

AIR WAR LESSONS

Experience And Progress

LOOKED at as a single event the intensified air war which has been going on since August 11 is seen as the supreme challenge to this country, wrote Major Oliver Stewart, the well-known Air Correspondent in "The Observer" recently. The challenge was accepted by the Royal Air Force, and one part of the contest has been won; the German attacks have been parried and the German air force damaged.

But full victory, with the development of a counter-offensive on a bigger scale than anything seen yet, and with the air control without occupation of German bases, calls for a still greater national effort. And the signs are clear that the moment to put forth this effort is now.

The call that must be made on the country's inventive, scientific and engineering genius is at its most urgent. Like the trained athlete, a country at war must time its supreme effort rightly. It must not put it in too soon or too late; but just at the instant when its resources in strength and staying power will carry it through to the finish on a crescendo of force and speed.

The Need

The need now is first for a delicate administrative adjustment of aircraft output and technical advance; second, for a big increase in the numbers of operational units; third for improved defences against enemy night bombers, and fourth for a tactical-technical solution to the problem of day bombing by large forces. The night bomber, because it cannot work in mass formations, cannot produce the instantaneous and widespread devastation of the day bomber.

It was only the efficiency of the Royal Air Force Fighter Command and of the auxiliary services, such as the Observer Corps and the anti-aircraft units, that came in daylight, that prevented the German mass formations from executing this wholesale destruction on our ports and factories and virtually stopping our production in a few days from the start of the main German air offensive.

Two-Fold Lesson

The lesson from this is two-fold; first that we must continue to build up and improve our fighter defences in order to be sure of holding further mass raids and inflicting yet heavier losses on the German machines; and, second, that we ourselves must work urgently for a technical-tactical solution to the mass day-raid problem so that, when the time comes, we can launch such raids on Germany without heavy losses.

It is obvious that new thought and new methods are needed. The German methods have failed against our defences. If we imitated those methods we might fail against the German defences. Here we must branch out with new thought and ingenious devices so as to gain the

destructive results of the mass daylight raid, without the losses.

Alternative possibilities present themselves; the extremely high speed day bomber, or the extremely high flying night bomber. A specialised form of unarmed bomber could be built with about the same speed capabilities as a single-seat interceptor fighter, that is more than 400 miles an hour. Using a tactical method which would permit it to make its approach to, or departure from, the target on a long shallow dive, such an aircraft would stand a very good chance of getting through without being intercepted.

Special High-Speed Machines

The Germans, by using the Messerschmitt 110 and even the single-engined Messerschmitt 109 as bombers, have shown that they, too, are groping for the high performance solution to the day bomber problem. But converted fighters are not good aircraft—specialised high-speed machines must be built.

There is one other possibility, and that is the use of a special, but as yet unspecified, form of advanced base for fuelling just before flight. This cannot be discussed in full as yet.

Night and Day Bombing

Night bombing is in tactical contrast to day bombing. Whereas the day bomber can be prevented from fulfilling its task by efficient interception forces, the night bomber too often gets through.

Its disadvantages are of a different kind. It cannot work in big formations and therefore cannot develop such heavy striking power. Moreover, it has greater difficulty in identifying with certainty its target. Good camouflage and a full black-out may protect vital targets very well as has been shown by the German raids on London.

The occasions when anything which could, by the greatest stretch, be described as a military target has been hit are so few as to be negligible. Mostly dwelling houses have felt the effects of the German bombs, the reason being that the mathematical probabilities of chance bombing over cities determine that dwelling houses are more likely to be hit than anything else.



RADIO keeps New Zealanders in the Western Desert closely in touch with the outside world: this group is listening to an early morning news bulletin received on a set presented by the National Patriotic Fund Board on behalf of the New Zealand public

The Next Advance

Our next advance in night bombing might be in the use of large formations. It is no secret that, before the war, the Royal Air Force was experimenting with formation flying at night. Owing to the much greater distance, our night flying aircraft can be over Berlin only about half the time the German machines can be over London. It might be possible for them to make good the deficiency by carrying heavier bomb loads and by using night formations.

Meanwhile, we have also to solve the reciprocal problem of intercepting the night bomber. Both Germany and ourselves will hit on a solution in the end. But on the whole it will favour us more than them, for our night bombers, with the aid of the power operated multi-gun turrets, can put up a fight, whereas their night bombers are comparatively ill protected.

Both by day and by night the German tactics have shown a remarkable restlessness. If the German squadrons are not ready to accept huge losses they must now come in the dark or in cloud. Probably their attempts to raid this country in cloud are of even less military value than their night raids.

By day the Germans use bigger fighter escorts or, as has been said, they make their fighters carry bombs or else they

use the scatter tactics already examined in these columns. None of these things has availed them.

Danger of Optimism

But it is a mistake to indulge in over-optimism. Suggestions that the German air force is finally beaten are too often an invitation to reduced effort in this country. The German air force is not finally beaten. It will go on trying for a long time. It can only be beaten for good and all by the supreme effort which we must now make.

And the preliminary must be the adjustment, already mentioned, between output and technical advance. There is nothing more difficult to settle. Technical advance restricts output; output restricts technical advance. That is the law. The efforts of the technical men and the producers must be so distributed that we go forward not only with increasing numbers, but also with those newer and better types of aircraft that have been mentioned as necessary for the successful air campaigns of the future.

We have here the tremendous advantage of the collaboration of American engineers, who are sharper and quicker at the adoption of technical novelties than those of any other country.

Maximum Effort

But our engineers must not rely for technical advances on America. They must work now as they have never worked before. It is the moment of maximum effort and of change. Before the spring we must have an air force not only bigger than the German and Italian air forces together; not only capable of defending this country; but also of undertaking gigantic and continuous offensive operations in Europe and the East.

Higher speeds, heavier armament, stronger armour—these are the major needs. And with them there go the needs for the introduction of new devices and new methods; assisted take-off, exhaust-driven superchargers, night flying formation work, new forms of advanced air bases for use by aircraft specially adapted to them; these are a few of the things that may be mentioned. With them are several things which must as yet be kept secret.

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