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THE LUFTWAFFE

IN POLAND

( September 1939 )

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I. GERMAN PREPARATIONS AND DEPLOYMENT

The uncompromising attitude adopted by the Polish Government over the Polish Corridor question led in spite of all the efforts of the German Government to the opening of hostilities. Preparations for this eventuality had been taken by the Germans as early as mid-May, 1939.

Our strategic aim was the annihilation of the Polish Armed Forces. The bulk of the Polish Army, located North of the Narew and West of the Vistula-San line, was to be engaged West of the Vistula and destroyed. Two Army Groups were entrusted with this task. Army Group South, - under Colonel General von Rundstedt, with three Armies in South East Silesia, was to drive from the Kreuzburg area towards Warsaw. Army Group North, - under Colonel General von Bock, with two Armies in Pommerania and East Prussia was to advance over the Narew and establish contact with Army Group South East of the Vistula.

The dual tasks allotted to the Luftwaffe in the operation were the destruction of the Polish Air Force and support for the German Army. These were laid down in an order issued by Ob.d.L. in mid-May 1939, which stated:

- "(a) The Polish Air Force is to be prevented from taking any effective part in operations and from carrying out attacks on the Reich.
- (b) The German Army - particularly its advance formations, - is to be given both direct and indirect support from the moment it crosses the frontier.
- (c) A mass air attack is to be prepared on military installations and armament factories in Warsaw. (1)

The deployment of Air Force units was adjusted to that of the Army. In the South, Luftflotte 4 was to co-operate with Army Group South - while Luftflotte 1 was to operate in conjunction with Army Group North.

Luftflotte 4 had at its disposal:-

- 3 Reconnaissance Staffeln
- 3 Bomber Gruppen
- 4 Stuka Gruppen
- 1 Ground Attack Gruppe
- 2 T.E. Fighter Gruppen
- 2 S.E. Fighter Gruppen

a total of 676 serviceable aircraft.

Luftflotte 1, - with Fliegerdivision 1 and Luftwaffe Command East Prussia had the following units available:

- 5 Reconnaissance Staffeln
- 13 Bomber Gruppen
- 4 $\frac{1}{2}$  Stuka Gruppen
- 3 T.E. Fighter Gruppen
- 3 S.E. Fighter Gruppen

a total of 824 serviceable aircraft.

For the Polish Campaign therefore, a total of 1538 serviceable aircraft was available. (2) The deployment of both Army and Air Force, disguised

/as

- (1) This mass attack on Warsaw could not be carried out on September 1st. and 2nd. due to unfavourable weather conditions.
- (2) Including units under direct command of Ob.d.L.

as manoeuvres, took place without a hitch. On the evening of August 31st. the units of Luftflotten 1 and 4 were ready for operations at their take-off bases.

## II. ASSESSMENT OF THE POLISH AIR FORCE

The beginnings of the Polish Air Force may be traced back to 1918, when about 200 aircraft of German and Austrian origin formed its nucleus. In its early days completely under French domination, the Polish Air Force did not free itself from foreign influence until 1926, when the Polish aircraft industry succeeded in producing a serviceable type.

In the autumn of 1939, the Polish Air Force comprised 6 'Fliegerregimenter' composed of Fighter, Reconnaissance, Bomber and Communications Units, 1 Flak regiment and 8 Flak Detachments with about 400 guns. No Air Signals units were available.

All the aircraft used by the enemy during the Polish campaign were of Polish manufacture. The PZL 37 and PZL 23/43 are worthy of special mention. The PZL 37 was a twin-engined aircraft, (each engine 800 H.P.), with a maximum speed of 475 km., at 4,000 metres. a range of 1,250 km., and armed with 3 machine guns. The PZL 23/43 was single-engined. 950 H.P., maximum speed 365 km., range 1,100 km., armament 3 machine guns.

The total strength of the Polish Air Force was estimated at about 1,000 aircraft, of which approximately 400 front-line types. In September 1939, 5 air frame factories, 5 aircraft engine plants and about 30 shadow factories were available. Aircraft production was sufficient to cover the peace-time needs. It was known that the Polish Air Force was intended to be more a weapon of the Army than an independent force.

## III. THE BATTLE FOR AIR SUPREMACY

1st and 2nd September.

While advanced elements of the German Army were crossing the Polish frontier at dawn on September 1st, the Luftwaffe was delivering surprise attacks on the Polish Air Force and on its ground organisation. In the night of August 31st-September 1st, however, weather conditions had deteriorated. A cloud bank lay above Northern and Western Poland and extended far towards the South. Visibility was restricted by ground fog. Thus, although most of the units of Luftflotte 4 could take-off as ordered at 0445 hours, operations by Luftflotte 1 could only be partial and depended on local weather conditions. Fliegerdivision 1 was at first almost wholly inoperative.

Later in the day, after an improvement in the weather and after reconnaissance reports had been received concerning Polish airfields, attacks proceeded without a pause. In this first day of the campaign, 9 of the 12 principal airfields and 19 other airfields in the frontier zone of North and West Poland were attacked and severely damaged. Approximately 100 aircraft were destroyed on the ground, and 9 aircraft shot down in the air.

Although its ground organisation had undoubtedly suffered severely in these attacks, it could not be said that the Polish Air Force had yet appeared in strength. No unified operations by concentrated bomber forces had been directed either against Germany or against our Armies in the field, apart from an unsuccessful attack at Peiskretscham.

Nor had Polish fighters operated in any strength. Only above Warsaw did a force of some 30 fighters engage the raiding aircraft of Luftflotte 1. In the ensuing combat, 9 Polish fighters were shot down. Our aerial reconnaissance, influenced by the unfavourable weather, also failed to provide any adequate information on the whereabouts of the enemy Air Force.

Our air supremacy was never in doubt. The evening reports by the two Luftflotten to Ob.d.L. on September 1st contained the following sentences:

Luftflotte 4 - "In the operational area of the Luftflotte, - our supremacy was never in question."

Luftflotte 1 - "Supremacy maintained by Luftflotte 1. Whereabouts of the enemy Air Force largely unknown".

Ob.d.L. ordered operations against the enemy Air Force to continue on September 2nd, - with particular emphasis on the Warsaw-Posen-Deblin area. Attacks were also to be carried out on the radio stations of Warsaw, Thorn, Lods, Radom, Lwow and Cracow. Once again our formations were prevented by bad weather from taking-off until the early afternoon. Airfield installations at Deblin, (5 raids), Radom, Lods, Gnesen, Kutno, Biala, Podlaska, Wilna and Lida, aircraft parks at Warsaw-Okecie and Brest-Terespol, and aircraft factories at Lublin, Deblin and Mielec were successfully attacked. 7 Polish aircraft were shot down. Less successful were the attacks on the radio stations. Only that on Cracow resulted in the silencing of the transmitters; that on Warsaw failed and the effect of the attacks carried out on the transmitters at Lods and Radom was highly questionable.

As on the previous day, - September 2nd brought no systematic bombing operations by the Polish Air Force. Only scattered fighter sorties were made. The explanation of this lack of activity was believed to be that the Polish Air Force had been very largely paralysed by the heavy attacks carried out on 1st and 2nd September. These had forced the Polish units to abandon their excellently equipped airfields in favour of emergency landing grounds, which although well camouflaged, had very inadequate technical facilities.

With air supremacy assured, the Luftwaffe was freed from the necessity of holding forces in readiness for the defence of the Reich, - and could turn to its next task, - air support of the Army. Although aircraft of the Polish Air Force continued to carry out individual tactical missions, often with considerable success, - there was no question of any massed operations. On September 10th an order was apparently given for all aircraft to assemble at the Rumanian frontier in 3 Groups, in order to proceed to France via Rumania, but this was not achieved. In view of the hopelessness of the situation, - the last remaining Polish aircraft crossed the frontiers into Lithuania, Russia and Rumania between September 14th - 17th.

#### IV. DIRECT SUPPORT OPERATIONS IN THE FRONTIER BATTLES

Even before absolute German air supremacy was certain, the Luftwaffe, in accordance with the orders of Ob.d.L. was carrying out direct support operations in aid of our advancing troops.

In the operational area of Luftflotte 4, Stuka and fighter formations under Fliegerfuehrer z.b.V, (General von Richthofen) accompanied Panzerkorps XVI in its drive over the frontier to Tschenstochau-Petrikau until the final break-through after the capture of Tomaszow Maz. Our aircraft succeeded in neutralising the many fortified positions which were to block the German advance Eastwards, broke up enemy preparations and attempted counter-attacks at Warthebogen, near Noworadomsk and Petrikau and frequently took part in the land fighting with machine gun and cannon fire.

At the request of Panzerkorps XVI, our aircraft also afforded protection to our tanks against the desperate attempts of the Polish Air Force to bring our tanks to a standstill. Between September 1st - September 7th, 1,634 sorties were flown in direct support of Panzerkorps XVI, 743 metric tons of bombs were dropped and 36,649 rounds of machine gun ammunition were fired at ground targets. When supplies difficulties set in, caused by the speed of our advance, ammunition and fuel was delivered to the Panzerkorps from the air; (this was done for the first time on September 3rd.). Luftflotte 4 was also able to give effective aid to the 8th Army in its critical battle for Sieradz.

Of special interest are the activities of Luftflotte 1 in support of the advance of Army Group North in the first days of the campaign. In the attack on Gdynia, bombers of the reinforced Kampfgeschwader Kessler together with Stuka and fighter formations attacked Polish naval vessels still in the harbour and the long distance batteries threatening Danzig, and plastered with bombs the plateau West of the town.

On another occasion, strong Polish forces attempting to break out from the Corridor over the Nahe and Vistula were spotted by our reconnaissance formations and attacked by bombers and Stukas in the Tucheler plain. Trapped in close column, these forces were decimated, and a break-through averted. This incident has been described by a contemporary writer as the "Blood Bath of the Tucheler plain". One Kampfgeschwader operating in support of the 3rd Army helped to open up the way to Poland by destroying pill-boxes near Mlawka.

#### V. THE POLISH RETREAT TO THE VISTULA-SAN LINE

Not long after the first battles in the frontier areas, the Polish lines began everywhere to break. After September 6th, all the enemy forces in Western Poland were in full retreat on the Vistula-San line - while those in the North were retiring towards Lublin. Both movements were soon observed by our aerial reconnaissance. If the bulk of the Polish Western Army was to be destroyed West of the Vistula, it was imperative to prevent a retreat over the river. This task could be best performed by the Luftwaffe, whose range of action extended over the entire battle-front, and which, after September 3rd., was available for the support of the Army.

While Luftflotte 4 was concentrating its attacks on enemy movements in the bend of the Vistula and near the San, the task of Luftflotte 1 was to operate East of the Vistula and over Warsaw. The bridges over the Vistula between Modlin and Sandomierz were bombed by both Luftflotten.

In the days until September 9th, the two Luftflotten carried out continuous attacks on the main West-East roads running between Posen-Kutno-Warsaw, Cracow-Radom-Deblin, and Cracow-Tarnow-Lwow and succeeded in paralysing all Polish traffic. Railway stations were in most cases in ruins or burnt out, while the tracks were broken in many places, or barred by wrecked or stationary trains.

Driven off the railways, the Polish columns attempted to drive along the roads leading towards the East, but were quickly spotted by our reconnaissance and subjected to continual bombing and machine gun attacks from the air. It was thus impossible for the Polish Army either to carry out an orderly retreat to the San-Vistula line - or to establish any kind of co-ordinated front West of the Vistula. The bulk of the enemy forces were blocked near Radom and Kutno, while individual groups continued their disorganised retreat towards the Vistula.

The C.-in-C. of the Polish Posnan Army, General Kutrzeba, described the Polish retreat in the following words in his Memoirs:

" Night had fallen and movement began all over the hitherto dead battlefield. Our forces, which had been reduced to immobility by the pulverizing fire of the Luftwaffe were once more on the march. The greatest speed was necessary if we were to make up for lost time. Our retreat resembled a migration into unknown territory, often without maps and without commanders, our forces wandering into the dark night, whose stillness was broken by the sound of shots. In this atmosphere of incertitude, disorder was inevitable."

Although the Luftwaffe only succeeded in destroying the bridge at Gora Kalwarja, our constant air attacks on the Vistula bridges nevertheless prevented the bulk of the Polish Army from crossing the river in an orderly manner.

Thus the Luftwaffe, operating in indirect support of the Army had created the basic conditions for our great victories shortly to follow at Kutno, Bzura and Radom, a task rendered doubly difficult by the fluid nature of the front, and by the fact that such operations were in effect being carried out for the first time. Without the far-reaching assistance of the Luftwaffe, the Army alone would have found it difficult to bring the enemy to battle West of the Vistula. The Polish Army was offering desperate resistance, - and but for the Luftwaffe, would have had undamaged communications at its disposal.

#### VI. AIR OPERATIONS DURING THE BATTLES OF ENCIRCLEMENT AND IN THE FINAL STAGES OF THE CAMPAIGN

On September 9th and 10th, the German 14th and 10th Armies had surrounded large enemy forces near Radom while elements of the 8th and 10th Armies were barring the road to Warsaw to large numbers of enemy troops compressed at Kutno.

The desperate and courageous attempts of the enemy to break out from our grasp led to fierce and often critical battles, in which the Luftwaffe undertook two main tasks, - that of lending direct support in critical moments, - and that of wearing down the morale of the encircled enemy by continuous bombing.

On September 9th strong Polish forces almost succeeded in breaking out near Ilza. Under the command of General von Richthofen 135 aircraft carried out numerous sorties co-operating with the ground troops in their heroic defensive action, and were able to foil the enemy attempt.

The 8th Army, in extended and loose formation in the Sochaczew-Lowicz bridgehead, had, since September 10th, only with the utmost difficulty resisted the attack of three Polish Divisions and cavalry. On September 11th, formations of Luftflotte 4 carried out numerous H.E. attacks on the advancing enemy and his rear communications, and enabled the 8th Army to halt the enemy drive and launch a successful counter-attack.

The enemy forces in the Radom area began to surrender on September 13th, but those encircled East of Kutno continued to offer stubborn resistance. To break this, bomber, stuka, fighter and T.E. fighter units of Luftflotte 4, - which had now taken over from Luftflotte 1 - flew 1,693 sorties between September 12th - 17th against the closely congested enemy troops in the area between Kutno and the Bzura River.

By September 19th, the battle for Radom was at an end.

/After

After September 19th, the Polish forces in the East began to collapse, and soon the last centres of resistance at Warsaw and Modlin were captured. In the struggle for Kutno and Radom formations of Luftflotte 1 had disrupted all road and rail traffic in Northern and Eastern Poland and had thus prevented the concentration of a battle group at Biels. In the final battles near Tomaszow and Zamosz the Luftwaffe played little part owing to the narrowness of the front and bad weather conditions.

After the Commander of Warsaw, which had been surrounded since September 22nd, had refused to surrender, German infantry attacked the City on September 25th after lengthy artillery preparation. The Luftwaffe had in the meantime worn down the resistance of the enemy Command and of the civilian population by repeated attacks. A total of 1,176 aircraft dropped some 486 metric tons of H.E. bombs and 486 metric tons of incendiaries on military installations in the centre of the City. On the afternoon of September 26th, the unconditional surrender of Warsaw was accepted. There can be little doubt that the heavy air attacks carried out on September 25th, coupled with the certainty of renewed attacks on the following day, - had done much to convince the Poles of the uselessness of further resistance.

Modlin, the last remaining centre of Polish resistance, was attacked by formations of Luftflotte 4 under the orders of General von Richthofen. On 26th and 27th September a total of 318 metric tons of H.E. bombs were dropped on its fortifications. On September 29th, the fortress capitulated. With the annihilation of the Polish armies, and the capture of Warsaw and Modlin, the Polish campaign was ended.

## VII. POINTS OF INTEREST ARISING OUT OF THE CAMPAIGN

### (a) What became of the Polish Air Force ?

The view was generally held that the first surprise attacks carried out by the Luftwaffe early on September 1st had broken the back of the Polish Air Force. In fact, however, both the uniformity and the strength of these early attacks were considerably diminished by the prevalence of unfavourable weather conditions.

For example, of the 27 aircraft dispatched against Lodsch airfield, only 3 succeeded in attacking it; against Kielce airfield, only 16 out of 27 aircraft located the target; in the attack on Sadkow airfield near Radom, only 12 out of 34 aircraft that had taken off bombed the target. Aircraft which had failed to reach their allotted objectives dropped some 24 metric tons of bombs on alternative targets which had however no connection with the campaign against the enemy Air Force. Such attacks could not alone have led to the abdication of the Polish Air Force.

Was the reason the numerical superiority of the Luftwaffe ? Although the Polish Air Force was outnumbered by 1:4, the relative strengths were at no time as unfavourable as those existing in 1918 between the German Air Force on the Western Front and the Austro-Hungarian Air Forces in the South, and the Allies. In August, 1918, for example, 300 German aircraft on the 2nd Army front in the West dominated the skies in the face of some 1,900 Allied aircraft. Since the morale of the Polish Air Force was excellent, the mere fact of German air supremacy could not have led to its being withheld from operations.

Another suggested explanation has been that the operational readiness of the Polish units was impaired by their being forced to abandon their well equipped permanent airfield as a result of our attacks carried out on September 1st and 2nd. It is in fact very

/questionable



questionable whether the Poles were forced to withdraw, or whether the evacuation formed part of an orderly plan. In any event, it is certain that the airfield of Posnan-Lawica and those around Warsaw were evacuated at a very early date.

The entire enemy Air Force was divided up in Gruppen between the individual Polish Armies. How far this had already been carried out by September 1st is unknown, but it appears to have been fairly well advanced. The Polish Air Force could in fact not function as an independent weapon having never been equipped or trained for such a task. To this organisational and operational decentralisation then, must be attributed the failure of the Polish Air Force to carry out any effective operations.

(b) German aerial reconnaissance

Although our aerial reconnaissance was generally satisfactory, it nevertheless gives rise to certain considerations worthy of closer attention. Our reports invariably described the great Polish retreat to the Vistula-San line in the words "panic-stricken", "disorderly", etc. Yet, between September 9th - 18th, the Poles were in fact putting up the most desperate resistance. On September 10th, for example, a strong and well co-ordinated attack was made on the German 8th Army. Writing of this battle in his Memoirs, General Kutrzeba says:

"We were able to launch a powerful surprise attack. . . . .  
I had the impression that the enemy had under-estimated our strength, and that his reconnaissance had reported only the confusion on the main roads by day but not the secret movements of troops by night".

It would be very interesting to discover how it happened that the 8th Army, with 3 close range reconnaissance Staffeln at its disposal, - was surprised in this fashion. General Kutrzeba adds:

" Our tank formations were deployed almost entirely by night, - as we had soon discovered that the enemy Air Force which could fulfil all its tasks by day without any difficulty, - usually discontinued operations by the early evening".

(c) Bombing reports

The majority of our crews always reported 'complete success' on their return from a mission. Only very seldom did one hear "results not observed", or "mission failed". Thus on several occasions heavy rail traffic was reported by our reconnaissance on tracks which shortly before had been "completely wrecked by bombing". Aircraft factories at Mielec and Lublin, reported as destroyed, were later discovered to be completely untouched. If the High Command is not to be misled, particular importance must be attached to the accuracy of such reports.

(d) Comparative figures of number of strategic and tactical sorties carried out by formations of Luftflotte 4.

- |       |   |   |       |         |
|-------|---|---|-------|---------|
| (i)   | Total number of sorties flown by Luftflotte 4 between September 1st-18th, 1939, | = | 9,029 | sorties |
|       | of which,   |   |       |         |
| (ii)  | Attacks against the Polish Air Force  | = | 483   | "       |
| (iii) | Indirect support of the Army during the Polish retreat to the Vistula-San line  | = | 4,806 | "       |
| (iv)  | Direct support of the Army in the frontier and final battles                    | = | 3,740 | "       |

(i) and (iii) above can be classed together, so that the overall figures are:

/Independent

Independent air warfare	=	5,289 sorties
Direct support operations	=	3,740 "

or a ratio of 5 : 4.

This ratio is to be explained by the peculiar nature of the Polish campaign, in which the Army had to be helped to a rapid victory and in which absolute air supremacy was attained by the second day.

#### VIII. CONCLUSION

Colonel General Loehr has written the following lines on the Polish Campaign:

" For the first time, the Air Force was to operate as an independent arm, altering conceptions of strategy which had remained unchanged since the earliest days of history. For the first time, the Air Force was to be employed against the enemy not only on the battlefield, - but also far from it, - in such a way that the defeat of that enemy would in great part be due to the Air Force".

Did the Luftwaffe succeed in this task ? The 18 days campaign answers this question clearly. In two days, absolute air supremacy had been attained, - assuring freedom of movement to the German Armies and immunity from air attack to the Reich. The destruction of communications and the paralyzing of all traffic West and East of the Vistula deprived the Polish High Command of all opportunities, and paved the way for our own strategic plans.

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