

RESTRICTEDAIR HISTORICAL BRANCHTRANSLATION NO. VII/VIII

A SURVEY OF
ANGLO-AMERICAN AIR OPERATIONS
AGAINST
THE REICH AND WESTERN EUROPE
1942-44

A Study prepared by the German Air Historical Branch
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FORWORD

The object of this survey is to summarize briefly the Anglo-American air war waged against the Reich and the Occupied Territories in the West, from 1942-1944. It enumerates the most important and decisive conceptions behind the operations of the enemy's air forces before and after the Invasion.

By means of a brief, historical description of the operation an attempt is made to illustrate the vital part played by the enemy's air forces in achieving the enemy's great successes in the West.

German victories during the years between 1939 and 1941 showed to what great extent an air force can influence the developments in modern warfare. The character of the battles and the after-effects had become considerably more varied and far-reaching. New material and intellectual sources had lent themselves to the conduct of war.

The rapid decisions in Poland, Norway and in the West must be attributed mainly to the operations of the German Air Force and the resulting mastery of the air. The flexible employment of the air force over vast areas determined the character of events.

Germany's enemies knew what conclusions to draw from these basic experiences; this has been proved by the developments in the air war since 1941.

I.

Operations of the air forces of the Western Powers
until the beginning of the Invasion.

The Anglo-American air war up to the beginning of the invasion may be divided into three phases. The operations of the British Air Force during the first phase, bore the stamp of a defensive battle for the protection of the British Isles against German air attacks which aimed at reaching a decision.

This defensive policy was forced on to the British in 1940 by the technical and numerical superiority of the Germans, and by the loss of the Western territories in Europe. The air attacks against England from August 1940 to June 1941 formed the climax of this battle.

The character of the second phase was determined by the formation and enlargement of the Anglo-American operational air forces. This new development was revealed for the first time during the heavy air attack against Cologne on 30th-31st May, 1942. A total of 900 British aircraft was employed in this operation. The first big American air attack was carried out against targets in France by 12 Boeings (B.17's) on 17th August, 1942.

In the third phase, after 1943, the enemy's air forces had absolute mastery of the air in the West. Thus the operational air war, on a large scale, was started and directed against the heart of Europe. The characteristic features of this air war were the great depths of penetration (raids on Regensburg, Gnesen) and shuttle raids. The ultimate object of Anglo-American strategy was to force a decision by employing superior forces. The utilisation of all military, political, economic and intellectual resources was to create conditions which would facilitate landing-operations on the Continent.

Within the frame-work of this task the following objectives were set for the enemy's air forces:-

- (1) the annihilation of the German Air Force and its resources;
- (2) the undermining of the German war potential, and of the nation's morale by attacks on industries and terror raids,
- (3) the obstruction of freedom of movement through attacks on communications,
- (4) the elimination of the U-boat menace and of U-boat bases.

The successful execution of these tasks was the direct preparation for the invasion which had been planned. The aim was to strike at the root of the German defence forces in the West, and to paralyse ~~our~~ defences during subsequent battles.

1.

The Campaign against the German Air Force
and its Resources.

The enemy realised that the success of a landing operation could only be ensured if mastery of the air had been achieved. To carry operations by twin- and four-engined bomber formations deep into the heart of Western and Central Europe, the enemy had to attain at any rate temporary air supremacy in these areas.

The Anglo-American powers, therefore, formed a superior fighter-force for offensive operations and gradually reinforced this fighter-arm until absolute supremacy had been achieved. Simultaneously a bomber force was created with aircraft capable of deep penetration, great carrying capacity, good service-ability, and equipped with strong defensive armament.

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The R.A.F. had, already during the air war against England, fighter aircraft which were equal to their German counter-parts. As their numbers increased, they were able not only to secure the mastery of the air over the British Isles, but also to conduct offensive operations against the Continent.

The construction of the U.S. fighter force was at its inception based on English aircraft types (Spitfires and Hurricanes). Since 1942, the U.S.A. has switched over to American models with greater depths of penetration (Thunderbolts, Lightnings and Mustangs).

The capacity of the English operational air force was insufficient; new four-engined models, (Stirlings, Halifaxes and Lancasters) however, were being developed. They had been employed since the end of 1941 but proved to be too slow for daylight-raids and their maximum ceiling was furthermore too low. After a short time, the heaviest attacks had therefore to be carried out at night.

Four-engined aircraft (Boeings and Liberators) had been developed in the U.S.A. since 1936. With their defensive armament, durability and climbing capacity, even in closed formations, they were well suited for daylight-raids. Consequently they were the basis for the formation of a strong four-engined American bomber force for daylight-operations.

Equipped with these forces, the enemy's first objective in 1942 was probably to push our fighters deep back into Central France and thus to achieve supremacy in the coastal areas.

By means of operations by strong fighter-formations against Belgium and Northern France, the British and Americans hoped to entice our fighters into battle. The aim of the Allies was to gain a tactically superior position and then deal a crushing blow to the forces operating from coastal areas. Simultaneous attacks of increasing strength were carried out by medium bombers (Bostons, Marauders, Venturas, Mitchells, Havocs, Mosquitoes) against the ground organisation of our fighters.

American four-engined formations (Fortresses and Liberators) had also taken part in the battle since August 1942. These American operations, were, at first directed against our aircraft industry and against supply installations in the occupied Western territories; later, more powerful attacks were carried out against fighter airfields.

In 1942, the German Air Force had at its disposal in Belgium, Northern France and Brittany 2 fighter Geschwader whose ground organisation lay in the coastal areas. Our own operations against the enemy's numerous fighter sorties proved to be rather ineffective. Despite prompt location and recognition by means of Radar, the situation remained unfavourable for our own fighters. Due to the proximity of their airfields to the coast the German fighters were flying at insufficient altitudes when contact with the enemy was established, and consequently had to fight from inferior positions.

We suffered heavy losses and it was therefore decided by the High Command not to oppose purely fighter sorties over wide areas. Our own forces, limited in number, were from then onwards employed only in compact formations against enemy bombers. Even this type of operation resulted in great losses because of the enemy's strong fighter escort forming an air umbrella. Consequently the forward airfields of our own fighters had to be moved further inland; the distance between the new bases and the coast however, made effective interception in coastal areas impossible.

The salient feature of 1943 was the incidence of continuous operations of British and American fighters and twin and four-engined bombers, whose strength had increased enormously.

The enemy's objective in 1943 was to attain the mastery of the air over the whole of Belgium and France. To begin with, the enemy concentrated on stronger fighter sorties; during these sorties the enemy broadcast faked bomber R/T in order to lure out our fighters and subsequently to attack them.

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Included in the tasks of enemy bombers were attacks on our own fighter airfields so as to keep our fighters on the ground. Strong medium and heavy bomber formations continued their attacks on our ground organisation, and in particular on that of our fighters. Attacks on industrial objectives were not very frequent during this period.

The German fighter force operating in the West had not yet been reinforced, and its operational strength was reduced by losses and by the employment of young and inexperienced crews. Interception of incoming four-engined bomber formations was their main task and one which also resulted in high losses, the enemy being protected numerically by superior fighter escort aircraft.

Tactical transfers were at various times necessary in order to concentrate our own weak fighter formations dispersed over large areas. Some points in the occupied territories, therefore, had to be stripped of all their defence forces. This enabled the enemy to carry air operations inland without encountering effective defence measures. Finally the constant pressure of the enemy's air force necessitated a further withdrawal inland of our fighter forces.

The air situation became considerably more critical during the second half of 1943. This was particularly apparent in the concentrated attacks on the German fighter forces. Strong enemy fighter sweeps were carried out over the entire Western zone with little opposition from our defences. The enemy continued to attack fighter airfields with twin and four-engined bombers as well as with fighter bombers; he also continued to attack aircraft plants in the occupied Western countries.

Within the Reich, the enemy started to attack aircraft production plants with strong formations of heavy bombers. Fighter production centres at Kassel, Aschersleben, Rostock, Warnemunde, Regensburg, Wiener-Neustadt and Marienburg bore the brunt of these attacks.

Meanwhile our own fighter forces grew in numbers. They were employed in a concentrated manner to oppose the enemy's deep penetrations into Reich territory. Transfers and diversions of fighter formations were necessary at short notice from the occupied Western territories in order to supplement the strength of these operations.

The relation between German successes and losses deteriorated. The enemy did not, however, achieve his goal of eliminating the German fighter defence. He only succeeded in severely interfering with our aerial defences in the West.

2.

ATTACKS ON INDUSTRIAL PLANTS
AND TERROR RAIDS

The fight against the German Air Force and its resources was supplemented by continuous attacks on German war industries and against the morale of the German nation. As a preliminary to the intended invasion, these attacks were to induce the general state of weakness which the enemy considered essential.

The enemy had adequate and ever-increasing forces at his disposal. British four-engined bombers could be employed for night operations and American escorted formations for daylight attacks.

Night terror raids predominated up to the middle of 1943, and the number of operations against industrial targets declined. Not until daylight raids increased did the number of attacks on industrial objectives and various other targets begin to grow.

During the first half of 1943 the British and Americans chose targets whose destruction would have a lasting effect. Heavy industries and chemical plants in the Ruhr area were the main targets, but owing to the dispersal of many of these concerns, only limited results were achieved.

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After the middle of 1943 therefore the enemy switched his attacks to assembly and production plants. Key industries, (ballbearings, air-screws, tyre-fittings) and also feeder-plants in S.W. and S. Germany bore the brunt of these attacks.

In November a new large-scale air offensive was launched against the Reich. The specific target was Berlin, which was to be destroyed in its capacity as a centre of communications, production and administration; its destruction was also expected to have a devastating effect on morale in general.

Measures were taken to divert and pin down our own fighters over the occupied Western territories. Spoof attacks of four-engined bombers in areas directly North and South of the actual target also served the same purpose.

The enemy wished to eliminate all concentrated operations of German fighters; sudden changes in course were, therefore, customary en route. Consequently the enemy penetrated into areas where our own fighter commands had not expected any attacks. Furthermore, the enemy exploited weather conditions which either reduced or altogether prevented fighter-activity.

Further developments in pathfinder tactics had a considerable influence on night operations. The characteristics of these attacks were the extreme brevity of the actual attack by compact formations and the very limited duration of the entire operation. Mosquitoes used detour routes to the main target in order to screen the actual attack.

The enemy carried out simultaneous large-scale attacks on several widely dispersed targets in order to divide the efforts of the defence forces. The enemy's navigational aids and means of pin-pointing the target (Boomerang and Rotterdam) had been developed to a very fine degree. On 22./23.11.43 an attack by a strong bomber force took place for the first time despite QBI weather conditions.

Our own fighter defences were confronted with a difficult task. The enemy's fighters were superior in numbers and also to a certain extent in performance. In addition the durability of their four-engined aircraft was remarkable. Wide areas were denuded of all fighter protection in order to ensure effective employment of the small available fighter forces by their concentration elsewhere.

The difficulty of employing our nightfighters at the right moment constituted a considerable disadvantage for the general night defence. The success of "Himmelbett" was largely dependent on the extent of the enemy's jamming operations. The "Zahme Sau" method was on the whole successful.

During the second half of 1943, however, difficult weather-conditions over Western and Central Europe hampered in particular, the night-operations. During good weather over his own bases, the enemy exploited this opportunity for numerous attacks.

At an early stage during attacks on industries and towns, the enemy paid attention to the development of the German V-weapon, realising its potential menace to the planned invasion. Attacks on the assembly-works at Peenemunde were carried out by four-engined formations, and in addition, continuous sorties were made against the launching-sites of the V-weapon by heavy twin-engined and fighter bomber formations.

As our fighter defences were negligible, the American bombers very soon began to split up into small attacking formations of 12-16 aircraft. As they did not penetrate very deeply, their escorts formed such an effective air-umbrella over the area of operations, that German fighters could not be successfully employed.

3.

Attacks on Communications

The enemy's attacks on our communications in Western Europe were the direct preparations for the invasion. At first the coastal areas bore the

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brunt of these attacks. The British and Americans attempted to paralyse the transport-network in order to prevent re-construction work after air raids. By this means the enemy hoped to stop transport of personnel and supplies to fortified areas and V-weapon sites.

Locomotive and truck-depots were the main targets during the first half of 1943. Operations were mainly directed against rolling-stock, repair-yards and locomotive and truck plants. Special attention was also paid to attacks on ports of sea-going and inland-waterway traffic and lock-installations. In addition, effective attacks were carried out on important railway junctions.

At first low-level raids on railway engines were carried out by single-engined aircraft (Mustangs and Spitfires) during favourable weather conditions. Trains which were either moving or stationary at railway stations were attacked with machine gun fire or in some cases by fighter bombers, and a great number of locomotives were put out of action. Once our fighters had been forced back inland, and the enemy had gained absolute air supremacy over the coastal areas, attacks on railway objectives continued without pause.

Attacks on railway stations, repair yards and objectives in ports were carried out mainly by medium and heavy bomber formations. Low flying Mosquitoes carried out raids at dusk on railway installations and even penetrated into Reich territory.

During attacks on railway engines by single engined aircraft, our own fighters could seldom be put into action even when enemy penetration was very deep. The enemy's low flying aircraft could either not be picked up, or else when contact was established it was too late. It was, therefore, impossible to sound the alarm in time for our fighters to start. Warning signals fired off for the benefit of our own aircraft on patrol-duties were only successful in a very few cases.

During deeper penetrations, attacks carried out by medium and heavy bombers against communications and installations led to air combat. Effective protection of targets however, could not be achieved because of our own weakness in numbers as compared with the enemy's numerically superior fighter escort force. During Mosquito-raids at dusk our aircraft on patrol duties were able to achieve victories against homing formations.

4.

The Battle against the U-Boats.

During the operations against naval targets the enemy concentrated mainly on keeping down the U-boats in order to exclude once and for all the possibility of a repetition of the grave threat of 1942/43. In these tactics also, the enemy was considering the basic conditions for the success of a large scale landing enterprise. The enemy's air force, was, therefore, entrusted with the task of eliminating the U-boat weapon by combatting the German submarines at sea and by attacking their bases and production-plants.

Operations over the sea necessitated wide spread reconnaissance. The actual attacks were carried out by units of Coastal Command, together with flying units subordinated to the Royal Navy.

Strong American four-engined formations carried out daylight raids on bases including those of Brest, Lorient, St. Nazaire and occasionally Bordeaux. British formations carried out night attacks with special bombs. Although little damage was caused to U-boat pens, auxiliary plants, workshops, shelters etc. without reinforced concrete protection received devastating hits and some bases were temporarily put out of action.

The daylight attacks took place under strong fighter cover with simultaneous diversion-raids. Here too, the enemy employed flexible tactics, in order to deceive, disperse or pin down our own fighters. For example, the enemy would

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first send out bomber formations on attacks against the Belgian zone in order to lure out the German fighter defence forces and to oblige them to transfer forces to the threatened area. However, after slight activity over the coastal areas, the bombers returned to the British Isles only to come back subsequently and attack objectives in Brittany. On such occasions it was not feasible to put up again a concentrated fighter defence in time.

In spite of this, our own defence forces had been very successful on several occasions in day time. On the whole, however, no lasting, effective protection could be achieved on account of the numerical inferiority of the German fighters.

At night, fighter operations were only feasible on a limited scale and in some cases quite impracticable. As the nucleus of German night fighter activities was over Reich territory, the Western territories lacked means to safeguard their defences.

The British and Americans used parachute mines for indirect attacks on U-boats and their bases. Minelaying operations were carried out at night by British aircraft in the coastal waters near German submarine bases between Brest and South of Bordeaux. When flying over Brittany, these forces enticed our nightfighter forces into battle.

Direct attacks on homing and outgoing U-boats in the Bay of Biscay were carried out by British Coastal Command bombers during favourable weather periods. On these occasions twin engined fighter bombers (Beaufighters and Mosquitoes) and also smaller fighter forces undertook escort duties.

JU 88 fighter bombers and one fighter squadron (FW 190) operating from Brest were entrusted with our defence. When losses were not too intolerably high numerous successes were obtained but these however did not tip the scales in our favour on account of the enemy's great operational strength.

Attacks on U-boat production plants in the Reich were carried out day and night by four engined bombers and these attacks were particularly directed against home-bases, wharves and feeder-plants for ship-engines, accumulators, electrical installations and navigational and signals apparatus. During the years 1942-43, these attacks were the main task of Anglo-American bombers over the Reich; in 1944 they were no longer of such great importance.

Allied Air Force Invasion Preparations

After the end of 1943, the Commands of the British and American air forces concentrated on direct preparations for the invasion. The employment of increasingly strong operational forces and the further pushing back of the German defence units were the characteristic features of the air-war at this time.

The battle against the German Air Force continued to be one of the major commitments of the enemy. With stronger forces than had been employed hitherto, the enemy attempted to annihilate the German Air Force in the West, and to weaken it critically over Germany itself.

The enemy's armed reconnaissance flights continued in growing force over wider areas than before, particular attention being paid to the German ground organisation. This hindered our own defence forces and our units had often to abandon their intended missions through being drawn into combat when setting out on operations.

The enemy also tried to prevent the German fighter wings from assembling in close order for offensive sorties. This resulted in a marked decrease in our striking power against enemy four engined bombers. Attacks were often carried out against our own fighters returning from operations and in a defenceless state, being short of petrol, fuel and ammunition.

Low-level bombing and machine-gun attacks on aircraft on the ground were developed to a great extent. These attacks were mainly carried out as independent fighter missions by the escort forces covering the enemy's bomber operations over the Reich. In order to crush the German fighter force on the ground, the enemy also increased his fighter-bomber activity in the vicinity of the front and his attacks with four and twin-engined bombers on our ground organisation.

In addition our aircraft industry and in particular fighter production plants, had to bear the brunt of heavy bomber attacks on Reich-territory.

Our own fighter defence forces were still further limited in their operational capacity by the effects of the enemy's over-whelming supremacy. Under these difficult conditions, losses continued to be high, and only young and inexperienced wartime-crews were available. Opportunities for practicing formation-flying, aerial combat etc. could only rarely be found on account of the critical air situation. It was necessary to transfer fighter units to the rear areas in order to safeguard our assembling activities out of the range of enemy fighters.

Within the framework of direct preparations for the invasion, air activity directed against the Western European transport network was increased still more in order to paralyse local and through traffic in Belgium and Northern France. These attacks on the main transport routes leading to the West were aimed at separating the potential invasion zone from the Reich, and assumed prominence after March 1944.

Over the entire Western area, shooting up of railway engines and machine-gunning of roads were carried out in all weather conditions by single engined aircraft. To this must be added attacks by strong twin-engined and fighter bomber forces on Belgium and Northern France, whose task was the destruction by day of almost all important railway and road-bridges, railway installations and repair yards. At night, the objectives of the strong British four engined formations were the marshalling yards and traffic junctions situated mainly in the Paris area.

In addition, during the day, American four engined bombers attacked the transit zone joining the German communication network to the networks of Belgium and France. Damage caused during these raids was still further increased in some cases by R.A.F. night attacks. Transport routes in Central Germany linked up closely with the Western zone, were also subjected to continuous attacks.

Simultaneously, Anglo-American operations for the purpose of carrying supplies to Belgian and French terrorists, increased considerably. These terrorists were supplied with weapons, equipment, sabotage materials, money etc., to enable them to continue their anti-German activities at the time of the invasion.

Large-scale British and American attacks on German engine fuel-depots played an essential part in the invasion preparation programme. After a short time, this would inevitably affect the operational employment of the German Armed Forces and transport system.

A new wave of bomber attacks directed against coastal fortifications, supply installations and signals stations in the West proclaimed that the materialization of the enemy's landing plans was at hand.

II.

The Anglo-American Air War in the West since the beginning of the Invasion.

The beginning of the invasion opened a new phase in the operations of the Anglo-American air forces.

Whereas strategic warfare had so far dominated the enemy's operational planning, now that a land front had been established, ground support operations were brought into prominence, and the Tactical Air Force could be employed in its proper role.

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Apart from this the battle for the maintenance of absolute mastery of the air in the West and for gaining air supremacy over the Reich continued. The enemy directed his attacks to a large extent against the movements of the opposing German defence forces in order to influence as quickly as possible the outcome of land operations. These attacks upon fuel and supply transports also played an important part in the overall battle for air supremacy.

When the German V-weapon was put into action, the enemy concentrated all available forces on attacks against the launching sites, reserve depots and production plants of the new weapon. This concentration of all forces against the occupied Western territories formed the characteristic feature of the enemy's aerial operations in June 1944. From July onwards, however, concentrated attacks against the Reich were renewed.

The enemy's S.E. fighters had a big task in the shape of tactical Army co-operation. During the first weeks of the invasion these formations maintained unbroken air cover over the landing zone. The operational strength of these units then amounted to an average figure of 150-200 and at times to 600 fighters and fighter bombers operating simultaneously. Generally speaking, employment of very great numbers of Allied fighters was the most characteristic feature of these battles.

The bulk of direct support sorties were carried out by fighter bombers operating over the battlefield and against German positions and supply lines. During the early days their attacks were directed particularly against ground targets in the bridgehead area. When the bridgehead expanded and the short-range bomber units had been transferred to the Continent, even the routes leading to the front and connecting routes far behind the German frontline fell within the range of action of the enemy's fighter bombers. They were employed in such a concentrated manner that at times during the day they succeeded in completely paralysing all movements behind our lines.

At times they penetrated very deeply into the rear areas to attack important individual targets. Traffic bottlenecks were blocked, troop-movements prevented, and supply and reinforcement operations rendered more difficult.

The critical air situation placed a heavy strain on the operational employment of the German fighter forces and their striking power decreased considerably. For example, on D-Day the operational strength of Jagdkorps II amounted to 48 fighters. Because of the reinforcement of our forces by fighters transferred from the Reich, the enemy was forced to put up an air umbrella over the frontline day after day for defensive purposes. At the same time the enemy's armed reconnaissance flights over our fighter airfields began once again to increase. Machinegun attacks on airfields and emergency landing grounds became more frequent and put aircraft on the ground out of action.

The enemy's fighter bomber operations increased still further after the breakthrough at Avranches. Movements and field positions in the battle area, river crossings and railway targets formed the main objective. At that time attacks on airfields were only carried out on a small scale.

The enemy fighter ground organisation was built and extended on very elaborate lines; especially noteworthy was the rapid installation of signals networks and ground navigational aids.

There had been no alteration in the operational employment of the Anglo-American twin-engined formations since the beginning of the invasion. They attacked concentrations of troops and armoured vehicles and objectives in the rear supply zones. After the breakthrough, their attacks were mainly directed against railway installations, traffic bottlenecks and movements in the rear part of the operational theatre.

The operations of the heavy bomber formations had shown a considerable increase since the beginning of the invasion. As the enemy held absolute mastery of the air over the French zone, British four engined formations

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(Lancasters and Halifaxes) carried out daylight attacks for the first time. As they grew in numbers they penetrated further into the centre of France. Already in August the daylight operations of British four-engined bombers outnumbered those made by night.

On 27th August the first day-light attack on the Reich (Hydrogenation Plant at Rhein-Preussen) was carried out.

British and American four-engined formations were employed on direct support during assaults on bases and concentrations of armoured vehicles. They opened up their large-scale attacks by pattern bombing and thereby succeeded in heightening the efficacy of their artillery fire.

After the German V-weapon had been used operationally the attacks of the heavy bomber units were also directed against V1-sites, reserve dumps and supply installations.

American four engined formations were also employed in the battle against the German Air Force, attacking airfields in Western Germany and in the occupied Western territories; more powerful attacks were also aimed at aircraft production plants in Central, North West and Northern Germany.

The crushing attacks on fuel installations and depots were continued by British and American forces and the effects of these raids were lasting. The enemy also directed his attacks against important traffic-junctions within the Reich in order to paralyse the flexibility of German movements.

III.

Prospects.

With our own frontline on the borders of the Reich many of the enemy's bases will shift to France and Belgium. As far as range and difficult weather conditions are concerned, this trend will enable the enemy to conduct concentrated operations of all forces against the Reich. The battle on German ground will probably be similar in character to the battles that took place during the preparations for and the actual invasion of France.

Apart from direct support operations, it is to be expected that the enemy will adhere to his present narrow range of strategic targets. Consequently the Anglo-American air operations will in the near future be directed against the German Air Force, fuel installations and communications.

Pinning down the German Air Force, which owing to its concentration in a small area is an effective defensive force, will be a preliminary condition for an offensive against the Reich. The enemy will, therefore, as in the past, have to employ his strongest fighter forces in order to draw into battle and paralyse the German defence forces.

Army support by strong forces of the Anglo-American Air Forces is expected to continue along the lines first developed in the North African campaign, and which have proved successful in Italy and in the West. Consequently fighter bombers will continue to play an important part over the battlefield. Apart from this twin and four-engined bombers will be employed in attacks against field positions, fortified points and other defensive installations.

Attacks on our communications will continue to be of the greatest importance in direct and indirect Army support operations. The enemy intends to continue attacks of very strong fighter bomber formations against roads and railways in order to render impossible all movements behind our lines, at any rate by day. Heavy, medium and light bombers will also be given the task of preventing us from carrying out troop and supply movements by permanently damaging our communications. The offensive against communications within the Reich could be supplemented by attacks on the inland waterways.

In the battle against the German armament industry the enemy will realize the vulnerability to air attack of our fuel, nitrogen, methanol and buna industries. Attacks on the production plants of armoured vehicles are also likely to materialize in order to ease the strain imposed on the enemy's army. Key war-production plants manufacturing ballbearings, cogwheels, tyres and electrical equipment will continue to be important objectives. In addition to this continuous blows against the armament industry generally are to be expected in the form of large scale terror attacks.

While the enemy has so far achieved no systematic disruption of our electricity supplies, attacks on these targets so vital to our industrial output must also now be considered. It is certain that the economic structure of Western and Southern Germany would suffer severely through such attacks. Disruption of our economic life will grow with the increasing incidence of enemy fighter bomber operations over the Reich.

The operational strength of the German Air Force as compared with that of the Anglo-American Air Forces has undergone a fundamental change since 1940/41.

At the beginning of the war the operations of the German Air Force determined the character of events; the initiative has now however since 1941 been in the hands of the enemy. This contention is borne out by the situation in the West. Our own air force was obliged to follow a defensive policy. The enemy, however, exploiting the experience gained in the first years of the war, built up a strong air force suited for both strategic warfare and for ground support operations and thereby achieved the supremacy which facilitated his great successes in the West.

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