several nations have joined together to form a system of collective defence. This physical manifestation of military force, of which air forces are a part, in effect, draws a clear-cut line between the Western Nations and Russia. These defence forces support the unequivocal announcement, that an overt attack by the Russian against a single member means war with all the members. And since they cannot defend themselves adequately with conventional weapons they will doubtless be forced to use thermo-nuclear weapons, - and the big war will be on, - with the NATO nations taking cover behind the deterrent force.

But NATO does more than that. The physical presence of Allied forces, particularly those from outside Europe - British, American and Canadian, - provides strong support for the Western European governments and goes a long way towards preventing internal overthrow by Communist elements. In the same way, in Western Germany the Allied occupation forces have prevented the seizure of the Bonn Government by Communist forces of East Germany. So here we see air forces, in conjunction with armies, undertaking the somewhat unaccustomed role of supporting the properly constituted democratic governments of Western

Europe. Air Forces are not as adaptable to this role as are ground forces, but I believe that the Canadian and US airmen who parade many times a year in historic old Metz, are playing a significant part in restoring Western Europe to political and economic stability.

Finally, the wide-flung nature of our alliances presents the age-old requirement to ensure the security of sea-lines of communication. Certainly, the theme of the short, thermo-nuclear war suggests that we reappraise the forces that we have allocated to this task. However, I believe that sea lines are an integral part of our defence system that we just don't dare leave unprotected for fear that the enemy take advantage of this weakness and use it to good account in the cold war. Furthermore, we cannot assure the support of our forces in a local war unless we are capable of protecting the sea lines. The enemy's temptation to interrupt [sic] these lines even at the risk of broadening the scope of the war might be proportional to the protection provided. For these reasons, air forces combine with surface forces in the continuing development of effective techniques to combat the submarine, the mine and the surface raider.

These then are what the airman believes to be the important roles of air forces; the strategic bombardment force with its necessary air defences to provide the deterrent to all-out war; tactical forces to combine with ground forces in fighting the local war; the strategic airlift to discourage small wars: [sic] cover forces stationed abroad to sustain the political health of our Allies; and maritime squadrons to join in maintaining the integrity of our numerous sea-lines of communications. In these ways the airman hopes to prevent the folly of a thermo-nuclear war; to help achieve our political aims by acquitting ourselves well in a local war if that be necessary, and ultimately by contributing to the success of our regional alliances to promote a period of stability in the world, sufficiently long to allow nations to come to realize the futility of war in this thermo-nuclear age and to resign themselves to existing together without further recourse to war.

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