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By authority A. C. of S., G-2

Date 31 March 75 [Initials]
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REPORT FROM CAPTURED PERSONNEL AND MATERIAL BRANCH ISSUED BY THE MILITARY INTELLIGENCE DIVISION, U.S. WAR DEPARTMENT, BY COMBINED PERSONNEL OF U. S. AND BRITISH SERVICES FOR USE OF ALLIED FORCES.

Information on reasons for the decline of the G.A.F., obtained from a German Air Force Colonel, captured 1 January 1945. British source. Received in Britain 15 March 1945.

KOGLER
VG 6

Note: At the time of his capture this prisoner was in command of a Fighter Wing. He has written what follows below in the hope it may ultimately help to assure that responsibility for disasters which have overtaken the G.A.F. and for the catastrophe thus brought on Germany herself, may rest where it properly belong.

USAF HRA 170.2281

The purpose of this paper is to show the development of air warfare during the last two years and all its possibilities as well as its actual course, which I experienced as Pilot, as 'Gruppenkommandeur" and as "Geschwaderkommodor." I should like to stress right away that I am not taking the 'Flak' into account in these pages as my knowledge of that subject is too slight and I had little to do with it.

Before coming to my main topic I must give you a short survey of the development and especially the preliminary steps of air warfare up to that period, in order to facilitate the understanding of the subject. German officers all witnessed the triumphal march through Poland, Norway and then in the Spring of 1940 in the West with great admiration and enthusiasm. It made clear to us the importance for successful modern warfare of motorized troops, and especially tanks, on the ground, and of the GAF in the air. I don't think it is an exaggeration to say that the main factor which enabled us to crush and defeat France in so short a time, and drive the B.E.F. from the continent at Dunkirk, was the GAF. After the French campaign was over we airmen often wondered about the continuation of the fight against England; we thought the next step would be to throw in the entire GAF against England's most sensitive spot, her shipping. We all agreed the thing to do would be for us all to take a torpedo on board and try and cut England's life-line. Instead of that came the battle against England itself, against London. Before the air-offensive started, our General Staff promised that our opponents would consist of three-hundred British fighters, part of whom would be piloted by very young and inexperienced pilots and also that, to some extent, with the exception of Spitfires, their aircraft were inferior. As a result we were amazed when in the battle of Britain the three-hundred fighters drew to an end. There weren't just three-hundred, but at least as many as we had. At the time we had about nine-hundred or a thousand fighter-aircraft operating and the English had the advantage of fighting

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over their own territory. The British armament industry had prepared for this period with great foresight. The construction of fighters was given priority over all other types of aircraft during the battle of Britain; pilots, reconnaissance and bomber-pilots, were retrained in order to be able to be employed as fighter-pilots in case of emergency. As a result we were faced with a fighter-force of practically equal strength to ours which had the additional advantage of having plentiful material reinforcements at hand. If a pilot was shot down over England - and it transpired that 60 or 70% of them landed safely by parachute - the following day he went at us again in a new aircraft. That was a situation which unfortunately the GAF never experienced. When the war started it was said: "Well, we'll have plenty of aircraft, too many in fact; but we'll lose our pilots; there will be a shortage of them because the training lasts so long and we won't manage to provide the necessary reinforcements." That situation never actually arose; it was always just the opposite. We always had enough pilots, reinforcements of crews were at hand but we lacked reinforcements of equipment of aircraft. England has to thank her policy of retraining pilots for defense and her total concentration on defense in the air for the fact that she won the battle of Britain and that, after both sides were completely exhausted, we had to give it up. Now the English say that they only had twenty fighters left on the last day, or after the last day-raids, but we hadn't many more either.

The next phase of air warfare was the transition from day-raids to night-raids, which it was possible to keep up for a relatively long period until British night-fighting had developed to such a point that night-raids also became too costly for us. Then our battles in the South-East started, followed by fighting in the East the following year. That gave England a breathing space. They were able to bring their fighter-arm up to strength and increase its numbers, and above all, it enabled them to start building up their strategic air force, building bombers, which by the end of 1941 and beginning of 1942 were already coming out as four-engined models. Then we experienced a similar situation at home: Night-raids started on the Reich, on Germany. We started developing night-fighting, which already existed in its preliminary stages; it was due to General Kammhuber that night-fighting developed in such a relatively short time into at least a weapon to be reckoned with. The whole development was further delayed by the fact that instruments still had to be constructed, and even invented, and tested in operations. At the time our night-fighting only had one aircraft, the Me. 110, at its disposal; it was first used operationally as a long-range-fighter-bomber; it was intended as a long-range-fighter and was then specially equipped with instruments for night-fighting, but with no other improvements. At first we tried equipping the approach lanes used by the enemy with a belt of searchlights which were to illuminate the enemy aircraft approaching at night. Our night-fighters were waiting above and tried to attack the enemy aircraft and shoot it down, whilst it was in the cone of searchlights. It was a fairly exciting but not very successful enterprise. At the same time we developed the so-called dark night-fighting restricted to a given area. It was based on the following principle: a whole belt of W/T beacons was placed along the entire coast, from Jutland down as far as possible towards the Brest area. An aircraft, a night-fighter circled around each of these beacons whenever enemy aircraft were approaching, and these night-fighters were directed to the enemy aircraft by control from the ground. The disadvantage of this method was that the instruments

we had at the time only covered a radius of 20 km; they described exact circles of 20 km, adjacent circles of 20 km; there was a second similar belt of them behind the first, forming a double ring. If you succeeded in directing your own night-fighters on to the tail of the enemy aircraft whilst it was within this 20 km radius, by instructing it to... slightly to the left or to the right, or somewhat higher

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These night-fighter tactics would have been more successful - and some aircraft were actually shot down, the number varied between 15, 20 and 25 per night - had not the enemy adapted their tactics to our defense methods. How did British bombers avoid being shot down? Firstly, they approached at a very high altitude and secondly, after these areas where our night-fighters were operating had become known, the enemy dived down to cross these areas at the greatest possible speed. Their aircraft nosed down, that is, they converted their height into speed and thus reduced to a minimum the period in which they could be attacked. After we countered that by instruments covering twice the radius and able to locate the enemy and direct our fighters within a 40 km radius instead of 20 km, the enemy changed to a policy of approaching in thick streams, that is to say they assembled all their bombers over England and approached like a narrow stream at low level. It was the real bomber stream, as we are experiencing it even today in daylight. It put our night-fighters under a great disadvantage, as it was no longer possible to direct individual fighters with all those enemy targets; even when it was possible we could only bring three, four or five night-fighters into fighting contact with those enemy aircraft. Of course the development of our tactics continued during this time; we switched over to free-lance night-fighting, when each aircraft was fitted with an instrument, a Radar, to enable it to home on to enemy aircraft on its own once it had been directed into the neighbourhood of the stream of enemy bombers. That was the period when our night-fighter successes increased and we used to shoot down an average of 40, 50, 60, and sometimes even 70 a night. That was the period, roughtly from the end of 1942 until the beginning of 1943, during which the British bombers suffered such heavy losses that one could reckon on their having to give up these attacks sooner or later.

However, parallel with those British night-raids came the growth of the American Air Force in England. Vast airfields were laid out and runways and underground battle HQs were built in the area to the North-East of London, right up to the Wash. Fog-dispersing plants were constructed, working as follows: you burn petrol on the airfield; you spray it out of some sort of pipe-lines and it produces great heat. The hot air disperses the fog, that is to say the air can absorb the humidity in it and thus it is possible to clear airfields of fog up to a height of 100 m. Apart from this, there is to be observed from the middle of 1942 onwards all the training which was taking place in England, where American crews were working up and being trained in formation-flying and, as soon as they were ready, undertook their first

flights over France. With what could we oppose those American four-engined aircraft? What was our fighter-arm like at the time? Our standard model was the He 109, the further development of the '109' with which we had entered the war, and the recently added FW 190. The armament of the '109' at the time consisted of two MG 17s with the normal calibre of 7.9 mm and an MG 131, 13 mm MG. The armament of the '190' was better; it consisted of two MG 131's and two MG 151/20s, that is two 20 mm cannon. With that armament our fighters on the Channel coast met the first attacks made by the four-engined formations. In their initial experiments the enemy flew in with a tremendous fighter cover. Forty or fifty bombers were protected by about a hundred or a hundred-and-fifty Spitfires. Our only chance was for our fighters to gain height in time and just dive through the enemy fighter formation, fire a short burst at the bombers and dive down further in order to avoid being involved in dog-fights with the superior number of enemy fighters, as these fights always led to considerable losses on our side owing to the numerical superiority of the enemy. In order to make myself clear I must add that we only had about a hundred fighters along the entire coast, the huge stretch from the Heligoland Bight to Biarritz. Of course it was never possible to assemble these fighters, as it would have meant their being in the air so long that they would have run out of fuel; usually about fifteen or twenty aircraft was the maximum number that operated in those invading bomber-formations with fighter protection. This disparity in numbers was reported to higher authority by the 'Verbandsführer' concerned and an increase in the number of night-fighters was asked for. It had little or no effect, the reason being: that we were tied down in the East; our valiant fighter-pilots were as indispensable on those immense fronts as they were in Africa, down in the South. After the American Air Force realised that their fighter protection was superfluous because we had too few fighters anyhow, and the ones we had were badly armed and as a result very seldom shot down a four-engined aircraft, they started flying without fighter-protection. The raids were always on territory occupied by us. Paris was attacked, Lille, in the Northern French industrial area, Holland, with the result that their losses were very much less than the Americans had estimated. I should like to add another example: A Fortress, a Boeing B 17 is flying home alone from a raid over Holland with one engine shot to pieces, a wave of He 109s with the armament I mentioned, two MG 17s or a MG 131 attacks the Fortress. Three out of the four aircraft are shot down by the Fortress and the fourth gets the wind up and makes off. That was the situation at that time. As a result it was said that Fortresses were not to be attacked, as no fighter could shoot them down. That was the first blow at morale German fighter-pilots had. It was realized that their armament was inadequate and something was done about it too. The '109' was given two MG 131s instead of its two MG 17s, that is two 13 mm MGs, and instead of one of its 13 mm MGs it was given a 20 mm. one; that is to say its explosive capacity was quadrupled; the FW 190 was given four cannon instead of its two and retained its two MG 131s. That made us at last capable, as far as armament is concerned, of taking up the fight against four-engined bombers with success.

Let us consider for a moment the balance of armament. When one of our fighters (at the period in question) attacked an American Flying Fortress, a "B-17", from the rear, it was faced by six or seven MGs firing back at it. Let us reckon according to the law of probabilities, six MGs against three MGs in the '109'. This is, however, to some extent compensated in favour of the Fighter by the difference of size. Now it must be born in mind that you're not faced by a single aircraft but by at least fifteen in close formation. At the start eighty to a

hundred-and-twenty aircraft used to fly over the Reich in the very closest formation, a flying achievement of the first order. If you take the average of eighty aircraft approaching in close formation you have to reckon with 720 MGs firing out to the rear at you. You were already hit at a distance of 1000 m. The first aircraft were shot [illegible] little chance of hitting a bomber on account of

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With the start of raids into the Reich proper, which took the Allies first to the Ruhr district, then the industrial areas of the Upper Rhine, then beyond the Main, Darmstadt, Ludwigshafen, the so-called defense of the Reich was initiated. We had a Fighter 'Gruppe' of about thirty aircraft, at our disposal in Holland. Twenty of them were operational. We also had at our disposal in the Reich the fighter schools with the so-called operational "Schwärme.' They consisted of one or two 'Schwärme' that is four to eight aircraft, piloted by instructors. We had at our disposal the so-called industrial 'Schwärme' manned by industrial test-pilots. That was the fighting force which was the foundation of the defense of the Reich. What happened to this fighting force was that they also, on account of their lack of experience, had heavy losses and little success. Then we started denuding our front lines; we brought up fighter formations from the South, from the South-East, from the East, from the West, in order to obtain a more or less adequate fighting force with which to oppose that assault. 'Divisionen' were formed; seven fighter 'Divisionen'; whenever we actually went into operation, each fighter 'Division' had from thirty to fifty aircraft in the air. That is to say, if two fighter 'Divisionen' both threw in their aircraft together. These raids proved the impossibility of operating according to old principles or to principles which were all right in the East; that is to say to send them up simply on the strength of 'Fluko' (Flugkommando-Flight Command) reports; a thoroughly reliable ground control had to be developed. I shall skip the development as it would lead too far afield. Finally the defense of the Reich was as follows: the 'Divisionen' who were to put fighters into operation, received detailed reports about enemy raids from 'Korps' and from their own range-finding posts. As soon as the first aircraft took off in England and reached a height of 500 m we received the report: "Assembly has started in England." Then the assembly was continuously observed until they started to leave, as soon as the assembling of those many hundreds of aircraft (a thing which must present colossal technical difficulties) was completed. Then their flight was followed, to establish

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where they were going, whether they were heading due East, or North across the North Sea, or South-East. From all those items we formed our decisions. The 'Divisionen' for day-fighting were able to make use of battle HQs which had already been prepared for the night-fighters. Slight alterations were necessary, but on the whole this huge apparatus could be used for direction by day too. Then the formations got the take-off order: "Take off at such-and-such an hour;" usually ten minutes or a quarter of an hour before. Assembly-point(for instance at the end of 1943 or beginning of 1944) - Hanover and Brunswick, at a height of 8000 m. Then all the formations flew to that area and assembled at the prescribed height. After assembling, this close formation of 50, 80, 100, 150 aircraft was directed towards the enemy formation until it sighted them. As soon as it sighted the enemy the leader of the formation had the task of organizing the attack in whatever way seemed most favourable. This control was fairly easy as long as there was no fighter escort present. The first attacks, which were carried out without fighter escort, were easier to combat and were easier for the ground control to direct than they were in later developments. The most famous and widely known was that attack on the ball-bearing factory at Schweinfurt, which resulted in the first large victories, which, I believe, were announced as 140 aircraft. 140 aircraft were announced as having been shot down, 67 or 68 were actually found on Reich territory and in the occupied countries, i.e. barely half the number announced - and about 300 were reported as having been shot down. How can one explain that? Is it simply the pilot's dishonesty or are there other reasons? I can testify that there are other reasons, and one of them is as follows: in an air battle everything happens so tremendously quickly that the whole thing is over in a few seconds. One fellow fires on an aircraft and it catches fire, in the same instant a second fighter, say further behind on the right, fires at the same aircraft; the pilot sees that it's on fire; still a third fighter comes up and in his excitement doesn't see that it's on fire, opens fire on it as well, and suddenly the bomber falls earthwards. Result: three fighters report shooting down an aircraft. In addition to all that: after air battles like these, aircraft always landed all over the place, fighters which took off from Munich landed in Holland, on the North Sea coast, or in the industrial area, and there they handed in the reports of their victories at the airfield HQ. In addition to which the pilot rang his home airfield and said: "I shot one down." Again a duplicated report. Why? Because the authorities have demanded to know within two hours the exact numbers of aircraft shot down. I know of one single instance only where a 'Divisionskommandeur' refused to pass on a report, because the 'General' was rung up maybe three, four, five times by the Reichsmarschall: "How many aircraft did your fighters shoot down?" And he kept repeating: "I can't say; they haven't arrived back yet; they landed all over the place; if I do tell you, the reports may turn out false."

Why weren't the successes any greater? At that time the 'Defense of the Reich' had already about 250 to 300 fighter aircraft. The long-range-fighter-bomber Geschwader 26, to which I belonged, was then also withdrawn from both the Eastern and Southern fronts and put on to Reich defence. Neither in the East or South did 50, 80, or 100 of our aircraft ever fly in a body and carry out any major operation. In Russia they flew in 'Rotten' of two or 'Schwärme' of four. The fighters, that is. What were the long-range-fighter-bombers doing? They had been dropping bombs and had thereby lost all feeling for flying as fighters, and now, thanks to a situation forced on us by the enemy, thanks to the huge formations in which they flew, and which in turn could only be attacked with huge formations, our fighter arm suddenly had to conduct the fight

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in a strength to which it was never accustomed. The few who could have done it right from the beginning of the war were no longer there; they had already been killed. As a result only individual dog-fights developed in all those raids. An enormous number of us arrived, a crowd of 30, 50 sometimes 60 aircraft, but each pilot simply attacked wildly at random. Result: Each of them was shot down wildly at random. The long-range-fighter-bombers and the FW 190 then received, in addition to their other armament, the so-called 'mortar-shell', 21 cm, the one from the 'Nebelwerfer.' That would have been a marvellous thing had we had the necessary sights for it. Two such 'mortar howitzers' were built into each wing of the '110', for instance, making four mortars in all; the fuze was set at 1000 or 1200 m, it kept changing during this experimental stage. Some very good successes were actually scored with it; my predecessor shot down two four-engined aircraft with one round from it. Their fuselages simply broke in half and the two huge things plunged earthwards. But, taking it all round, one had to say that successes due to the 'mortar-shell' were infinitesimal, in fact so few that it was withdrawn again. I had no instrument in the aircraft for calculating exactly how far away I was from the enemy aircraft. The only means I had was that so-called 'Reflex' sight. That's an illuminated circle with a graticule in it, rather similar to a telescopic sight; and I know that when the Boeing takes up a third of the diameter I am about 1000 m away from it. But it's impossible to say whether it's exactly 1000 m or 1100 m or 900 m. That's why it kept occurring that people fired at too great a range; especially the inexperienced crews were always afraid of those huge aircraft which already had so many victories to their credit, so they didn't wait to open fire at 1000 m but fired at 1500 m, 2000 m and even 2500 m. The 'mortar-shell' also had a bad effect on the pilots; they wouldn't close in any more but remained at a distance at which it was impossible to engage in combat. That's why, having introduced that 'mortar-shell' in the Autumn of 1943, they started to remove the thing again at the beginning of 1944, and rightly so, as I had to admit afterwards, although I was all for it in the beginning.

After that lack of success a strongly-worded order was received from the Reichsmarschall in which he again reminded fighter pilots of their duty to protect the Fatherland, to get to close grips with and shoot down the enemy, and ordered that the attack be delivered from behind and that fire must not be opened until the range had closed to 400 m. If one can get to within that distance, there's a lot of point in what he said, but as has already been pointed out, the probability of attaining that range was extremely small. That was because of course it's harder to shoot down an aircraft from the front. Naturally, the inexperienced crews had little success when they started attacking from the front and only after half a dozen operations did they find out how it should be done and really record some successes. For these reasons, there were the strictest orders that the attack must come from the rear and anyone who didn't comply was court-martialled. Result: our fighter force which was already sickening under a shortage of experienced pilots, obstinately pressed home its attacks from the rear and was equally obstinately shot down. It was dreadul to see; they approached from the rear, flying in closest formation, and doing a slightly greater speed than the enemy; and 50, 60, 70% or even a greater percentage of them were shot down.

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To the existing dilemma there was added, at the end of 1943 or beginning of 1944, the Allied fighter escort, the American long distance fighter, the Thunderbolt and then the Mustang. The first time the Thunderbolts escorted them as far as the Rhine everyone was horrified and utterly confounded - what ever next? Then they got auxiliary tanks and flew as far as Hanover. The troops reported this but they were laughed at and were told they were seeing things; "It's impossible for a fighter to fly that far," so said our GOC Fighters and the Reichsmarschall. Nobody dared tell the Führer that it was possible for enemy fighters to fly so far into Reich territory. The GOC Fighters himself took off with his inspector, Oberst Trautloff, in order to have a look and see how his fighters pressed home their attack. He was fortunate enough to meet four Mustangs and the Mustangs took him in charge and chased him all the way to Berlin, so then he knew how far the things could fly and believed it; but despite that no one dared report the air situation to the Führer. Orders to our fighter pilots remained the same, to avoid air battles with enemy fighters and go solely for the bombers. I should like to add here that by the beginning of 1944 no-one was attacking from the rear any more, despite the 'Reichsmarschall's" orders and despite the fact that this order is still in force today; it was just impossible. I have several times requested, even in writing, that that order be rescinded, but it was in vain. That order which I mentioned earlier, to attack only the four-engined bombers, is, of course, understandable insofar as it was only the bombers which were a nuisance to us, because it was they that dropped the bombs. The order was, however, psychologically wrong. When talking with one of the Reichsmarschall's staff officers in January or February of 1944, I said: "Brewer, it's absolutely essential that one day in one of these penetrations we attack only the fighters, to take them down a peg, make them lose their feeling of superiority, and make them suffer losses for a change!" This desire on the part of men, which wasn't just my personal wish, was passed on; it went up to the 'Division', the 'Korps' and to the GOC Fighters; it was turned down with the remark: "We must shoot down the bombers, those are the ones we don't like, the ones which are dangerous to us." What was the result of that? The flight of an American fighter over Germany was the safest flying in existence. Not a soul attacked him. The pilot had no need to look round to see whether there was anything coming up from behind which would try to shoot him down. It never happened, he merely had to look ahead - "What is down there ahead of me that I can shoot down without endangering myself." There again we felt the effect of this factor. To start with, the Americans were rather apprehensive and attacked very unwillingly. But once they noticed that nothing happened to them they grew increasingly cheekier and more dare-devilish. Then they had successes and got a taste of how wonderful it is to be able to shoot down an aircraft; until finally it got to the stage when our fighter formations were no longer able to reach their bomber formations because they were shot down first by the fighters, which always had the advantage of coming from a higher altitude. The moral effect of that on us was that all our pilots, whether rightly or wrongly. I'll leave open, felt inferior to those enemy aircraft, and the collapse of our fighters' morale dates from then. The inferior aircraft at those heights was the FW 190 which, although it had shown excellent performances at low level, was inferior to the enemy aircraft at altitudes of 8,000 m. Equal to the Mustang and superior to the Thunderbolt was our 'Bf 109'. In addition to all that, on account of the losses suffered in those air battles, the ground control made the greatest effort to direct their own fighter formations so as to avoid the enemy fighters and bring them on to a bomber formation which had no fighter escort or only a small one. As a result, this feeling of inferiority increased still more, and you ran into fighters again any way, for it's impossible

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to get such a clear air picture as to be able to say: "There are fighters there, there are no fighters there." In the end they were all over the place. This difficult situation for us was complicated still further in the spring of 1944 by the attacks of the enemy air force on our fighter industry. Augsburg, and the large aircraft factory at Wiener-Neustadt which produced 600 fighters a month were destroyed; so were the engine factories at Magdeburg, the engine factories at Cassel, the aircraft factories at Posnan, at Sorau in Silesia, everywhere. It was really remarkable with what spirit and energy the industry and our workers succeeded in making repairs in the shortest possible time: at Augsburg for example, from the completely ruined and oft-bombed factory they reached not only the former production figure but an even higher one within fourteen days; they hadn't a roof over their heads either. You met with the same picture practically everywhere. Despite that, however, we were faced with the necessity of splitting up and dispersing the whole aircraft industry. Small workshops were set up in villages, engines were mounted there; one workshop produced the rudder, the second produced the elevator, the third the fuselage end, etc., and in the fifth or sixth the whole thing was then assembled. It was a Sisyphean task, which had now become necessary. When the Allied Air Forces realized that they couldn't completely destroy the aircraft industry, they switched over to smashing our fuel industry. We have learnt in the meantime, with what success.

We flyers had one ray of hope in that situation and that was the new jet fighter, the Me. 262. The Me. 262, armed with four cannon 108, calibre 3 cm, is the first combustion turbine aircraft to be used operationally. First an explanation of the superficial details: a low-decker with extremely thin wing profile, with a wonderful aerodynamic rounded shape and a so-called tricycle undercarriage. The two wheels, just like in ordinary aircraft, fold inwards, but the third wheel, which is up near the nose, is drawn backwards into the fuselage. Now, as far as I'm able, just a short description of the combustion turbine. The principle is as follows: air is sucked in in front through the revolution of the turbine, which is first started up with a small two-stroke (?) engine. This sucked-in air then passes into a combustion chamber after it has been compressed before induction by compressors and there it is mixed with a substance similar to Diesel oil - it can also be crude oil - and this mixture is then ignited and explodes and it then propels the turbine which is at the back, and the exhaust comes out at the back. With the high rpm attained by the turbine - over 6,000rpm - the thing works out as follows: air is sucked in in front, the aircraft literally sucks its way forward in the air, and the explosion, which comes out behind, pushes the aircraft forward. In other words a suction and pressure effect: with the pressure effect considerably greater than the suction effect, of course. The normal cruising speed of this type of aircraft is over 800 kph. When one thinks that the highest speed of the most modern fighters in 600 kph one can realise how superior this aircraft is, as regards speed, to all other aircraft so far used operationally. The disadvantages of this aircraft are: firstly, it is difficult to move on the ground and for this reason had to be towed by tractors, or similar things, which are capable of pulling the aircraft. It weighs about six tons. For just taxiing once round the airfield one uses about half the amount of petrol which in flight is sufficient for one and a half to two hours flying time, according to the height. The aircraft is simply wonderful from the point of view of flying. Of course with that speed, the take-off presents difficulties, as does the landing, because it needs a very long run. So we put all our hopes on this type of aircraft and

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kept hoping that when it went into operation it would finally turn the scales of the air war again. As luck would have it, my 'Gruppe' was chosen to be re-trained with this pattern of aircraft in May 1944. Unfortunately, I was unable to accompany them, because I then had to take over the 'Geschwader'. After the 'Gruppe' had already started re-training and some of the pilots were already accustomed to this pattern of aircraft, and others were still re-training, an order was suddenly received from Supreme Command: "This aircraft will not be employed as a fighter, but as a bomber." So, after we were already up to our necks in trouble, this type of aircraft began to be tried out as a bomber, as a fast bomber, to be exact. A fierce struggle went on between General Galland, the Reichsmarschall and the Führer. But they stuck to it at the time, that the aircraft was to be tried out as a bomber. It was badly suited to that or not suited at all; its maximum load was one 500 kg bomb, and its flying time barely an hour.

Moreover, with these turbine aircraft the consumption of fuel is terrific, corresponding to the performance. The aircraft needs about 1800 litres of fuel to be able to fly for two hours; that's to say about twice as much as an ordinary twin-engined aircraft; but it is a fact that you can fill it up with anything combustible, Diesel oil, crude oil, and one can therefore obviate the need for various steps in industrial development, such as the distillation of all kinds of fuel, etc. In May last year there was still no acute shortage of petrol, there was still sufficient petrol available. Meanwhile the aircraft was actually employed as a bomber and dropped an odd 500 kg bomb here and there. But, as there was no bomb-sight for use at this speed, they didn't hit anything and now they have at last reached the point of saying that the aircraft is to be employed solely as a fighter; now when it is already too late!

Simultaneously with this experimental employment of the '262' as a fighter, the Me. 163, of which the principle of propulsion is completely different from the Me. 262, was sent into operation. The '163', which is armed with three (?) 3 cm cannon, is entirely a rocket aircraft with proper rocket-propulsion. It has broken entirely new ground. It retains hardly any similarity to an ordinary aircraft; it no longer has an elevator at all, and that accounts for this peculiar shape. The elevator is incorporated in the aileron which can be set to alter the direction of flight according to the height. This aircraft may possibly play a tremendous part in the future as a so-called specific target-fighter or flying Flak. The speed of this type of aircraft amounts to about 1200 kph in horizontal flight, and it can climb to 8,000 m within three minutes. I have seen a film of a '163' taking off, and I thought at first it was a trick-film; as a matter of fact I saw the film at General Galland's place in Berlin. The aircraft looks like this: for taking off, this aircraft has two wheels, a small undercarriage on which the aircraft rests; there is a skid on which it slides when it lands again. Then the rocket fuze is actuated, this huge cloud of smoke comes out behind with a deafening noise, and with terrific acceleration the aircraft shoots forward, leaves the ground after a short run, jettisons the wheels and under-carriage and then climbs at an almost vertical angle of about 80°, until the fighting altitude of 8,000 or 9,000 m, whichever is necessary, is reached - then it changes over to horizontal flight and tries to get into a favourable position for attacking the enemy aircraft. The pilot has seven minutes in which he can, so to speak, keep the throttle open, and if after seven minutes he has still failed to attain a favourable position for attack, then the propellant will have been used up, there is no longer any propulsion, and all there is left for

him to do is to come down to earth again like a glider. Several have been shot down in these circumstances, and if they weren't shot down at once, because of their excellent manoeuvrability, then they were shot up on the ground as soon as they had landed. The success of this aircraft which has been employed in the Leipzig area since

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him to do is to come down to earth again like a glider. Several have been shot down in these circumstances, and if they weren't shot down at once, because of their excellent manoeuvrability, then they were shot up on the ground as soon as they had landed. The success of this aircraft which has been employed in the Leipzig area since August last year, has remained negligible; the losses were terrific. It also frequently happens that these things explode or catch fire and in that case even an asbestos suit, etc, which the pilot had to wear, was no protection. They were only employed as day fighters. A further development permitting a longer flying period would give us the means of waiting on the ground for the enemy, spotting him, then taking off and shooting him down within sight of the object to be protected. The aircraft cannot be manoeuvred at all when it is being propelled, but once the maximum speed has slackened, it is extremely manoeuvrable, that it to say it is more manoeuvrable in ordinary gliding flight than any fighter, because it is very light and its construction is extremely suited to flying tight curves.

It was then recognised in all these developments that our greatest weakness was the small number of aircraft we could send into operation. A so-called 'Fighter programme' was accordingly set in motion, which, by the stopping of production of all other aircraft, whether bombers, reconnaissance aircraft, or anything, achieved in November 1944 the production of 4,000 fighters a month; a terrific number, which is larger than the total production of fighters in England and America. Then came the dark side of this mass-production, and above all this production in primitive workshops under unimaginably unfavourable conditions. In September I started to re-equip the first 'Gruppen' of my 'Geschwader', and to bring up to strength and to equip the second 'Gruppe' which was already in operation against the invasion. The 'Gruppen' were brought up to a strength of about 60 to 70 aircraft and a corresponding number of pilots, and then the re-training started with FW. 190 and Me. 109. The third 'Gruppe' flew the '190'. During the re-training I lost the following: six excellent pilots killed, a large number seriously wounded, and between 40 and 50 aircraft, I can no longer remember the number exactly. Because of technical defects alone! Each time a 'Gruppe' went on a so-called 'Gruppe' training flight, I had to count on probably one killed and on two, three, four or five emergency landings, from which a certain number of aircraft had to be written off because they were damaged. On one sortie, which I flew in the AIX LA CHAPELLE district with the second 'Gruppe' after Christmas, I took off in bad weather - we had about 100m (?) visibility - that's to say you could just see the limits of the airfield. These were weather conditions in which we would never have flown in the old days. I took off with rather more than 40 aircraft, and then set off in the direction of the Ruhr district. Over the Ruhr district I heard someone say on the RT., presumably a young pilot: "What shall I do, what shall I do, the cockpit's on fire?" Presumably an engine was on fire. As there was dense fog down in the Ruhr district, and not more than 500 m visibility, and an emergency landing was consequently, impossible, and was also inadvisable after the losses we had already sustained, which could have been avoided if the pilots concerned had baled out in time, I gave him the order clearly and concisely: "Bale out!" Then, of course, everyone looked to see whether he would get out, until they did see him get out. He landed all right, the aircraft was done for. These were conditions which of course did not contribute towards raising the pilots' self-confidence or strengthening their confidence in their aircraft.

I have already described the effect of enemy air-raids on the aircraft industry, and also the effect on the fuel industry which then led in the summer and autumn of last year to an acute petrol shortage. I will touch briefly on the effect on communications centres.

The enemy attack on bottle-neck industries, the ball-bearing industry for example, resulted for instance in the latest engine produced by Daimler Benz, the 'DB 603', having sleeve bearings for its crankshaft instead of ball-bearings which were no longer obtainable: these sleeve-bearings are a type of bearing which is quite useful for reasonable peacetime use by suitably trained personnel, but is, however, not as reliable as a ball-bearing, and it has recently led to an extraordinary amount of engine trouble.

In view of the whole situation, it was fairly clear to us airmen what course the invasion would take. The whole available fighter force would be thrown into action - we had been told that beforehand and it was quite obvious to us personally that the whole of the fighter force would be destroyed after two, or at the most three days. That's what happened, too, and that's why the invasion was the success which it has turned out to be. With the approach of the front to the borders of the Reich, came the fighter-bomber pest in addition to all the other enemy air attacks. Fighter-bombers spent hours darting about the territory near the western frontier of the Reich, attacked women and children walking along the road, trains and engines in motion and fired into petrol dumps and houses; and it was these attacks which caused the complete collapse of all means of transport. It was, for instance, no longer possible for us to move a petrol tanker by day. Petrol supplies could only be brought up at night - the passenger trains were normally from 15 to 20 hours late, they had to stop umpteen times on the way, and all passengers had to tumble out of the carriages and lie in the ditch or take cover somewhere. I heard from a railwayman that at the end of last November there were about 60 demolished locomotives at Zwolle in Holland which had been smashed up in these attacks. That was only one station. It was no longer possible to transport from the Ruhr district the available coal which was being requested and which in November amounted to about 30,000 truck loads. It was equally impossible to take ore and raw materials to the Ruhr district to be worked up there. Along with the transport system generally, the post, which had previously carried on fairly well, naturally also suffered delays. I have received ordinary letters which have taken from three to four weeks from Austria to central Germany.

And now briefly to indicate how this utter failure of the GAF came about. If our leadres had realised at the end of 1942 that we hadn't finished with Russia, that we had to reckon with the American air force, and that we must, therefore, change over to the defensive not only on the ground, but also in the air, then it would easily have been possible to quadruple the fighter arm in one year. By the middle of last year we could easily have had a force, not of 1,000 or 1200 fighters as we did have, but 4,000. It would have been possible for us to inflict right at the coast such heavy losses on all enemy air forces that they would never have penetrated into Reich territory. It would have been impossible for the enemy to start the invasion. The Fatherland would have been spared this fearful devastation which is its lot, by day and by night. The fighter programme which I have mentioned did not get under way until towards the end of last year. It was started in the middle of the year, and was half-

way completed by the end of the year. Not until towards the end of last year did we take steps tore-train the bomber pilots we had into fighter pilots, as far as they were suited to it, because we could no longer manage the training. It was not until November of last year that an attack by about 2,000 to 2,500 fighters was to be mounted against a penetration into Reich territory. The planning was wonderful. The preparations were magnificent but it was never carried out, because the air leaders had lost their

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Let me give an instance. I myself took off with seventeen aircraft - that was in the Spring of last year - and of those, two had to turn back on account of engine and undercarriage trouble, (one of them could not retract its undercarriage, and the engine of the other one was not in order). As leader of a battle formation with these fifteen aircraft I tackled an enemy division with some sixty aircraft; and when I say that of these fifteen aircraft not a single one returned, but all were shot up (half of them killed or severely wounded, while the other half had made crash landings and were wounded) that will afford a fairly accurate picture of the severity of these battles. The following day I took off again with the remaining eight aircraft which we had raked together, and was then the only one

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to return home, because I was the oldest and most experienced pilot. That only makes it clearer still.

At a conference at 'Korps' at which this attack on 1st January was briefly announced, General Pelz and General Schmidt said: "If we don't at last succeed in driving the fighter-bombers from our Reich territory, then after three weeks our remaining industries will have no coal left, and in about as many weeks the industries in the Ruhr district will have no ore." The three weeks have long passed, and I have been told by a 'Hauptmann', just recently taken prisoner, that there are a great many factories in which the workers no longer have anything to work on because there is no coal and no raw material there.

The GAF in particular which is such a highly-developed technical arm, has special need of far-sighted planning. Measures which are adopted only take effect in the available aircraft about four to six months later. You have to arrange for the necessary training and provide the necessary material. Unfortunately, we lacked this far-sighted planning, so that, as a member of the GAF, I have to admit that the war which Germany is now waging has been lost by the GAF.

For A. C. of S., G-2:

P. E. Peabody

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Brigadier General
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