II. The Norwegian Campaign

Since the occupation of Denmark and Norway had not been planned from the outset, the collection of intelligence for this operation presented particular difficulties. Until 1 November 1939 no agents had been employed in Scandinavian countries so that the scarce information concerning that area originated from occasional reports that became available without proper planning. On the other hand, the military power of these countries was no closely guarded secret that had to be especially penetrated.

From the intercept service, whose station at Husum-Mildstedt also covered the northern European area, there was no indication that these countries were making any kind of military preparations. The preparation of an Anglo-French operation, however, was revealed both by agents and by radio intercepts.

After 26 March 1940, when Hitler had decided to anticipate an Allied landing in Norway, the intelligence data essential for such an operation were procured in great haste. The German Navy High Command naturally had a wealth of information since the entire country of Norway was essentially a coast line. What the Navy still needed were photographs of the bays and ports where its ships were to land as well as a reliable system of observation of the British
Fleet. Both tasks were assigned to the Luftwaffe, which was able to combine them with the missions it had to carry out in its own interest. No special intelligence preparations were needed by the ground forces which were integrated into the Air Force and Navy operations; they needed good reliable maps after landing.

The Luftwaffe was most interested in establishing the facts concerning the distribution of the Danish and Norwegian Air Forces and above all the centers of anti-aircraft defenses. Accurate photomaps of the Norwegian airfields were required in order to carry out the intended parachute jumps with subsequent airborne landings. The air attaché -- Captain Spiller -- was ordered to obtain exact information on these subjects and to report on same. Captain Spiller, who was a young and very capable general staff officer, performed extremely well within a minimum delay although he had been in Norway only since 1 March 1939.

The principal information for the Norwegian operation was obtained, however, by air reconnaissance; here again most the credit must be given to the strategic air reconnaissance group of the Air Force High Command (Hovell). Before the start of the operation, no overt infringement of the neutrality of the two countries could be committed. Nevertheless, this group was able to take aerial photographs of all main ports, navigational channels, and of all airfields from Oslo to Kirkenes before the outset of the campaign. In this manner the group produced
the essential data for conducting the operation. The reconnaissance flights covering objectives from Narvik to Kirkenes were made by Focke-Wulf 200 aircraft based on East Prussian airfields.

In addition to the reconnaissance flights over the Danish and Norwegian territories, German strategic reconnaissance flew missions over the British eastern seaboard ports, with emphasis on Scapa Flow. The purpose of these flights was to recognize in time the start of the Anglo-French operation.

The intelligence preparations for the Norwegian Campaign were typical for excellently conducted general staff work using a minimum of improvised means; at the same time, these preparations may be considered as exemplary for maintaining secrecy.
III. The French Campaign

The preparatory steps taken in the field of intelligence collection partly prior to this campaign have already been dealt with in Section I of this chapter. The collection effort was facilitated by the fact that immediately after the start of the war they were hardly any combat actions. There can be no doubt that the German military leadership would have been in an extremely difficult position, if the Western Powers had started immediate hostilities.

The Germans had neither the military strength nor the intelligence data essential for major operations in this area. As it was, however, intelligence agents and air reconnaissance were given sufficient time to fill existing gaps and to produce all the information that subsequently permitted the conduct of a MILCHFELD (lightning war). As previously mentioned, the air reconnaissance operations played the main part in obtaining this information. But the practical experience gained by German airmen in ANGRATEN (lightning war) during the MILCHFELD (lightning war) was of great importance to the German intelligence effort, since it permitted a better evaluation of the enemy forces. According to these experiences, the French Air Force was not considered very highly, while encounters with British fighters convinced the Germans that these opponents were not to be ignored.

38 This was the term used by German military for the phony-war period up to 10 May 1940.
Nevertheless, by 10 May 1940 the Germans had a completely accurate picture of the troop and air force dispositions of their opponents. They also had all photographic data to carry out the planned operations.

During the French Campaign the collection of Intelligence was limited almost exclusively to air reconnaissance, prisoner-of-war interrogation, and the interrogation of local inhabitants.

Of outstanding importance for the conduct of the swift blitzkrieg movements was only the air reconnaissance, which was all the more important because the weather was good almost throughout the entire campaign. The main part in the air reconnaissance was played by tactical and strategic reconnaissance for conducting ground operations. Reconnaissance missions to uncover the whereabouts of enemy air force units were of secondary importance. This neglect of enemy air force units in flying air reconnaissance missions can be explained by the low esteem in which the hostile forces' combat value was held, quite apart from the fact that the Germans assumed that they had incapacitated the essential elements during the very first days of the campaign.

The photo reconnaissance missions for ground operations and thus also for the primarily tactical employment of the Luftwaffe overlapped frequently. Quite often army reconnaissance aircraft, reconnaissance planes of the air forces, and air corps as well as strategic reconnaissance aircraft of the Luftwaffe High Command were
engaged in the same mission. Even though such mistakes in command and staff
procedures did not do any actual harm, they must be condemned as a wasteful
employment of available forces. It can be explained only if one remembers
that military events suddenly took an unexpectedly swift and precipitated
turn.

The over-all results of the German air reconnaissance during the entire
French Campaign were outstanding. There was hardly any serious doubt in
the situation at any time. The essential elements of information for
conducting tactical and strategic operations of all three services were
thus always available.

The true value of information obtained before the start of an operation
can be exactly assessed after the complete defeat of one's opponent. \textsuperscript{39}

\textit{Im K.K.} (Maj. Gen., Ret.) Josef Schmid writes on this subject:

"The strength, equipment, and striking force of the French Air Force,
insomuch as it was supposed to support the ground forces, had been correctly
evaluated down to individual figures. This fact was confirmed after the campaign
by the former assistant to the air attache, Stehlin. The French bomber
forces located in central France had been overestimated. They consisted
only of cadre units. They had only just begun to receive their equipment."

"The presence of British bombers in central France turned out to be
a hoax."

\textsuperscript{39} Schmid, \textit{Intelligence Division}, (no page number indicated). Karlsruhe
Collection.
"The French aircraft industry was even worse organized and had a lower capacity than the Germans had assumed. The treatment of German airmen who bailed out or made forced landings by the French civilian population was unworthy of the Grande Nation (Information based on statements made by flying personnel who returned from prisoner-of-war camps, such as for instance General Kamahuber.). The assassination of German airmen by the French was established and registered in reports."

"The over-all evaluation of the Royal Air Force during the French Campaign was unfavorable. The strength of the flying units committed in northern France had been greatly overestimated. The Germans had anticipated that British bomber units would raid during daytime the vulnerable and overextended German lines of communication, but no such raids took place."
IV. The Battle of Britain

The intelligence data for the Battle of Britain that started in the summer 1940 consisted of the previously mentioned Study BLAU. This study was no doubt an appropriate basis for strategic air warfare against Britain since it was the result of extensive pre-war intelligence work. It would have satisfied requirements, had sufficient forces been available for the operation. The preparation of this study and the work that it represented indicate the high standards maintained by the Luftwaffe General Staff in preparing operations at the top-level command echelon. Such recognition is all the more necessary because precisely the activities of the Intelligence Division of the Luftwaffe General Staff were subjected to severe criticism by many authors. The failure of the Battle of Britain is often attributed to the activities of this division and its chief.

For this reason, the opinion of Generalleutnant [Maj. Gen., Ret.] Josef Schmid, then Chief of the Intelligence Division, is hereby quoted as follows:

"The Intelligence Division of the Luftwaffe High Command was intensively engaged in the preparation of target intelligence. Photo reconnaissance results from missions flown over the British Isles provided ample source material. Photo mosaics taken from economic publications and atlases complemented the information for the flying forces. In addition, data were computed on the British ports and the various...

---

10 Schmid, Intelligence Division (no page number indicated). Karlsruhe Collection.
industrial installations, with emphasis on giving the air vulnerability of each target in detail ....

"... Intelligence Estimate: After the campaign in the West, the British concentrated their efforts on ascertaining the air defense capability of their islands. The reorganization of the fighter arm was essential for that purpose. The British fighter squadrons and distribution became well known during July 1940 and the following months. Insofar as it can be remembered, the number of fighter combat units, equipped with Spitfire and Hurricane aircraft, was about 1,000. The number of antiaircraft guns was not known to the Germans. They did know, however, that there was a shortage of small-caliber antiaircraft guns because so many guns of this type were needed by the Air Force, Army, Navy, and commercial shipping. The British bomber forces were by no means up-to-date by summer 1940. They were weak, consisting of approximately 600 - 700 Wellington, Hampden, and Whitley aircraft which were available to the Bomber Command for ready commitment.

The performance of the Spitfire was being improved by the introduction of the new Merlin engine; the change-over was in full swing. Similar efforts were being made to improve the performance of the bombers and to increase their armament. But, the United States could not rapidly furnish something better, and British aircraft models were not yet ready for mass production.

During the Battle for Britain the fighter arm suffered extremely heavy losses, particularly in material. The lowest point was probably reached at the end of August - beginning of September. At that time there were days when the
number of aircraft available for commitment had dropped to 100 as the
result of the fighting that had preceded for several days. Even the trans-
fer of squadrons from the Midlands and northern England to the south coast
did not materially increase that number. On the other hand, during inter-
vals in the fighting caused by bad weather, the fighter units recovered
their strength considerably and increased rapidly to 300–400 aircraft. Because of the
then defective communications security of the British fighters, the Germans
were able to establish all their strength figures and information on em-
ployment of forces. The Royal Air Force's weakness and plight were such, that
even Gladiator models were being committed and that replacements for the
fighter squadrons were pulled out of the officer training units of the
Bomber Command.

During the course of the Battle of Britain and the German night bomber
attacks, the British Fighter Command very soon (October 1940) decided to
commit night fighters. As in Germany, single-engine aircraft seem to have
been used for the first trial flights. The success of the first night fighter
sorties was apparently minor. The German night bomber units did not report
the surprise intervention of numerous British night fighters until April 1941.
The extensive and costly use of barrage balloons at various heights to
protect pinpoint and area targets surprised the Germans. The actual effective-
ness of these balloons — measured in terms of destroyed planes — was small,
whereas the deterrent effect on day and night bombers was major. Equally
unexpected was the tremendous use of all other means of antiaircraft
defence except for flak, such as searchlights, rocket barrages, and flak
rockets. Commercial vessels of all types were quickly and successfully
armed with small-caliber antiaircraft weapons and other defensive measures,
such as smoke screens, standing still, reducing steam, fake maneuvers, were
introduced for naval craft. The British ability to improvise, noticeable
even in peacetime, was manifest. The Battle of Britain forcibly advanced
the development in the entire field of high frequency techniques to an
unexpected degree and at an unprecedented rate. New methods of fighter
command procedures were introduced, aircraft and ground equipment was
modernized and adjusted to defensive purposes, and interference and
decoy were practised at an early stage. The emergency period during
the Battle of Britain led to an advance in the development of high frequency
equipment of all kinds for offensive and defensive operations of the Royal
Air Force, so that the latter had at least one year's head start over its
German counterpart. Since I later became closely acquainted with the so-called
high-frequency-war, when I was assigned to the defense of the Reich, I have the
greatest admiration for the British performance in this field."

"The Battle of Britain was lost by Germany. There are today some people
among former Luftwaffe personnel who have a tendency of blaming also the
wrong intelligence estimate of the Intelligence Division for the outcome
of the lost battle. On the other hand, the assumption continues to prevail
according to which the British fighter arm was subjected to extraordinary pressure during the first phase of the battle. For all other points of consideration, it is best to refer to Study BLAU. An "intelligent air force high command", after analysing that study and relating it to its own striking power, might have conducted the Battle of Britain quite differently or might have decided to abstain from such a battle altogether. Finally, one should point out that all intelligence information of various kinds had been distributed so widely and extensively to the combat airfields that there was overabundance."

"All German preparations for an Invasion were a complete bluff. The Intelligence Division of the Luftwaffe High Command had to contribute to this bluff by dropping faked invasion plans above the British 1st's by parachute during summer and autumn 1940."

The above statements of the former Chief of the Intelligence Division of the Luftwaffe General Staff indicate that Study BLAU was the basic document for the operation against Great Britain. A coordinated intelligence collection effort going beyond that study was conducted shortly before the start of the Battle for Britain, and then almost exclusively. During the French Campaign the interest of military agencies was focused on the course of the
operations in France proper. The problems concerning Great Britain were obviously not being considered more seriously for the simple reason that all agencies — both the political and military ones — were convinced that the war was over once France was defeated. This concept was justified by the passive attitude of the British ground, naval, and air forces during the French Campaign. The successful withdrawal of the bulk of British troops near Dunkerque was not considered to be a factor that would strengthen the British in their will to resist. On the contrary, the German intelligence collecting and evaluating services hoped that the disarmed and defeated army would depress the morale of the British population. The change in the British leadership that had meanwhile occurred — when Churchill became Prime Minister — and the appointment of a new production minister — Beaverbrook — in their triumphant mood were not properly recognized by the Germans who overlooked these warning signals of growing British will to resist. The Germans generally believed that the British, having an army without weapons, had no possible chance of continuing the war by themselves.

The principal factor, however, in hampering any planned activity against Great Britain was Hitler’s well-known aversion to conducting warfare against Britain and to weakening that country’s stature as a major power. All leading politicians and military men on the German side were
confident that, after his victory over France, Hitler would succeed in making Britain conclude a peace treaty with Germany. Only after Hitler had failed in his attempt to do so, did the various German governmental agencies realize that the war against Britain would have to be continued.

In evaluating the available data for a war against the British Isles, which had meanwhile become a necessity, one must take into account that the essential part of these data -- the operational study BLAU -- was prepared in 1939 from information that was mostly even more antiquated than that. The rapid development of the British aircraft armament, though anticipated in this study, was not fully known at the time the study was written. During the French Campaign and the first part of the Battle of Britain there was no sign of a renewal of the Royal Air Force. The Intelligence Division of the Luftwaffe High Command was therefore fully justified in assuming that the British fighter strength had reached a new low at the end of August-beginning of September 1940. German intelligence failed to take into account that the British aircraft production had meanwhile been developed to a point that permitted to replenish decimated units shortly after and even to increase their strength. The Germans simply did not know how readily the British were able to replace lost aircraft.

The personnel losses were never truly disastrous because a major portion of the crews could parachute over British territory or rescue themselves somehow so that they could be committed again. This unawareness on the part of the Germans shows that there was either
a gap in the intelligence collection effort or a real mistake in evaluation.

On the other hand, the Germans could not possibly have any doubts on
the number of planes; the British were able of committing. The German radio
intercept service was [REDACTED] that time so well coordinated and operated so
excellently that these facts could not escape its attention. This is shown
by the following quotation:

"Whereas the German radio intercept service had been very successful
in peacetime and must be considered as having rendered excellent services
in all theaters during the war, its outstanding achievements were obtained
here along the Channel coast opposite the British Isles. For this reason,
more details must be given concerning radio intercept activities in this
area."

"The radio intercept unit of the 3d Battalion, 2d Air Force Regiment,
had cooperated very successfully with German fighter units during the
position warfare along the West Wall. It contributed greatly to the German
Eighth Air Force victory in the German way. In summer 1940 this cooperation became
even more successful, when the unit started to operate at [REDACTED] along the
Channel coast. Here, a special radio monitoring station had been established
by the Radio Intercept Post No. 2. From Wissant there was direction-finding
traffic with direct long-distance communications to the DF stations at Le
Tonnelle — 6 miles south of Boulogne — Bonnoues, Wissant, and Beatake. At

[REDACTED] (Col., Ret.) Göttschling, [REDACTED]

For [REDACTED] (in [REDACTED]) Die Kämpfen gegen England unter der Panzerdivision, Bel-

gien und Frankreich (Intercepts — Successful Reports from the III Battalion,
2d Air Force Regiment — in the Battle of Britain after the Occupation of
the Netherlands, Belgium, and France). Extracted from Karlsruhe Collection.
Boulogne there were also Navy personnel. The radio intercept and DF station at Wissant, which had first-rate personnel and equipment, was situated close to
FRAN the British coast. It had direct contact with the advance airfields
along the Channel coast and sent out warnings each time British bomber,
reconnaissance and fighter units took off from England. Even General-Field-
marshal (Field Marshal) Goering was very impressed; so much so that he
and other high dignitaries often visited the station. At this station were
Lt. Thomas and Inspector Barth who performed outstandingly. Above all,
Wissant succeeded in totally monitoring the British fighter radio traffic
along the English southeast coast. As a result, the station identified the
complete British fighter effort in this area, including ground radio stations,
airfields, units, numerical strength figures, etc. The corresponding reports
were currently transmitted to the Luftwaffe Operations Staff via the
Commander of the Second Air Force, General-Field-Marshal (Field Marshal)
Kesselring. Among other details these reports listed the exact figures for
fighter-crews flying every day on patrol and defensive missions around London
as well as along the English southeast, east, and south coast. The number of
British fighters decreased steadily, until eventually only 1/40 fighters were
counted."

"Even though German fighters also reported the decreasing strength
of the British defenses, the Germans did not take any steps to implement
the landings in England which they had
planned originally."

"The two principal tasks of the radio intercept service along the Channel coast — as anywhere else strong enemy fighter forces were employed — were to \textit{intervene} against enemy fighters and to inform friendly alerting fighter forces. The first task consisted of \textit{intervene} the German fighters to engage enemy units, while the second task was to constantly notify and inform the German fighters of the whereabouts and strength of the enemy units and the enemy's direction of flight so that the German fighters would be employed to best advantage."

"The radio intercept service of the 3d Hn., 2d Air Force Signal Bnt., was capable of performing such outstanding services only because it had so much experience\textsc{m} in intercepting English radio traffic. By continually following the evolution of the British air defenses during their buildup and by watching every minute detail, the intercept personnel constantly broadened its field of knowledge. They found out many things because the British radio \textsc{m} operators conversed with one another, often leaving their microphones \textsc{m} by mistake. In this manner the Germans were able to listen in on their extra-curricular conversations which were certainly not destined for enemy ears. The Germans thus also discovered that the British were simulating ground-air traffic in order to deceive the Germans into believing that more fighters were committed than were actually available. For this purpose, the radio station on the ground conducted the entire radio traffic at certain times without contacting any aircraft. Another fact discovered
by radio intercepts was that the British did not intend to launch an
offensive along the West Wall at that time."

"General Heinz Guderian visited the intercept
station almost every second day. The command post of the Second Air Force was
also at Wissant. He summarized the impression he received of the station's
operation by exclaiming: 'What a remarkable job!'

The statements of Heinz Guderian show very clearly that
the Intelligence Division of the Luftwaffe High Command was exactly informed
on the number of British aircraft committed, if from no other source than
from the intercept reports. These reports also testify to the fact that the
British fighter defences were facing a serious crisis in summer 1940 --
all assertions to the contrary notwithstanding. If nevertheless or perhaps
for that very reason the Germans broke off their struggle against the Royal
Air Force and initiated the attack on London, one cannot blame the intelligence
personnel. This was a strategical error made by the Commander-in-Chief of the
Luftwaffe and his Chief of Staff. If the aircraft production capacity of the
British industry had been properly known, the struggle against the enemy
air forces and above all against the fighter production resources should have
been continued until the British defences had actually succumbed. This capacity
was no doubt not sufficiently known, and that must be considered as a serious
failure in the intelligence collection effort, and in second place only as
an evaluation error by the intelligence personnel.

Because of the wrong decision made by the Commander-in-Chief of the Luft-
vaife, the German air force units failed also during the next phase of
the air battle for Britain to take advantage of the crisis in the English
defensive system, although the critical situation was accentuated. On the
contrary, when the Germans had to switch to night attacks, they were
unable to prevent a recovery of the British fighter defences and their
constant strengthening as time went on.

In summarising one may state that wrong decisions based on faulty
intelligence together with overoptimism in evaluating the existing
situation finally led to failure in the Battle of Britain.
V. The Campaign in the Balkans

The Campaign in the Balkans, also, was not a preplanned operation. The collection of intelligence in this area was therefore not directed toward conducting operations against the Balkan nations. The events in Yugoslavia and the plan to clarify the situation in the Balkans before the campaign against the Soviet Union came as complete surprises to the Luftwaffe High Command and thus also to the Intelligence Division. The intelligence data concerning Yugoslavia and Greece thus had to be obtained very hastily by photo air reconnaissance and by agents, whereupon they had to be evaluated. As a result, the information for this campaign was not as complete as for the principal theaters of war. This deficiency, however, had little effect on the course of operations since strategic air warfare did not seem necessary in this area and the Luftwaffe could thus restrict its activities mainly to tactical support of the ground operations.

The decision to seize Crete was not made until the Greek campaign had been brought to its conclusion. The data on Crete were therefore very scarce and also had to be obtained with a minimum of delay, primarily by air reconnaissance. The strength of the British garrison was unknown to the German top-level command and staff agencies, even though the counterintelligence organization made every effort to obtain some information by dispatching and interrogating
agents. The air reconnaissance missions were flown by 2 reconnaissance
squadrons of VIII Air Corps and 1 reconnaissance squadron of XI Air Corps
(Parachute Corps). The principal mission of these squadrons was to observe
shipping in the sea around Crete, to establish the number of vessels in the
ports, and to reconnoiter the defensive and air force installations on the
island. The squadron belonging to the parachute corps reconnoitered landing
fields, field fortifications, artillery positions, troop billeting areas, etc.

The following official information is available on the results of this
important reconnaissance activity:

"The intelligence estimate resulting from that information was as follows:

a. Suda Bay was the most important port on Crete. Few war ships were present,
whereas there were a certain number of commercial ships that changed
frequently. The landing facilities at Rathimon, Heraklion, at the Gulf
of Mirabella, at Irakleion, and in the Bay of Massara were very limited.

b. There were usable airfields with runways near Maleme and Heraklion. An
airfield with limited facilities was near Rathimon. The total number
of aircraft at these fields varied from 25 to 40 planes, most of them
fighters and a few bomber aircraft.

c. The flank defenses in the Canea area were strong; the same was true of

Extracts from a report of the Fourth Air Force, dated 28 November 1941,
Crete. Karlsruhe Collection.
Suda Bay, the Maleme airfield, and the Rethymnon and Heraklion areas.

d. According to the statements of agents and prisoners of war, the island garrison was estimated at about one division plus elements of troops which had escaped from Greece.

The constant observation of the shipping to and from Crete did not give exact information since these ships brought in and removed personnel and supplies. A direct observation of the convoy traffic in Cretan waters was not possible because both the arrival and departure of ships in Suda Bay, like all other ocean shipping around Crete, took place under cover of darkness.

e. The attitude of the population of Crete was difficult to assess. The Germans believed that, in order to obtain equally favorable treatment as the Greek population on the mainland, the islanders would assist the Axis Powers or at least maintain a neutral attitude.

f. No major fortifications were observed despite detailed photo reconnaissance. Reports from agents indicated that some natural caves were being used as storage dumps.

g. The terrain conditions of the island limited the execution of a parachute or airlanding operation to the
three areas along the northern coast, where airfields were available.

Here, the Germans would have to face strong defenses, since these were the key positions of the island.

That these intelligence estimates did not correspond to the conditions the Germans actually encountered had its cause in the early preparations of the British who had started to build defensive fortifications on the island long before the Germans had initiated military operations in the Balkans. Also, the British had masterfully disguised all fortifications. Some of the antiaircraft gun positions identified on the aerial photographs were dummy positions, and the real emplacements were not recognized.

The mostly contradictory statements of agents could not be properly corroborated because of lack of time.

Great Britain was firmly decided to defend Crete. For this purpose, the British were ready to offer tough resistance, as the course of operations was to show, and to commit their naval vessels.

The British were aware of the fact that an attack on Crete would have to be staged as an airborne operation. Their defenses had been prepared accordingly. Strong points organized for all-around defense had been established around the airfield and at all points where they could serve a useful purpose.
In so doing, the British placed special emphasis on keeping the heavy weapons within range of the airfields.

The island garrison was far stronger than the Germans had presumed. Subsequent after-action reports indicated that the garrison was composed of about 22,000 men; there were 24 combat battalions, 1 artillery regiment, and approximately 40 tanks. Moreover, the civilian population sided with the British, participating actively in the defensive actions against the Germans, particularly in the western section of the island.
VI. The Russian Campaign

The German intelligence effort preceding the start of the Russian Campaign is subjected to various criticisms by expert and laymen writers who almost without exception are absolutely unfavorable in their judgment.

One must state in advance that the German Armed Forces High Command and thus also the Luftwaffe Operations Staff were actually not very well oriented concerning the Soviet Union, when they received the order to prepare a campaign against Russia at the end of 1940. Their knowledge remained rather sketchy until the start of the campaign.

The outsider will consider this curious, particularly if he is told that for many years — until 1932 — the German and Red Army leaders maintained close relations, that the Germans had troop training installations in Russia for weapons they were not allowed to have according to the Versailles Treaty, and that the Germans and Russians exchanged visits at maneuvers and inspected each others' troops.

These facts are true, but nevertheless the Russian espionage succeeded in camouflaging its real face despite all these contacts and ties. Before criticizing any particular agency or person, one must realize the very special circumstances that contributed to this situation. It is in the nature of the Russian and even more of the Communist, to distrust everything foreign. Despite the prevailing good relations with the Soviet Union,
the German experts and training units located in Russia were unable to
obtain any insight into the organization and strength of the Soviet armed
forces. Certain special observations that were inevitable were useless for
obtaining an over-all picture. During troop visits and maneuvers it was
possible to get a superficial and mostly deficient idea of the training
and equipment of certain Russian troop elements, but no more than that. There
never had been an exchange of information regarding the two countries and
their armed forces. If despite the Soviet Union's effort to keep its military
strength absolutely secret from its political friend, German intelligence
had a fairly accurate picture of the Soviet armed forces, until 1932, this
fact is irrelevant for the estimate of the Soviet Union in 1941. Of real
importance was, however, that the Soviet armed forces and armament pro-
duction never stopped advancing throughout the years of collaboration with
Germany and particularly from 1933 until 1941. The Soviet military forces
and armament of 1941 had no similarity with what existed in this field in 1930.

After 1933 the Germans were subject to the same limitations in obtaining
intelligence information regarding the Soviet Union as any other nation.
Perhaps, they encountered even more distrust than some other foreigners.
The Iron Curtain separating the
Russian territory from the rest of the world prevented any insight into
Soviet-dominated areas. The German diplomats and military attachés had no
more means and ways of obtaining information than those of other countries.
To establish a network of agents within this area was almost hopeless in
view of the strict border control and the close supervision of the entire
national life. To recruit agents from among the Russian people was almost
impossible. Mutual suspicion and fear of spying deterred the Russian
from acquiring any knowledge beyond the narrowest scope of his work and
his field of activity, preventing any investigation of wider
spheres of activity.

Even when it was possible to introduce here or there an agent, such
as a Russian-speaking national of socially-similar-adjacent peoples (?),
the difficulties that were encountered in the field of transmitting
information were insurmountable. To establish a courier service was
impossible, the ordinary Soviet citizen was not permitted to travel out-
side his country, and the tourists were subjected to strict controls.
People who had illegally entered the country had no chance of leaving
it through normal channels.

Other possibilities of transmitting information were:

Illegal border crossing by the courier — a very dangerous under-
taking since
the frontier were well guarded;

Dropping carrier pigeons by night with parachutes in desolate regions; and

Radio communication.

All these possibilities involved considerable risks for the agent, and for this reason it was far from easy to find someone to take such risks.

Up to 1939 the achievements of the intelligence service directed against Russia were therefore very poor. The analysis of the Soviet press also produced far less material than that of Western nations, where the press enjoyed full freedom. In many matters the German military leaders therefore had to rely on guesswork and assumptions. For this reason, the opinions on the Russian military forces and armament potential were either outdated or differed greatly.

Relatively sound information was produced by Oberst (Col.) Aschemberger, the air attache who spoke Russian perfectly and overcame many a handicap in his efforts. He reported on his activities as follows, writing after the war:

"With regard to obtaining information: Jaschennak had given me the following mission as air attache: 'Establish the best possible relations with the Soviet Union, and never mind

Extracted from his report, Karlsruhe Collection."
the intelligence angle!" -- That I kept my eyes open, nevertheless, was because I thought I owed that to my country."

"My concentrated effort was directed toward obtaining insight into the air force production. The key figure in the Russian economy was Mikoyan. For 1½ years I pursued him at every possible opportunity to give me that chance, stressing more and more emphatically what we had done in this field. It was not until April 1941 that I succeeded in obtaining Mikoyan's approval for a visit of 10 German experts who would be permitted to see about 20 Russian armament and research facilities. Within 36 hours of getting this approval my boys had landed at Moscow. They had to wait 11 days because apparently Josef (Stalin) had not given his approval. Finally, they were permitted to go ahead. The result was a clear cross section of the air production effort which permitted also to draw conclusions regarding the rest of the armament production.

My very responsible experts — aside from Scherzich and Schwenke from the Reich Air Ministry there were representatives from such German armament firms as Daimler-Benz, Heinkel, Arado, Henchel, Hauser (Vickers), etc. — who had very comprehensive knowledge of all foreign armament plants, including the United States and Great Britain, and who were able to make comparisons, were very much impressed by the things the Russians had been able to produce. My reports went to Germany day after day by way of short cable. According to Below, Hitler is supposed to have stated on this subject: "There you are, we must get started"
immediately!

"To my knowledge, there were no other sources of information; it was very difficult to obtain information because the Russians secluded themselves completely from any foreigner. I succeeded in taking the "Atlas of the Red Empire" from the library of the Polish military attaché whose apartment I took over in 1940. The German military attaché General Hubert had tried to get that atlas for years. It contained very comprehensive data regarding railroads, industrial facilities, etc., including plans for future installations with power plants and their future kilowatt capacity, etc. This atlas was dispatched to Germany, where it produced much information. Moreover, during a tour I made in April 1941 I was able to take along a telephone directory from the Ural Mountain district, which contained much valuable information on the Russian industries in the Ural...

From the statements of the former attaché one can gather that he had some possible openings after the joint Polish campaign. Incidentally, after the Polish campaign the Eastern Section of the Intelligence Division of the Luftwaffe General Staff was reduced in personnel strength. Intelligence efforts directed at the Soviet Union were almost completely stopped "because the collection of intelligence and the activities of agents ceased entirely."

The Russian-Finnish War of 1939-40 was followed very closely by the Germans. They could not understand why the Russians were not able to crush

---

Schmid, Intelligence Division, (no page number given), Karlsruhe Collection.
the small Finnish Armed Forces within a short time. The German intelligence agencies received a lot of information regarding tactics, flight performance, technique, and strength figures of the Russian Air Force via Finland. In general, the apparent knowledge derived from the Russo-Finnish War of 1939-40 contributed to German underestimates of the Russian combat and armament potential; this applied also to the Russian Air Force potential, more specifically. Then already individuals voiced the opinion that the Soviets had purposely bluffing in a negative sense by performing so badly in that war; none of these accusations could be reasonably motivated by those who originated them.

Truly positive information and data were produced during the winter 1940-41 by committing the air reconnaissance group of the Luftwaffe High Command (Rowohl) whose activities have been discussed previously. The commander of this group reports on this subject as follows:

"In October 1940 the Führer in person ordered the commander of Group Rowohl to reconnoiter Russian territory with suitable aircraft, emphasizing photo reconnaissance of airfields. This order was to be executed by 15 June; after that date all airfields were to be reexamined once more within one week. This order was complied with precisely. Simultaneously, around November 1940 an order was issued to the German commander at Plovdiv, Bulgaria, according to which he and the air attaché were to use a commercial aircraft for flying to the

45 Chronology of the Reconnaissance Group of the Luftwaffe High Command, (no page number given), Karlsruhe Collection.
Commander-in-Chief of the Bulgarian Air Force. After contacting the latter, the German representatives were to ask him to make available an airfield in Bulgaria, which would serve for German reconnaissance flights over Greece and Russia."

"In the Winter of 1940-41 the group began to fly systematic reconnaissance missions from airfields at Seerappen-Koenigsberg in Prussia as well as from Cracow (Poland) and Budapest (Hungary). Because of the many different types of missions, the group had meanwhile reorganized its forces. In the Winter 1940-41 the reconnaissance group of the Luftwaffe High Command was composed of 3 squadrons. The supplementary squadron commanded by Captain Schach, which belonged to the group, was redesignated the 1st Squadron. It replaced the old cadre and core, which were shifted to Grunewald, where they formed the experimental station for high-altitude flights. The personnel assigned to this station were to fly preparatory reconnaissance missions without warning, were to drop agents by parachute, etc. Eventually, they were to emphasize the development of high-altitude flights. The 2d Squadron remained at Zerle for the time being, and the 3d transferred to Bucharest-Baneasa."

"The 1st Squadron, operating from Seerappen airfield, reconnoitered the territory of White Russia with Heinkel 111 aircraft."

"The 2d Squadron started later from Insterburg airfield, covering the territory of the Baltic States and advancing in the direction of Insterburg."

"The 3d Squadron flew from Bucharest in the direction of the Black Sea coast and to the north thereof, as far as possible."
"The experimental station for high-altitude flights flew sorties from Cracow and Budapest into the area extending from Kiev to about Minsk."

"The aircraft used for these flights were Heinkel 111's with high-altitude engines, Doernier 215's, Junkers 88 B, and Junkers 86 P, which were specially equipped with pressurized cabins and with engines tuned for high altitudes."

"One high-altitude aircraft was lost a few days before the start of the Russian Campaign, the crew was captured, but it was liberated the day after the offensive got underway."

"Meanwhile, some agents had been parachuted at various sectors, having been assigned intelligence missions. All these missions were accomplished in accordance with instructions without major losses."

"The reconnaissance mission in the Balkans was flown in addition by three crews using Doernier 215 aircraft from Plovdiv, Bulgaria, starting in March 1941. By executing this mission the group's forces were dispersed in different directions. The need for attaching the individual squadrons in accordance with their assignments became more and more urgent. However, the existing organization remained intact until the start of the Russian Campaign, after which the squadrons were tactically subordinated to the appropriate air forces ..."

During the Russian Campaign the intelligence collection effort was unequivocally concentrated on air reconnaissance. The squadrons of the air reconnaissance group of the Luftwaffe High Command, which had been assigned
to the air forces, were primarily responsible for strategic air reconnaissance. These squadrons have photographed major parts of European Russia several times during the course of the campaign, have checked the effectiveness of bombing raids by obtaining photographic evidence, have observed railroads and canals XXX in distant rear areas, etc.

Statements by prisoners of war were another important source of information. The captured Russian soldiers, like the civilian population, were far more willing to provide information than the soldiers of Western Powers. This was particularly true during the early part of the campaign, when in many instances fear of bad treatment on the one hand and perhaps a certain hope that the internal policies might change induced the Russians to talk rather freely. The one exception were the commissars, that is to say the COMMUNIST communist officials. The collection of intelligence from such sources was complicated by the fact that the simple Russian soldier and the lower non-com were very little. Nevertheless, their statements made it possible to obtain an over-all impression, to know the units committed in combat, their equipment, supplies, tactics, and — since the higher ranks were not much more discreet — very often also the enemy plans and intentions.

The arrival of large numbers of prisoners of war, among whom there were also many bitter adversaries of the political regime, facilitated counter-intelligence operations that penetrated deep into enemy territory. The
agents could once again resume their activities. Dr. Paul Leverkühn writes on this subject:

"After the Germans had occupied sizeable parts of Russian territory, they established special centers for collecting and evaluating intelligence and for employing agents behind the Russian front. These centers cooperated well with the intelligence officers in the field and at higher headquarters. General Field Marshal von Manstein writes in his memoirs with reference to so late a time as the Stalingrad encirclement at the beginning of 1943: The figures and data regarding the enemy units were based on the sum total of all reconnaissance information. This information proved nearly always to be accurate (as in this instance) and not -- as Hitler always asserted -- exaggerated."

As the last important source of intelligence information permitting an evaluation of the existing situation one must mention the radio intercept service. It operated successfully already in its peacetime coverage of Russia and performed excellently during the war. Since radio was often the only means of communication available to the Russian Air Force units that changed so frequently from one locality to another, the Germans were able to draw extremely important conclusions regarding Russian unit strength, site of employment, supplies, and planes from intercepted radio traffic.

[147]

Dr. Paul Leverkühn, Member of the Bundestag, Der Willkommene Eich- und Steinmetz (The Military Intelligence Service), Extracted from Hilmar Förstel's Kriegsmarine (The Balance Sheet of World War II), p. 199. Gerhard Stalling Verlag, Oldenburg.
The former Chief of the Intelligence Division of the Luftwaffe High Command writes as follows on the subject of the preparations for collecting intelligence, on the evaluation, and on the continuation of intelligence operations during the Russian Campaign:

"Around 10 January 1941 the Intelligence Division of the Luftwaffe Operations Staff was notified of the plan for defeating the Soviet Union. This news came unexpectedly because the Battle of Britain had not yet been terminated and above all because the two-front war, that Hitler had always proclaimed as having to be prevented, would now become an accomplished fact. The many disadvantages for a successful continuation of the conduct of military operations on the part of Germany led to doubts. In the Intelligence Division as well as in other staff divisions there were many officers who opposed the attack plan on Russia. The Chief of the Intelligence Division, in particular, repeatedly submitted his serious objections to the Chief of the Luftwaffe General Staff. The new plan changed completely the methods of operation of the Intelligence Division. Most of the personnel were now used for topographic and target intelligence directed at the Soviet Union. Since no information from agents or other sources pertaining to Russia had been received, the new orientation meant building up an entirely new organization from scratch. All sources were instructed to devote their energy fully to

Schmid, Intelligence Division, (no page number indicated).
the collection effort. The information obtained from agents through the
counterintelligence channel had little effect up to the start of the operation,
which was announced for the beginning or the middle of May. The winter
weather imposed severe limitations on the photo reconnaissance. By 1 May 1941
target intelligence work concerning the Soviet Union had been concluded
up to the general line Archangel — Leningrad — Lake Ilmen — course of the Dnestr. The distribution of Soviet air force units was closely
watched until the start of the campaign. Most of the airfields and the
planes for their improvement, especially on former Polish territory, were
known to the Germans. The German evaluation of the Russian Army aviation
was generally correct. The total strength of the Soviet air force support
units in Europe was estimated at 2,500 — 3,000 outdated aircraft and about
200 — 300 modern fighter planes. By 21 June 1941 this latter figure proved
to be too low. Little was known regarding the Russian antisubmarine defenses.
The Germans believed that apart from the flak attached to the combat forces
all industrial areas and railroad junctions would be strongly protected by
antisubmarine guns. The very advanced training of Russian Army units in
combating aircraft with all suitable weapons as well as the excellent
camouflage training given to ground forces were not known to the Germans.
The Russian aviation strength figures for Asiatic Russia were merely
assumptions, the total strength being estimated at 2,000 outdated aircraft.
Russian bomber aviation was considered of insignificant value, which
turned out to be a correct estimate. Although the Germans were aware of the existence of major industrial centers at Moscow, Leningrad, in the Ukrainian Donbas Basin, and along the middle sector of the Volga, the Russian aircraft industry's capacity was greatly underestimated. Above all, the production capacity in the field of modern aircraft engines, primarily for fighters, was far more advanced and extensive than the Germans expected. The estimate was absolutely wrong insofar as the total capacity of the Russian military economic capacity and the performance of the Soviet railroads were concerned. Both were immeasurably better than the Germans had assumed. The over-all underestimation of the Soviet Union by the Germans was caused by the total exclusion of the Soviet state for two decades, by intentional German propaganda, and perhaps also by the antagonistic attitude of Russian emigrés.

The positive information, obtained from a German industrial commission that had visited aircraft industrial plants at Moscow as late as spring 1941 and which had also been in the Urals and along the Volga, had not been given sufficient credence by the Intelligence Division. On the contrary, the intelligence experts believed that the Russians had bluffing the industrial commission. The German air attache had little opportunity to see anything in Russia and was ill informed, generally. Shortly before the start of the campaign he agreed with the wrong estimate of the Intelligence Division. The combat effectiveness of the Russian aviation had been correctly evaluated by the
- 151 -

German. At the outbreak of hostilities the entire European-Russian Air
Force was destroyed. It lost almost its entire material but only few men.
It was surprising that the Russians were able to reorganize and replenish
their air force units by about 1 November 1941, when they had some 400 –
500 aircraft, even though they had to transfer forces from Asia to do so.
Despite constant attrition, their strength rose to about 700 aircraft by
1 May 1942. The outdated fighters had disappeared. In their place they had
modern types of aircraft in addition to the Boston and Hurricane planes
delivered by the Western Powers. The Russian Air Force with its badly
trained personnel continued to suffer severe losses in the summer 1941
and during the entire course of 1942. The total number of aircraft lost may be
estimated at a minimum of 4,000 aircraft. Nevertheless, the Russian industry
succeeded in replacing these losses, in delivering up-to-date fighter,
ground-attack and light bomber aircraft, and in slowly increasing the over-
all strength of the Soviet aviation in combat-efficient aircraft. By the
autumn of 1942 the Russians had some 1,000 aircraft. Russia was approaching
total collapse after having suffered tremendous losses of territory during
1942. The production capacity of the industries in the Urals had been of no
use, and the turn in the military events that occurred at Stalingrad would
not have been possible,
if the military assistance of the Western Powers had not been so effective. Without the delivery of food, aviation gasoline, aircraft, and scarce material from Great Britain and the United States the Russian weakness in 1942 could not have been overcome and the war in Russia would have taken a different course. Whether the Russians would have surrendered is another question.

"The strength figures of the Russian Air Force after summer 1941 indicate aircraft that were ready for service. The percentage of serviceable aircraft in the Russian Air Force never exceeded 60 percent and was usually only 50 percent of the actual strength or actual number of aircraft."

"Radio intercepts covering Russian traffic showed good results in peacetime. During the war, radio intelligence provided the only comprehensive and outstanding reports, particularly with regard to the strength and equipment of the Russian aviation. In many instances it was possible to draw conclusions on the operations plans of the Red Army by observing transfers and shifts of Air Force units from one airfield to another."

There were no major changes in the German intelligence collection methods and sources during the further course of the war. The radio intercept service became more and more efficient in the performance of its tasks and developed into the most important and reliable collection instrument.

The primitive and careless radio transmission methods of the Russians with

To illustrate the steadily growing significance of intelligence work during the course of the war, a pamphlet on field intelligence is attached to Appendix V.
their lack of radio discipline facilitated the German task. It may be
assumed that this was not intentional. The causes were probably to be found
in the bad communications facilities in general, which enforced extensive
use of radio communications. Also, Russian radio operators were not sufficiently
intelligent and therefore badly trained. Finally, there was a constant shortage
of suitable personnel. Since bad radio discipline had been observed already
during World War I, one may assume that a change in this field in the future
would take place slowly.

The German intelligence collection effort improved further as of 1942,
when the interrogation of prisoners of war was centralized. Up to that time
such interrogations took place at air force headquarters, where they were
carried out in a haphazard manner. Since these methods did not produce
satisfactory results, a central interrogation agency was established at
Loetzien, near the Luftwaffe High Command headquarters, where especially
important prisoners were interrogated.
VII. The Military Operations in the Mediterranean

The collection of intelligence in the Mediterranean area was considered a secondary matter in peacetime so that there was little information available at the beginning of hostilities regarding this future theater of war. This probably indicates that neither the political nor the military leaders of the Reich anticipated during pre-war days and even after the start of hostilities that Germany would have to conduct military operations in this area. The Mediterranean was considered as an exclusively Italian sphere of interests and operations.

Although Admiral Canaris maintained contact with the Italian Intelligence Service (SIM -- Servizio Informazioni Militari, whose chief was General Boatta), the Germans were unable to obtain any important information either from this agency or from the Italian Air Attache. The German Armed Services Attaches in Rome were equally unable to produce worthwhile data for the conduct of operations in the Mediterranean. This is not surprising, since their mission was only to report on their host country.

This generally unsatisfactory situation continued to exist during the subsequent joint operations with Italy -- the Italians did not know much, and what they knew they were obviously not willing to communicate.

For all the operations in which German troops eventually became involved in the Mediterranean area during the course of the war, the
data had to be **XXXXXXX** collected immediately before or even during the operation, essentially from German resources alone.

The methods of collecting information in this theater were the same as elsewhere, taking into consideration the political, geographic, and ethnological particularities of the areas involved. Since no basic organization was available, it was necessary to use wartime media; this meant that collection through agents -- although conditions were favorable for this type of activity -- was of secondary importance compared to aerial reconnaissance, radio intercepts, analysis of captured items, and interrogation of prisoners.

The X Air Corps, which was the first senior Luftwaffe headquarters employed in the Mediterranean area, was at first responsible for the collection of intelligence. The central control of this effort was later assumed by the Second Air Force headquarters which had command over the Italian-North African Area. The former intelligence officer of X Air Corps summarizes the collection activities of his headquarters as follows:

"At the end of 1940 the X Air Corps was transferred to Sicily at the same time as the German Africa Corps was organized and committed in North Africa. The missions of X Air Corps were directly related to the over-all mission -- direct and indirect support of the

---

ground operations in North Africa. The Italian army in North Africa disintegrated was at that time in a state of flight from the British forces thrusting out of Egypt."

"The X Air Corps had the following missions:

a. Direct support of the ground operations;

b. Providing immediate security for the supply routes from Italy to North Africa; and

c. Securing the lines of communications indirectly by neutralizing Malta."

"These tasks were to be undertaken in conjunction with the Italian air force units, with the Germans attempting simultaneously to improve the combat efficiency of the Italians."

"The following additional missions developed during the course of the operations:

a. The British naval forces in the eastern Mediterranean had to be combated, their bases, especially Alexandria, and the supply lines through the Suez Canal had to be attacked;

b. The blockade had to be maintained, that is to say British air and naval forces and supply vessels had to be prevented from passing through the western Mediterranean and penetrating as far as Malta or the eastern part of the ocean."

"No time could be lost; since the situation of the Italians was
in North Africa. On the other hand, the German air force intelligence had very little information on the enemy air and naval forces. This theater of war was only very scantily observed from Germany for very obvious reasons, and there were therefore many gaps in the intelligence. The Italian intelligence data were poor. With regard to Malta, for instance, the question as to how many aircraft there were on the island was answered by: "Molti" ( \textit{Fr.}: many), leaving it open whether this meant 100, 500 or 1,000. The question as to the various models of aircraft was answered by presenting the German aircraft-type-chart for the air reconnaissance service, which had been reproduced in Italian. -- The German air force intelligence personnel therefore had to obtain as quickly as possible the information needed for the employment of air forces and the estimate of the enemy strength, and this had to be done by using German media. The extended and unsatisfactory signal communications between Sicily and Germany required furthermore that the X Air Corps operate independently and that it be equipped with reconnaissance means that would produce results."

\textbf{Author's Note:} The command and staff organisation and the training of the young Luftwaffe was still absolutely inadequate at the start of hostilities, which is altogether understandable. The constantly recurring tendency to control units or even individual planes, if possible even during their commitment, directly from the Luftwaffe High Command or at least from the respective air force headquarters
led to the overloading and malfunctioning of the signal communications and intelligence agencies because of excessive reporting. The normal staff of intelligence personnel assigned to an air corps or division headquarters was fully occupied with these reporting functions. If one adds such other functions as military administration, military news reports, etc., there was no time left or personnel left for the intelligence functions proper, namely to prepare the intelligence estimate. The X Air Corps therefore formed an intelligence section that really acted as a link between agency for the operations and intelligence officers. It collected automatically the yard-type tele-type messages concerning take-offs, operations, landings, and successes achieved that arrived from subordinate units as advance, main, supplementary or corrective reports, transmitting same to a nervous senior command that really failed to realize its proper mission. The qualified intelligence personnel were exempted from such duties, or else they would not have been able to produce such a satisfactory intelligence estimate.

"The X Air Corps used the experiences made during the Norwegian Campaign to establish intelligence coverage for the Mediterranean Campaign. For this reason, maximum emphasis was placed on obtaining intelligence collection of various means of all types to be used in this distant subsidiary theater of war; it turned out that this was fully justified."

"Aside from air reconnaissance units, the air corps included the
following intelligence collection agencies that were either transferred together with corps headquarters or moved in subsequently; an enlarged photographic laboratory; an overstrength air force radio intercept company with organic decoding section; a naval radio monitoring station; an advance field station of "AFI, INT.1 (Armed Forces Counterintelligence Office, Branch I -- collection of intelligence); geographic, economic, and political experts of the areas occupied by the enemy; and a field station for the interrogation of prisoners."

"These units, insofar as they were not Luftwaffe organizations, remained under the technical and administrative control of their parent organization. For operations, HOWEVER HOWEVER, they were subordinate to the intelligence officer of X Air Corps. He assigned them their missions, and to him they had to report primarily. The chiefs of these units usually participated in the daily situation conferences at the air corps headquarters, and they attached a liaison officer to the intelligence section."

The various fields of intelligence collection will be dealt with in detail with special emphasis on their methods of operation, activities, and successes achieved.

Reports of Dismantling Aircraft in Field

These reports were uncertain and their veracity depended on the training and experience of the respective crew in the fields of ground combat and naval tactics.
Moreover, many mistakes were made because of bad light and enemy camouflage. In summary, such reports are important items of information, but for preparing intelligence estimates they can be used only after having been checked by another more reliable medium of intelligence collection.

**Air Photo Reconnaissance**

This is an amazingly effective means of collecting information, if the photographs are really thoroughly examined. Photographs of airfields were examined with special enlargers. These permitted even with not particularly good or sharply focused pictures to identify up to 50 - 70 percent of the models represented by the aircraft parked on the airfields. Checking of the same frequent airfields permitted photo identification of dummy aircraft as well as those which were not being committed at the time; the latter showed no changes in position whatsoever and no taxi tracks.

On photographs taken of the fortified area of Tobruk the light conditions made it possible to recognize on enlargements the freshly dug-in mines, including the related wire obstacles and gaps in the mine fields.

On photographs of naval forces one could not only identify without fail
the different types of vessels -- it was also possible to establish
the damages inflicted to the super-structure and to examine the holes
caused by bomb hits.

At first, automatic aerial cameras were used only for reconnaissance
objectives. Later such wrong economy was dropped -- the amount involved was
so small compared to the commitment of an aircraft with its crew. Two special
items of information derived from aerial mosaics of enemy-held coastal areas
and return flights over the same territory along the coast: A French-built
branch line of strategic importance was accidentally discovered in this manner
in southern Tunisia; this rail line had not been noticed by the armistice
commission that was naturally also engaged in intelligence collection. In
another instance, the airhead of the British airlift across central Africa,
which was situated far south of the Nile Delta was accidentally recognised
on the margin of a mosaic photograph, whereupon it was given full coverage
by a specially dispatched aerial reconnaissance plane.

Author's Note: As so often in the history of Luftwaffe operations, chances
were missed because of half-measures taken by the top-level command. That
also happened in this case. As mentioned above, careful photointerpretation
had succeeded in accidentally identifying an important enemy installation
in the midst of the desert. The airfield and dispersal area contained some
300 - 400 fighter aircraft which the British had laboriously brought to
West Equatorial Africa by ocean transportation during the last half year
or so. The planes had been assembled at the coast and then flown over a long
detour via the Sudan to Egypt. This support airfield was insufficiently
secured, its defense consisting of only a few light and medium antiair-
craft guns that had been identified on the photographs to the exclusion
of any other defenses. Apparently there was no radar screen and therefore
no proper fighter safeguards.

The unit commander and some general staff officer at advance posts
requested a concentrated daytime low-level attack by all bomber and fighter-
bomber aircraft available to the air corps -- at that time, in the autumn
1941, the air corps was stationed in Greece -- and the Air Force Commander
Africa who was subordinate to corps headquarters. Naturally, such an attack
might have involved the loss of some 10 aircraft, perhaps a few less. But,
on the other hand, the British re-supply of fighter aircraft would have
been at least halved through destruction. This, in turn, would have delayed
the British offensive in the Cyrenaica by 3 - 6 months; this offensive was
under preparation at that time.

One must mention in that connection that the constant evening or
night operations ordered by the top-level command and directed at airfields
involved on an average the loss of at least one aircraft.
Finally, it was decided to launch an evening-duck operation by one bomber group of the Air Force Commander Africa. This group was equipped with Junkers 88 model aircraft; because of the constant strain and overload imposed upon the flying units — instead of concentrating all forces for essential and promising operations which is the only feasible method of employing a technical arm — only about nine aircraft were capable of taking off on this mission. About 2 or 3 of these reached the target which was difficult to locate since the desert was without markers. This was all the more difficult at dusk which is of short duration in the south. The operation was of no consequence. The airfield, which the enemy had hitherto believed to be unidentified, was strongly defended by air warning service, fighter patrols, and antiaircraft guns within hours and days after the raid, as ascertained by subsequently committed air reconnaissance planes.

This is not the place for post mortems of mistakes made; rather, an example was given to illustrate the basic problem. The best and most revealing information concerning the enemy is of no possible use, if the command is incapable of availing itself of such opportunities and basing its operational plans on the intelligence produced.

Radio Intelligence

The immediate interpretation of the information concerning the airfield identified through aerial photography as described in the above example
was possible only through the medium of radio intelligence. For long-distance ferrying flights, such as between Gibraltar and the Cyrenaica with intermediate landing at Malta or between the Cameroons and Egypt via Central Africa and the Sudan, flight security radio traffic — however restricted — was indispensable. It is questionable whether the radio operators in Central Africa and the crew in the aircraft were aware of the fact that almost every signal they originated was intercepted somewhere — that is to say wherever reception was best — by German radio monitors. In any case, almost every aircraft that transferred supplies or served as replacement was identified by its tactical symbols (monitored from Gibraltar) or its manufacturer's serial number (intercepted from the Takoradi station). At the same time — if not even before — the chief of supplies at Middle East headquarters entered the newly arrived aircraft in his reserve stocks, including manufacturer's serial number and tactical identification symbols, the German intelligence personnel performed the same transaction.

Author's Note: No doubt, limited flight security traffic cannot be dispensed with during such long-distance flights over enemy territory or over areas lacking ground organisation support. On the other hand, it would be possible to deceive the enemy while conducting flight security traffic. By an added expenditure of a few kilowatt-hours, the British air supply organisation might have deceived the German intelligence personnel, indicating that 10 or even 20 times as many aircraft were being moved than in reality. This type of
deception would have reduced the value of intercept — the monitoring of enemy flight security radio traffic — to a minimum. In view of the present developments in technical intelligence devices, active deception reigns supreme.

While the supply line across Central Africa was of only general significance with regard to information referring to enemy material and supply reserves, the transfers via Gibraltar could be stopped or intercepted by active countermeasures. Moreover, the take-off of aircraft at Gibraltar could easily be observed by an expert or trained person who simply went for a walk along the neutral Spanish side of the border. This could be done with bare eyes by daytime or by watching the essential illumination of the runways, the searchlights, etc., by night. The problem was therefore purely technical, namely how to transmit such observations to Sicily with the necessary rapidity.

Because of their range at that time, fighter aircraft did not take off from Gibraltar but were transported on aircraft carriers that penetrated into the western Mediterranean as far as Algiers. To intercept them effectively, the German air reconnaissance had to identify the British fighters as soon as possible after they took off from the carrier. After sufficient intelligence data had been collected, the Germans were able to counterdirect their tactical operations even without this specific air reconnaissance information.
At the specified time, the German fighter patrols above and particularly west of Malta above the sea surrounding Sicily. A not insignificant percentage of the aircraft flying toward Malta for an intermediate landing were here intercepted. The British supply aircraft found no better protection by a detour above the then "neutral" territory of Tunisia because they were recognized by German radar sets at Sicily and by intercepted flight security radio messages (for instance by direction-finding of the ground station Malta). The corresponding information was immediately transmitted to the German fighters in the air.

One might add in this connection that the almost 100 percent surveillance of the enemy flight security traffic resulted in the rescue of many crews that were in distress at sea because they had run out of fuel. The German sea rescue service saved those crews in addition to those whose aircraft had been shot down.

The possibilities of immediately exploiting for one's own operations the information derived from monitoring tactical ground-air traffic of enemy aviation have been discussed separately. Naturally, all this traffic was constantly being monitored for other purposes, for instance to find out the number of aircraft the respective squadron had ready for commitment, or to obtain clues as to their home base, to know which model aircraft their equipment consisted, etc.
Radio traffic that had been monitored for some time was naturally well known by squadron, home base, area of commitment, etc. Whenever new code designation, wave lengths or unusual radio traffic appeared in the area under surveillance radio direction finding network was extended over the entire operational area with the assistance of a special direction-finding command signal communications service. In this manner the station that had not previously been identified was integrated into radio traffic intercept service.

The decoding service concentrated its efforts on the ground-to-ground radio traffic of the various airfields and logistical installations. (The messages of the enemy reconnaissance and bomber units, which used simple code charts that were changed almost every day for encoding their ground-to-air traffic, were usually decoded the same day.) The radio traffic between ground stations provided extremely interesting information because there were so many supply messages that had to be transmitted by radio since there were no wire communications. These messages were necessary in the North African desert, especially in conducting mechanized operations. The supply messages, in particular, transmitted by transposition cypher, was hard to crack. (It could mean, for instance, that 1 was three, 2 was negative report, 3 was four, etc.) In general, interpretation was possible because of constant observation with the assistance of German logistical and technical specialists. After that, the messages became all the more valuable.

After discussing the two outstanding intelligence collection media, one should interpolate a few observations on the
method of evaluation. To make it short: high praise must be bestowed on intelligence
the maintenance of card-index files. Every enemy squadron
had its own file, in which records were maintained of every operation by
registering the reports from different sources.

This registration differentiated between reports from German crews,
from the German aircraft warning service, the intercept service, etc. For
this purpose, the same methods were used as for geographic situation maps,
i.e. different colors were used for the various sources, such as red for
intercepts, green for photo interpretation, etc.

After a few weeks or months the evaluating personnel were able to pro-
duce without delay such data on enemy squadrons as average number of aircraft
ready for commitment, kills scored, etc.

In general, the intelligence officer thus had after 3 - 4 months an
estimate that was based on an almost personal relationship to the enemy
units he kept under surveillance. In this connection the author always
maintained the point of view that a truly effective intelligence officer
who knows his job inside and out must be able to replace the enemy operations
officer from one day to another. Obviously, constantly renewed retroactive
evaluation and examination of cover designation hypotheses, etc., are
essential in order to ascertain complete correlation of the information
produced by the various intelligence collection sources with absolute
certainty. On the other hand, such checks must be made, if one wants to avoid falling into the trap of a "cheeky" enemy deception in one field of collection. During the last war neither side consistently tried to use coordinated deception in several fields simultaneously. At that time it was therefore almost foolproof to check one item of information against information obtained from another field of collection, before integrating the first item into the intelligence estimate.... Aside from the previously mentioned evaluation based on card-index files, other statistical methods were employed, such as curve diagrams. Because of the more effective enciphering method used in the radio traffic of British naval forces, the Luftwaffe intelligence adopted the "radio frequency curve" from its naval counterpart. This curve, all by itself, gave a XHH clue to the opponent's operation. By observation, as previously mentioned, the intelligence officer would for instance notice immediately, whenever British bomber forces in the Mediterranean would deviate from their usual routine — 4 squadrons in operation, 1 squadron idle. If all 5 squadrons were committed simultaneously, this was obviously an alert signal and was recognized as such. As it later turned out, it was the preparation for a major attack in North Africa.

Aside from transmitting intelligence information to
the German top-level command and to the Luftwaffe High Command, it was
obviously also important to keep the German units informed on the enemy
distribution of forces and dispositions. For this purpose, the "enemy news-
sheet" was distributed. In a war of movement such as that in the North
African desert, one had to take into account that information disseminated to
combat units would fall into enemy hands. According to the motto: "Effect
has priority over security," all intelligence information was disseminated
down to squadron level. The only thing that was not revealed — a SECRET
classification was put on it — was the source from which the information
had been obtained. In retrospective it seems as if this cover had been
sufficient. No doubt, the enemy was surprised at the volume of information
available to the German command, when he captured data. But
no timely change in the methods of radio transmission occurred. It was not
until after the Yalta conference, during which this subject was apparently
discussed secretly, did the Soviet Union and the Western Powers obscure
their radio messages a little more than they had previously started to do.
But at that time it was too late, the German evaluation personnel were so
well oriented that such changes could be overcome through analysis and
interpretation. It is not without interest — especially in view of the
very modest achievements of the German communication security — that the
warnings regarding the remarkable effectiveness of the German intercepts of radio communications probably reached the Allies mainly through communication security. A specially established contact of the enemy communication security, operating at the top-level command and dealing with problems concerning the military conduct of warfare, repeatedly issued warnings of breaches of security during the latter years of the war. These reports were monitored in Germany, where they could not be pinpointed as to the country of destination because they were transmitted very skillfully from a radio engineering point of view.

It remains an Allied secret — no doubt the Allies were fully aware of all details concerning these messages — which country received and above all who sent these messages that produced a truly deadly effect on the German intelligence system. In summarizing one must state that the sources of information should be kept secret at any price, while the intelligence itself must be disseminated and used for current operations.

The mechanics of intelligence dissemination in the Mediterranean theater were as follows: Down to squadron level, each unit was issued a loose-leaf binder. In the introductory part, the binder contained general data on the combat area. There followed details concerning the forces of the enemy that had been identified in the combat area. This information was constantly brought up to date, the new information carrying the page number or appendix reference of the enemy news sheet that were to be amended.

approved
All that had to be done was to insert them automatically where they belonged. (One has to count with the "indolence" of the flying crew who are fully occupied with operational matters.) The enemy news sheet contained furthermore a special attraction. This was the daily Headquarters Middle East report and other foreign press reports concerning the combat area. The reproduction of these news and propaganda releases was carried out with all the more enthusiasm during the early part of the Mediterranean campaign because the enemy press reports showed as much imagination — the word "lie" has been purposely avoided — as Goebbels' Propaganda Ministry in Berlin. The German units, isolated in some tents in the North African desert, enjoyed reading of the exploits of the enemy who had contracted a dose of Arab fantasy. They were the best qualified to submit these assertions to a critical analysis since they were directly involved in the actions described. With this juicy morse it became possible to make the "enemy news sheet" of the air corps a readily read and eagerly awaited item of information.

When the German political leadership decided to interdict the transmission of enemy press reports altogether during the subsequent operations in the Mediterranean theater, the
troops became all the more eager to receive the daily enemy news sheet.

Some time later such publications on happenings in the German combat area were forbidden also within the framework of military surveys. With the stoppage of the flow of such information, rumors of all kinds spread like fire among the troops, much to the detriment of their morale."

These statements have been quoted so extensively because they hail from an officer with wide experience in the general field of intelligence who was particularly well versed in the collection of information. They describe graphically the methods of collection and evaluation as applied in the Mediterranean theater.

In the course of the German participation in the operations in the Mediterranean, the espionage service in this area was activated. The degree to which the Germans collaborated with the Italians in this field is difficult to establish since the responsible persons are no longer alive and because there can hardly be any records on this subject. How effective the information from intelligence agents was in contributing to the Second Air Force's estimate of the situation can be gathered from statements by

**General Ber Flm.R. (Lt.Gen., Ret.) Deichmann, who was then Chief of Staff of that headquarters and who wrote as follows:**

"During the months from the end of August through September and October 1942"
the Commander-in-Chief South and Second Air Force — both committed in
the Mediterranean area — received a great number of reports from the Armed
Forces High Command, Counterintelligence Office, regarding an imminent
landing in the Mediterranean. Every one of these reports started with the
word: "According to a "...

"Within a short sequence landings were predicted in the south of France,
in Sicily, in Sardinia, in the Tripoli area, in Greece, etc. Each one of
these reports might have had great impact on the operational preparations
of the Air Force, affecting such important matters as the improvement and
new construction of airfields, their filling with ground and technical
personnel, gasoline supplies, bomb, spare parts, technical equipment, and
the establishment of signal communications. In view of the great distances
involved, each one of the above landings would have required a different
disposition of the air force units. The Second Air Force, however, had
neither the necessary personnel, nor the equipment, let alone the supplies."

"While this was happening, Admiral Camar., the Chief of the Counter-
intelligence Office, Armed Forces High Command, announced his visit at
the Headquarters of the Commander-in-Chief South in Italy."

"In the presence of the Commander-in-Chief, the Chief of Staff made the
following oral suggestions:

1. There is probably not a single possibility for landings in the

Mediterranean area which has been omitted from the predictions by
apparently trustworthy agents during the last few weeks.

2. By his present procedure, the Chief of the Counterintelligence practically Office at the Armed Forces High Command conducts a war of nerves against the Commander-in-Chief South and the Second Air Force, thus aiding and abetting the enemy.

3. Already now there can be no doubt that most these agents are not trustworthy; on the contrary, they are extremely untrustworthy and are obviously serving the enemy.

"If the Counterintelligence Office, Armed Forces High Command, is not in a position to scrutinize the trustworthiness of the reports of individual agents, the Commander-in-Chief South should at least be given an opportunity to do so himself. If therefore an agent sends in two reports that seem unbelievable, his future reports will be equally unreliable. To enable the Commander-in-Chief South to check the veracity of these reports, the agents originating them must be made identifiable by some distinguishing mark.

Naturally, this would not mean that the names of the agents or the symbols used by the counterintelligence personnel be revealed. An identifying mark expressed in figures or letters would suffice to show
which reports had originated from such individual agents."

"Admiral Canaris replied that he had ordered all reports to be sent to the Commander-in-Chief South, since the latter was best qualified to discern what might possibly happen. The request for an identifying mark that would permit recognition from which agent originated several reports was rejected without credible reason."

"At the Headquarters of the Commander-in-Chief South one got the impression at that time that Admiral Canaris might perhaps deceive the Commander-in-Chief South intentionally."

The supposition that has been here expressed and which arose at that time, namely that the counterintelligence people were deceiving intentionally, can obviously not be proved because counterintelligence service XX in general will not show their hands. After the war, when it was publicized that important information was played into enemy hands from the Counterintelligence Office, Armed Forces High Command, through General Oster, who had been executed as one of the accomplices implicated in the attempt on Hitler's life on 20 July 1944, the possibility that intentional deception could be used after all not be refuted altogether. On the other hand, it was only natural that the enemy tried to confuse the situation by all means, including deceptive maneuvers; a properly integrated counterintelligence service, however, should be capable of discerning such maneuvers in the long run.

In order to deceive the German intelligence service with regard to the
Allied plans for landing in Sicily during the summer 1943, the British intelligence used some extraordinary measures. The corpse of a man who had died from a 50 pneumonia — to isolate death from drowning — was dressed in a British major's uniform that contained the identification papers of a Major Martin. The corpse was brought close to the Spanish coast by a submarine and then released so that it would surely be drifted ashore and found on the beach. In the pockets were two letters from prominent personalities, the contents of which led to the conclusion that the Allies intended to land in Greece and in Sardinia.

This affair greatly preoccupied the German intelligence and the German command. General Deichmann, then Chief of Staff of the Commander-in-Chief South had the following comment on this subject:

"The contents of the two letters that the German intelligence people had received were also communicated to the Commander-in-Chief South. In the case of the letter, which was supposed to have originated from Admiral Mountbatten, C-in-C South, after thorough analysis, arrived at the conclusion that landings in Sardinia, to which a remark contained in that letter referring to "Sardinia" was obviously supposed to point, were unlikely. The Allies would have once again been on an island that was at a considerable distance from the Italian mainland. If they landed in Sicily, they would be separated from the mainland only by the Straits of Messina. According to 50 for more details, see The Men Who Never Were, by Ewen Montagu, London, Evans Brothers. 51 Deichmann, Karlsruhe Collection."
German theories, they would have been even strong enough to land directly in central Italy. — This deception, insofar as Italy was concerned, therefore had no effect. As to Greece, which at that time was no longer within the sphere of responsibilities of C-in-C South, I do not believe that the letter from General Archie Nye resulted in any changes in the defensive dispositions that had been previously planned.

This attempt at deception with "Major Martin's" corps was based on a relationship between the Spanish and German intelligence services; this assumption was justified. It was perfectly executed on the basis of meticulous plans, and everything went according to schedule. But — as General Deichmann's comments indicate — it produced no results. The reasons are easy to find. An attempt at deception that is too perfectly staged must fail if there exists a strong distrust of such reports on the part of the opponent; the existence of such distrust must be assumed all the more if the report that is being floated seems somewhat unbelievable. Landings in Sardinia lacked all military sense, and an operation in Greece had to appear unlikely to any militarily trained commander in the existing situation, so long as German troops in Italy and Sicily had control over the lines of communication across the Mediterranean. To
carry out landings in Greece, the seizure of Sicily would have been an absolute prerequisite.

As a matter of fact, the carefully prepared and well executed "Operation Martin" had not achieved its purpose — that the Germans shift their Mediterranean forces to facilitate Allied operations.
VIII. United States of America

The persistently continental outlook of Germany’s political and military leaders prevented that country from maintaining an effective espionage service in the United States before, during, and after World War I as well as before and during World War II. For this reason, the German counterintelligence had almost no information concerning the United States for World War II.

The most significant and correct information regarding the American Armed Forces and armament potential was provided by the German military attaché — General von Boetticher. This general was an Army officer, acting simultaneously as air attaché, which indicates how little importance the German Air Force High Command attached to information from the United States. Also, it shows that a military conflict with the nation across the Atlantic was not taken into consideration. Although he was an Army officer, this capable general provided excellent data concerning the American air armament before and during the first years of the war. The collection of information was greatly facilitated by the lack of restraint with which American politicians and military personnel discussed their problems in conversations and in public. Additional sources of information were the official publications, press reports, magazines, and the radio.
Very productive source of information regarding the American
military establishment and armament were the hearings on military matters
before Congressional committees and the army register.

On the basis of all these sources, the Intelligence Division at
the Luftwaffe High Command was after all capable of piecing together a
somewhat adequate picture of the United States military establishment
and of the armament potential in which it was primarily interested. The
intelligence agencies involved in this effort were aware of the enormous
— compared to European standards — industrial potentialities of the United
States, and they did not fail to draw the attention of their superior
authorities and of the political leadership to this information. That
no credence was given to their reports or that these reports were considered
exaggerated cannot be EXCEPFTIONAL blamed on intelligence. Despite the
experience of World War I, neither Hitler nor the great majority of the
top-level military leaders considered the United States as a potential threat
that might influence military decisions on the European continent. They
hoped that the United States would not participate in a war in Europe. This
was the decisive miscalculation in Hitler's political scheme — as the
result of the war has shown. For, one may assume with some certitude that
he would have achieved his military aims in Europe — also against Great
Britain and the Soviet Union — if the United States with its
tremendous resources had not intervened in the conflict. Such an inter-
vention was considered unlikely, all the more since the German Legation
in Washington and especially the military attache uttered even in 1941
the opinion that the United States might stay out of the war, if every
effort was made to avoid friction. That the inflammatory propaganda against
Germany, which was then already going at full blast, was part of a psycho-
logical preparation for the United States' entry into the war and that
the very extensive unilateral support given to Great Britain, which went
beyond the framework of neutrality, actually meant practical participation
against Germany, was — perhaps because of wishful thinking — not properly
considered in evaluating the United States' attitude. Even if Hitler had
counted on the eventual participation of the United States in active war-
fare, he would not have been capable of realizing the danger that would thus
intensify,

have arisen to his military intentions for the simple reason that he did not
want to spoil his preconceived notions by such considerations. Moreover, he
did not believe the information regarding the United States' resources.

Finally, he might also have believed that he would be able to terminate
the war victoriously before the United States' intervention or its potential-
ities could make themselves felt.

This type of reasoning, even if it had taken place,
was not communicated to the military command agencies. These, having access to exact information on the military potentialities and being disinterested in minimizing them, had only some dark forebodings that the question of peace or war with the United States meant the decision regarding the issue of the war. The Chief of the Intelligence Division of the Luftwaffe High Command realized in the course of the year 1940 on the basis of the un-

by the United States, it had equivocal position taken and the assistance given to Great Britain that one had to take into account a United States intervention in favor of Great Britain before too long. A first full evaluation of the United States' armament was therefore prepared in the autumn 1940. General Schmid, who was then Chief of the Intelligence Division, wrote on this subject as follows:

"The Intelligence Division was well oriented with regard to air armament progress, conversion of peace-time industries, industrial and manpower mobilization, and the future output of modern fighter and four-engine bomber aircraft. The information had been provided by the air attaché in Washington. The emergency assistance given to the Air Force in delivering scarce material was closely watched. The United States' influence on and interest in South America, Africa, and the Middle East became obvious at an early moment. The establishment of the two flight routes across the Atlantic was followed with great interest. The Luftwaffe High Command was informed by the Chief of the Intelligence Division that by about summer 1943 the first XXXXX combat-ready Air Force

32 Schmid, Intelligence Division, (no page number indicated).
units would be available in the United States. American intervention in
the European war was taken into consideration, but was not considered to
be likely. It was not until spring 1941, when \textit{Friedrich} (First Lt.) von
Wehr, who had escaped from a British prisoner-of-war enclosure, returned
via Canada, the United States, Mexico, and South America, that the
American inflammatory propaganda against Germany became obvious. But even
at that time General von Boetticher \textit{radioed} from Washington that
he considered United States' continued non-intervention a possibility, ye
even a likelihood. But everything possible \textit{must} be done to avoid incidents
that might annoy the United States."

The political leadership and the agencies responsible for armament
did not take any notice of the above-mentioned industrial mobilization
of the United States, particularly in the fields of developing and con-
structing heavy bombers. On the contrary, they ordered the well-known
stoppage in research and development, according to which all development
in the sphere of armament were to be set aside, unless the item could be
designed and made available for combat commitment within one year. It was
precisely this radical measure, which affected particularly the air 

sphere, that induced \textit{industrialist} --- the aircraft designer

\textit{Fritz Siebel} --- to take a courageous step by informing Hitler
of the dimensions of the threat presented by the United States.
and by making suggestions with reference to the dispositions Germany
should take as a result of that situation. Since Siebel's concepts of
1940 proved to be absolutely correct by the further course of World War II,
his letter to the Chief of Air Forces Special Supply and Procurement, with
whom he was on friendly terms, and his memorandum will be quoted verbatim
as follows:

Fritz W. Siebel
Chief of War Economy
Siebel Aircraft Factory Halle Co., Ltd.

To the
Chief of Air Forces Special Supply and Procurement
Emerick (General) USAT

Dear Ernest:

During our last conversation I promised you to put in writing
my ideas and concepts of the air force in the present and in the future,
especially in the light of the American armament developments. These
thoughts occurred to me in July, but because of being occupied with
building barges (Trs: The so-called Siebel Ferries for the invasion of
England.), I did not have time until today to keep my promise. The

53 Both documents are part of the Karl-ruhe Collection.
attached memorandum contains the essential parts of these ideas that I have worked out together with my friend Koch.

Although this might seem like big talk, I don't believe that I am exaggerating when I say that the key to the future of our people during the next few years is in the timely expansion of our air armament. This will be true whether the present war will end soon or only after some time and whether the United States will intervene or not.

Because of the office you hold, your actions will have great influence on our future. You have the skill and imagination to fully realize the scope of the task with which destiny has confronted you. In the "Iron Man" you have somebody who will back you up with the full impact of his personality and who will enable you to see everything into reality whatever he considers right.

The problem seems very serious to me. In my opinion you should therefore immediately establish a committee of highly capable men — preferably in collaboration with the president of our industrial association. This committee should prepare in conjunction with your leading experts a very precise plan for our future armament production. This will permit the expansion

54 Goring's nickname among his personal friends.
of the armament production with a minimum of delay, which might mean as little as a few weeks, the way I see it.

The problem of the skilled technician is of decisive importance in this connection. The Army must not only put an immediate stop to drafting technically skilled men, but beyond that it must also discharge technicians on a large scale. This is true for both blue-collar and white-collar.

The attached memorandum follows up the study of 11 January 1939 on that subject. This contained a detailed plan for a constant resupply of technicians, and I still believe that today in wartime this plan should be implemented.

But everything will fail, unless planning and implementation are assigned to one person, to whom the Reichsmarschall (Tr.: Goering) gives dictatorial powers. Above all, this man must be in a position to eliminate without delay the obstructions presently caused by the central control of all construction activities. But this is just one of the functions for the accomplishment of which such far-reaching powers are necessary. The execution of every other segment of the expanded armament program — for instance the increase in productivity of the subcontractors — will depend similarly on the pivot question whether one man can impose his will without resistance.

Even though I know that you see the future in a similar manner, you
will understand that I feel compelled to submit my ideas to you; I just
have to express my thoughts in the way things appear to me.

I remain glad to come to your side and greet you

Heinrich Hitler

Your, Fritz Siebel

________________________

Fritz W. Siebel
Chief of War Economy

Berlin, 7 October 1940

I.

The United States rearm at an extraordinary rate of speed. So far as
air armament is concerned, the American armament buildup will certainly
result in a shift in the size of air units. The air forces of the future
will no longer be composed of thousands but of tens of thousands of aircraft.

These air forces, which will be composed of armored aircraft equipped with
powerful guns — some of them remote-controlled — will gradually develop
to such perfection that the air arm will become the exclusively decisive
factor in any type of warfare.

The world enters a new epoch of warfare. What had been predicted after

seems indicated

World War I and already clearly during the present war, will
be transformed numerical

into reality simply by the increase in aircraft without taking

improvement in aircraft performance into account; wars of the future
will be fought almost exclusively by the air forces and will be decided by them. For, with enemy air forces having the numerical strength they will possess in the future, it will be impossible to maintain industrial production and to transport essential supplies for modern combat forces and the same of interior once air supremacy has been lost. We are confronted with a similar turning point in the development of warfare as that which occurred during the transition from the knights' armes to the formation of infantry. Germany should not be retarded in making this transition. If any other country overtakes us, we shall enter a period of extreme vulnerability during which all the gains achieved by the victorious conclusion of this war would be jeopardized. That the air arm would become absolutely predominant over the other arms of the service war - anyhow inevitable. This evolution, however, has been accelerated by the start of the tremendous air armament effort of the United States. All this is valid no matter how the present war will continue. If one is of the opinion that the United States will enter the war, be it by direct intervention or by indirectly giving Great Britain full support, the immediate strengthening of the German air armament is anyhow inevitable. There cannot be the slightest doubt that the United States want to rearm; there is
no reason why that country should not be able to carry out its rearmament at all or not according to planning schedules. The United States has demonstrated during World War I and on other occasions that the organizational capability of its industries and the youthful energy of its people enable that country to perform seemingly impossible tasks.

II.

The productivity of the German air armament must at least be as large as that of the United States. President Roosevelt wants to build up an army air force of 50,000 aircraft and planes for an initial production of 3,000 planes per month. These figures are not utopian, in fact they will probably be exceeded. Since we have to count on more than one opponent, we shall have to produce rather more than fewer aircraft than the United States.

The proportions of this air armament effort in conjunction with technical developments, such as the absolute necessity of armor-plating initially at least the vital parts of aircraft with all the consequences this implies, the construction of stratoospheric aircraft, of fighters and of twin-engine planes flying at subsonic speed and beyond as well as of long-range aircraft, etc., will require very drastic measures. A shift in production will be necessary on a large scale, for outdated equipment will be replaced by new items all along the line, and the industrial capabilities must be adjusted.
accordingly.

A detailed description of the measures that would have to be adopted would exceed the scope of this study, but some of the salient features will be mentioned.

To begin with, one must enlarge the raw material capacity. The production of the necessary quantities of steel will probably involve relatively minor difficulties. This is not so with regard to alloy.

Equally difficult would be to make the necessary quantities of duralumin and electron available. Their procurement is complicated by the high consumption of electric current required for their production.

The experiments of making steel lighter by the addition of light alloys without impairing its tensile strength will be continued.

The main bottlenecks in the production field are in the machine tool industry and in the drop forges. There are not sufficient drop forges; their machine are inadequate, and their performance unsatisfactory. To achieve a satisfactory performance standard, the drop forges must be issued additional machine tools. In this manner two bottlenecks really form only a single one expressed in terms of time factors: the new or improved drop forges cannot begin to operate.
until the necessary machine tools are delivered to them. The same is true of the subcontractors in their relationship to the industries producing machines for them, such as the producer of wire-cutting presses, extrusion presses, rolling mills, etc.

The question of skilled technicians is naturally of special importance, both for planning peacetime production and for setting aside the technicians needed for the production effort in a future war. In this connection, reference is made to the study of 11 January 1939 addressed to Reich Marshal Goering. It is inevitable, but at the same time quite feasible, that the Army will soon release a corresponding number of skilled technicians.

Probably one will have to make plans for housing these workers -- at least the highly qualified ones -- near their site of employment together with their families, instead of making serve as draftsmen, operating them from their families for many years, and billeting them in camps.

Moreover, the production plants of the aircraft industry will have to be enlarged considerably, in some instances up to three times. This will have the corresponding repercussions on the entire construction industry (iron, cement, lumber, and various other assimilated industries).

Finally, one must solve the fuel problem,
essentially with regard to securing the lines of communication to the oil deposits. At the same time the exploration of German territories must be continued intensively.

As a result, Germany has to overcome extremely long preparatory stages, also in the sphere of production facilities, before it can expand its air armament. The production increase in engines and fuselages can begin only after the preparatory hurdles have been jumped. The expansion of the armament production must therefore start on the widest possible scale and range all the way to the raw materials.

III.

The United States has to undergo far shorter preparations. Its natural resources are far greater, it has access to the raw materials of the rest of the world, and the capacity of the American industry that is suitable for transformation to military production probably exceeds that of its German counterpart. Furthermore, the United States has started its rearmament program already three months ago so that this head start will increase its natural advantage. One must also take into account that the construction of new German production facilities will be complicated by the need for securing and camouflaging these plants extensively to safeguard them against air attacks, a
factor the United States does not have to consider for the time being.

In Germany production facilities, where particularly important scarce items are being manufactured, are especially safeguarded by constructing, for instance, underground plants. In many instances production has to be decentralized, although centralization would be more rational. Special consideration must be given to securing the route of transportation between the individual production centers.

For this reason the start of further buildup of the air armament effort is particularly urgent. Even if we start immediately, there can be little doubt that for quite a long time the United States' air armament will remain superior to ours.

IV.

The necessary production capacity will be reached only if the manufacturing processes, especially those of producing fuselages, are converted to mass production and if the craft-manlike procedures are dropped.

This would also result in a reduction of skilled technicians needed per unit produced, quite apart from the simultaneous drop in cost. Such mass production methods are opposed by people who argue that the conversion to mass production methods are opposed by people who argue that the conversion initial and subsequent changes caused too much delay so that one cannot produce the most recent aircraft in this manner; they prefer to have fewer aircraft of the most recent model rather than
several times as many of the preceding type. This objection is not valid.

If a model is designed for mass production from the outset and planned accordingly -- this does not exclude that the test model continue to be built according to craftsmenlike process -- and if plant is available, which is properly equipped for this type of production (Installation of sheet molding and stamping machine, conveyor belt, etc.), the time lag between the end of test run and the start of deliveries need be no longer than hitherto. The deliveries, however, would be incommensurably larger.

The construction of appropriate plant facilities is part of the industrial preparatory stage.

V.

The entire task is of extraordinary dimension that permeates all spheres of the war economy. Its execution is possible only if armament is given absolute priority in the field of industrial production. For this purpose plenipotentiary power placed above the authority of any individual responsible for a single sphere of activities.

A far-reaching plan with careful exploratory preparation will be a prerequisite for this new expansion. The size of the task and the competition with the United States will make it compulsory to start immediately along the full length of the...
production front, timeliness, completeness, and speed with which this task is undertaken may decide our future.

The author of this R Man memorandum — F.W. Siebel — who was a former World War I pilot and aircraft manufacturer, had clearly recognized the significance of the air force and the industrial capacity required to back it up. In contrast to the political and military leaders, he knew how important the air force was for the eventual issue of the war. This memorandum also indicates that German industrialists were well informed on what was happening in the United States as well as on the armament potential of that country. There is no reason to assume that the agencies responsible for the political and military decisions were not equally well informed.

If Hitler as the solely responsible dictator did not draw the respective conclusions from such information, this may be explained by his aversion to having his preconceived plans thwarted by disagreeable statements concerning possible outside interference. The fate of this memorandum shows his way of thinking and how he skipped over realities that were unpleasant to him. In the autumn of 1940 the memorandum was submitted to Hitler, Goering, the Chief of the Luftwaffe General Staff Jodl, and the Chief of the Luftwaffe Operations Staff, General von Waldau. The Minister of Armament Production, Dr. Todt, who was then considered very highly by Hitler, flew with the memorandum from Siebel to Hitler. His intention was to strongly endorse the theory that the war would be decided by
the air force. During this conference Hitler tapped the also present Chief of Air Forces Supply and Procurement, General West, on the shoulder and
stated: "All that has been written here — it may be that the gentlemen are right — but I have just about won the war already."

Hitler issued strict orders that the memorandum not be discussed with other persons or given any publicity.

No wonder things took their uninterrupted course in view of such a disastrous tendency toward self-deception. It is only one of the many examples of attempts made to inform Hitler on the enemy capabilities and thus also on his own situation. He disbelieved unfavorable information on principle, if such information did not fit into his pattern of thinking and if he had already made up his mind on the basis of other sources of information. An unequivocal armament policy that was geared to the enemy effort was under such circumstances not possible, since it was Hitler alone who determined the policy.

As late as 1943, at a time when the United States had already entered the war after Hitler had declared war on that country and the air superiority of the Allies made itself felt in an oppressive manner, Hitler rejected all advice concerning measures that would have to be taken in view of the recognized American

\[^{55}\text{Verbal statement of Director Siebel made after the end of the war.}\]
armament capacity. General H. Kammler (Lt. Gen., Ret.) Kammler made the following verbal statement on this subject on 15 March 1946:

"In June 1943 I requested Hitler to triple the strength of the fighter aircraft that were to defend the Reich territory. In so doing, I mentioned Allied production figures taken from a handbook issued by the Armed Forces High Command. Hitler called Field Marshal Keitel and asked him from what source these crazy figures had been extracted. Keitel replied that the Counterintelligence had provided them. Hitler then said that he knew what quantities of steel, machine, etc., such an armament effort would involve. The red book issued by the Armed Forces High Command, which contained this information, was to be suppressed immediately."

"Turning to General Kammler Hitler continued: "If the figures were correct, I would have to stop the offensive in Russia right now (This was the German Operation ZITADELLE) and switch everything to air defense. But the figures are wrong. Now, I must defeat Russia. Once I have defeated the Soviet Union, you can get all you want for defending the Reich. But then you will not need anything any more."

A psychiatrist might draw some interesting inferences from Hitler's categorical assertion that the officially compiled information regarding American and other Allied production capacities was wrong. The fact remains that for Germany's fate..."

56 General Kammler, who now serves as Inspector of the Air Forces of the Bundeswehr with the rank of lieutenant general, was Commander of the Home Defense Flight Unit in 1943.
these concepts of the country's head of the government were disastrous.

After the United States became an active belligerent, the American press grew constantly more reserved. Despite this obvious reluctance to reveal military information, the German collection agencies, which continued to have access to these new media through neutral countries, were able to trace both the strength and the expansion of the United States Army Air Force. Re-pleaching did not produce any results. Attempts to infiltrate agents into the United States via submarines or through neutral countries were limited to isolated instances and proved ineffective because almost all agents were seized by the American authorities.

The people interdicted, established to keep track of the aircraft transferred to Europe ever since the war started, provided complete data on all flights across the Atlantic along both aircraft transfer routes.

With regard to prisoners interrogation it has already been mentioned that the prisoners made during the first months after the arrival of American units on the European continent were very willing to make free statements, but that subsequently prisoners became increasingly reluctant to do so.

Nevertheless, even during the last years of the war the interrogation of prisoners remained one of the most important sources of information concerning the United States Air Force and its air armament.

Additional sources of information were the examination of unladen aircraft, such as aircraft that had been shot down or had performed emergency landings, and photo files revealing enemy of the air bases used
by the American fliers. The sum total of information produced was such that the German were never in doubt about the existing and steadily increasing strength of the United States Air Force units that were committed against their country.
IX. The Open Channel Approach in 1944

No special intelligence effort was needed to establish that an invasion of the European continent was planned by the Allies — by 1943 at the latest this was an open secret. The task with which all fields of intelligence collection were confronted was — when, where, and in what strength the invaders intended to land.

For obvious reasons, the covert intelligence collection was particularly interested in obtaining the answers to these questions. The contacts communicated established for this purpose mainly via neutral countries; but attempts were also made to airland agents on the British Isles in order to obtain insight into the events across the Channel. Because of the difficulties that had to be overcome and because of natural enemy efforts at secrecy and concealment, the information consisted only of bits and pieces which — even after they had been put together — gave only a blurred picture of the situation. This is all the more comprehensible, since many false reports — mainly from agents who worked for both sides — had to be taken into account. One must state in this connection that covert intelligence did succeed in obtaining important information concerning the time and place of the Allied landings on the European continent.

Other intelligence media therefore had to be employed to supplement
the scanty reports from agents. First, there was the Identification of
\textit{informers}. There again, the results were poor. The discipline observed
by the Anglo-American crews in making statements has already been mentioned.
Moreover, they were naturally completely ignorant of such \textit{Top Secret} matters,
to which they had no access. They, too, could provide only minute bits
and pieces.

\textit{Aerial reconnaissance} was more productive. Photo interpretation
produced information on reinforcements at air bases, the construction
of new airfields, and the shipping as well as landing craft found at ports.
In the course of time, particularly in spring 1944, a certain amount of
progress in the preparations for an invasion was observed in that manner.
But aerial reconnaissance was equally unsuitable for obtaining information
the outline and place of such an invasion. Intensified preparations in south
and southeast England gave certain clues that the landings of the bulk
of the force would take place somewhere along the coast of northern
France. The almost impenetrable fighter screen above England complicated
air reconnaissance missions to such a degree that results were obtained
only accidentally. Thus, no information could be gathered as to possible
secondary landings, for instance in Norway, Denmark or perhaps along the
German North Sea coast.
Radio intercepts provided important information, particularly concerning
the organisational structure, strength, and disposition of forces. The
well-integrated intercept service that by then had been functioning
opposite the British Isles from stations in France, Belgium, the Netherlands,
northeastern Germany, Denmark, and Norway monitored every message and every
that signal radio operating in the British Isles transmitted. Radio operators
and cryptographers were well acquainted with their tasks and were able to
immediately detect the slightest change in the radio communications
operations. Changes of frequency or codes introduced by the enemy presented
no obstacle since they were uncovered and solved without delay. It was there-
fore primarily to the credit of the intercept service that already in spring
1944 — long before the start of the invasion — exact information on the
organisational structure, strength, and disposition of the invasion forces
was available. However, the most crucial information concerning the vital points
where or the landings would take place, that is to say the data that
were of the greatest interest for preparing the defence, were not made
available in time by the radio intercept service. Only shortly before the
start of the invasion did the radio intercept service obtain the first
indications in this field; they were rejected as improbable. The former
Chief of the Western Section of the Intelligence Division, Luftwaffe High
Command, West-En (Col. Ret.) Kienitz, made the following statement on
this subject:

"As Chief of the Western Section I witnessed in 1944 that

[57] According to a verbal statement made to Professor Suchenwirth on
3 April 1956 (Karlsruhe Collection).
an important intercept made by my monitoring personnel was ignored. I had established that north of the Isle of Wight there were two enemy groups connected by radio communication, each having its own radio network.

Since I knew that the Americans linked their ground forces to the tactical air force, I identified these groups as the forces assembled for the invasion. I transmitted the interpretation of this information, namely that one should not count on an invasion of the Channel coast, but rather of the coastal area which was eventually selected by the enemy for their landings. I addressed the corresponding teletype message to the Western Intelligence Branch of the Army. They replied that my interpretation was wrong. The area I had assumed as potential invasion sector did not have sufficient harbor installations for landing strong forces. The records concerning this matter were transmitted to Section Rhodes; they must still be among the papers of that agency."

This statement shows that the German Supreme Command had formed its own opinion on the probable location of the impending invasion. For lack of other information, the military leaders had based their preconceived notions on naval warfare and general staff theories. They failed to take into consideration — partly because of their ignorance — that the enemy might be so flexible and might have sufficient means to overcome
difficulties that appeared insuperable to the German General Staff and that they might land precisely at the point where they were not expected to do so. [Gottchling] made the following interesting
statement on this subject:

"T.Z.W. On this subject was [Intercept] report that the time and place of the invasion were recognized in such good time that the Intercept Regiment West and individual officers were given special commendation."

"In a study published in the [Wehrwissenschaftliche Fundamente in 1943 entitled [Karl] von der Wehrwissenschaft des Juni 1944 (The German Air Force during the Invasion 1944) the following information was provided concerning the imminence of the invasion:

2 June certain indications pointed to the imminent start of a major operation. Around 2100 the enemy radio broadcast sabotage instructions to the partisan units in France, the execution of which was to take place within 24 or 48 hours. Toward 2200 weather reconnaissance aircraft of the American heavy bombardment units transmitted weather reports. From 2300 onward weather reports were transmitted for the United States tactical air force units. Toward 2300 the intercept service monitored radio messages indicating the transfer of British close-support flying units into the southern area. Shortly before midnight the London radio broadcast that the invasion would begin within the

58 [Karl] von der Wehrwissenschaft des Juni 1944 (The German Radio Intercept Service during the Invasion in June 1944), Extracts from Study in the Karl-Rühe Collection.
59 Apparently a typographical mistake. Should probably read 5 June.
next 48 hours after 0000, 6 June. With all these indications coinciding, the
advance message center Paris of the Radio Intercept Regiment West
recommended that the subordinate intercept units maintain increased alert.
After 0235 intercepted messages indicated the assembly of United States
heavy bomber units north of London. Meanwhile, after 0030, airborne landings
accompanied by simultaneous air bombardment took place in the area between the
Seine and Orne estuaries. The area of the German Fifteenth Army headquarters
north and northeast of the Seine — had been put on a preliminary alert status
after midnight. The same was true of the Dieppe Antiaircraft Group at 0127
and the LXXXI Army Corps at 2200. The invasion forces were on the move.
Despite the aforementioned preliminary alert, the enemy achieved surprise,
and the landing succeeded from the outset."

The author of the above statement supplemented this information by
answering as follows to a questionnaire:

"The fact is that the radio intercept services of all three arms of
the Armed Forces had kept track of the continuous buildup of the enemy
invasion forces down to almost battalion-size units. Moreover, during the
night of the invasion the assembly of the heavy bombardment aviation above
the British territory had been recognized in time (In those days, however,
such a concentration of forces took place every night for raids on Germany).
Furthermore, the British radio broadcast — by mistake —
a report on the execution of the invasion in one in-tense (i, my-self, have
read the reference in a teletype message of the Armed Forces High Command,
when I was in London). Despite -one attempt at deception by parachuting
(Tr: elsewhere (??))
dummies, the airborne landing- and parachute jump- on the Cotentin Peninsula
were very quickly noticed; but at first no major landings were expected
because:

a. The weather conditions were distinctly unfavorable for air and

   naval operation-;

b. Naval expert- considered the tide as unfavorable for seashore

   landings; and

c. The Armed Forces High Command had — in contrast to the Navy —

   always assumed that the invasion would take place in the Dunkerque-

   Calais— Dieppe area."

"For these reasons, precious time was lost. Even after the invasion

forces had made full-scale landings in the Seine Bay and the operation

was in full swing, the Supreme Command could not see its way to moving the

major ground forces stationed in the above-mentioned Dunkerque-Calais area

toward the Seine. Even at that time, the major landings proper were still

expected in the Channel-coast area mentioned above. The time thus lost

could never again be compensated because the enemy air superiority that now

became fully effective made movement of major ground forces extremely

difficult."
If the intercept achievements are given special emphasis in this study, and that with full justification, one must mention after all that this collection medium was not capable of establishing the time and place of the invasion in such an irrefutable and timely manner that would have permitted to concentrate major ground forces for the defence of the actual invasion front. This would have required strict coordination of all total intelligence collection media and a concentration of effort toward the achievement of this one single purpose.

If the important messages and observations of the radio intercept agencies during the night of 5 - 6 June 1944 were not immediately utilized by the German field commanders, this would probably have to be attributed to the organisational separation peculiar to the radio intercept service, particularly within the Luftwaffe. The main reason for this deficiency, however, was that the key military personnel and general staff officers of the Luftwaffe (Armed Forces) knew too little about the capabilities of this technical agency and did not have sufficient confidence in the reliability of this source of information. They were not sufficiently indoctrinated in the utilization of this important medium of intelligence collection and they did not understand the messages it conveyed. Significant for this state of affairs is the fact that Speidel does not mention one word about the important function of the radio intercept service in providing preliminary intelligence and tracing the
event of the night of 5 - 6 June 1944 in his book "Invasion 1944."

After the invasion got underway, the intercept service continued to be one of the most important media of intelligence collection. The other media available were primarily front-line reconnaissance and the interrogation of prisoners of war until the war ended. The Germans had failed to establish an effective espionage service in the rear of the advancing Allied armies, probably because they had not counted on such a scale of events.
Chapter Nine

Intelligence and Operations

Purpose

The purpose of the Intelligence collection effort is to provide the political and military leaders with information that will enable them to make a correct estimate of the situation of their own country and of the enemy situation. In addition, in wartime the intelligence collection agencies should submit an up-to-date record of the existing military situation which serves as a basis for military and political decisions. Since a correct estimate can be made only if maximum coverage is obtained, this implies automatically the requirement that all possible sources of information be used for preparing the estimate of the situation. Although the German military leaders realized properly the value of collecting and evaluating information, they did not draw the logical conclusions from the above principles. One of the cardinal mistakes made was the dissipation of effort, which will be discussed in more detail in the following pages. Such a dissipation will occur only if a precise political concept is lacking, which in turn will result in the absence of a precise directive covering the entire intelligence service.

After Germany had been defeated in World War I, it had only few organizational and financial resources for collecting information pertaining to foreign countries. The
diplomatic foreign service of Germany — in contrast to its counterpart in many other countries — had no covert intelligence function. By tradition, it was not related to any espionage service or foreign agent.

The German foreign service was restricted to the traditionally proper method of collecting information through diplomatic channels. Naturally, the government to which the diplomat were accredited could easily control the flow of such information. The foreign service collected no military information, let alone target information for a potential commitment of air force units. The diplomat would have refused categorically to have any dealing in such touchy matters. After 1933 this orientation remained basically unchanged. It has already been mentioned in this study that the military attachés appointed after 1933 (Dr. ?) had no intelligence collecting function which could be carried out solely under cover. Wherever there were supposed to have been any deviations, these occurred upon the individual's own initiative or upon request of subordinate agencies.

The only agency concerned with collecting secret military intelligence during the years after World War I until the organization of the Armed Forces was the Counterintelligence Branch of the Reichswehr (100,000-men Army) Ministry. It was designated Counterintelligence Branch because its primary function actually was to protect the small Reichswehr during its buildup against foreign agents and against
penetration by communist and other subversive elements. The relatively small sum of money available to this branch were obviously insufficient for obtaining anything like an adequate idea of the military situation and of the new developments all over the world. The branch was therefore forcibly restricted to direct its attention to the most vulnerable points along the Reich border opposite Poland and Czechoslovakia. Shortage of funds for establishing an extensive espionage service even for covering only this field of activities limited its ability to obtain an accurate picture of the intentions of those di-quieting neighbors by secret air reconnaissance along and beyond their borders. This type of collecting information has proved to be the most reliable and effective method and has — as previously mentioned — been expanded subsequently also to other countries. This activity can be carried out only by infracting the air sovereignty of the countries concerned, but even so it does not transcend the limitations of other secret intelligence activities. The photo-reconnaissance activities of the Special Squadron Busehel produced clear and unequivocal information which proved valuable during later days not only against Poland and Czechoslovakia but also against other countries. On the basis of practical experience one may state that no power can renounce peacetime air reconnaissance to supplement the
other intelligence collection media. Comprehensive information on fixed
departments for war, on the construction of routes of transportation,
on the extent of the industrial mobilization, on the installation of supply
facilities, etc., can be provided only by continuous air observation that
leaves no gaps. All the other intelligence collection media will be capable
of producing only bit, and piece, but they will constitute precious-
 supplements to the data obtained from a photograph. The difficulties, which
improvement in direction finding — an auxiliary means of air defense —
create in carrying out peacetime air reconnaissance mission, must be
compensated for by systematic technical improvements in developing
the models of aircraft needed for this purpose, be they crew-served or of
the missile type.

The National-Socialist state ignored the restriction of the Versailles
Treaty also in the field of intelligence. As a result, concurrently with
the activation of the new Armed Forces, the secret military intelligence
service was drawn up on a large scale. This task was assigned to Captain,
later Admiral, Canaris, as he has been pointed out previously. Canaris was
specially suited for this assignment. He had "a sixth sense for obtaining
information; his resourcefulness in carrying out new tasks
was as remarkable as his resolution in transposing his ideas into action."

Deverknecht, *Waffen-SS: Pflichtenbewusstsein* (The Balance Sheet of World
War II). (Tr.: No page number indicated.)
Since apparently the right person was here in the right place, the partial failure of the German intelligence collection poses the question whether the organization had been adjusted to its mission. Even though one must agree that the unification of the secret military intelligence effort on an armed forces basis was right, it must seem wrong that the head of the state tolerated the creation of a number of other intelligence services in addition to this central agency. Aside from their proper tasks, these intelligence services showed a predilection for collecting military intelligence without having been assigned a special mission in this field or possessing the necessary qualifications or other prerequisites for this purpose. Thus, the Heeres-Abwehr-Stab (HA - State Security Service) built up an intelligence service in foreign countries, which took up 'sizeable proportions in some instances. The foreign organization of the National-Socialist Party also considered it one of its tasks to dabble in collecting intelligence - Goering formed the so-called Research Office of the Luftwaffe, an organization that mainly served to monitor the communications with foreign countries and the domestic telephone conversations of foreigners and foreign diplomats. This agency had - apart from its cover designation - no relation whatsoever with the Luftwaffe. Finally, the Foreign Ministry under Ribbentrop could not deny itself the privilege of establishing its own secret intelligence organization outside diplomatic channels. Because of its 'shortage of funds', however,
the latter organization remained insignificant, but this made it no less liable to further increase the confusion created by such diversification. All these agencies carried out their activities in one and the same field, and each agency had maximal ambition to collect also military information and to impress Hitler with the profundity of its knowledge. As an autocrat, Hitler was inclined toward making decisions that were not based on realistic examination of available precise information originating from competent agencies. On the contrary, he wanted to see the situation as it suited his purpose. For this reason, the non-military agencies in particular were inclined to encourage this natural tendency and submit situation reports that Hitler preferred to listen to over the realistic facts presented by the competent military agencies.

The lesson that might be learned from this is that it is detrimental for forming an opinion on political and military problems, if several organizations collect intelligence information independently of one another within the same area without clear delineation of responsibility. To obtain a clear picture of the situation, that is neither blurred nor distorted, be it in peace or wartime, it is necessary to make any one agency responsible for the collection effort or at least to control the entire collection by one agency.

But even if there might be differences of opinion on the proper method
of intelligence collection, the need for unified and centralized evaluation cannot be questioned nor can it be subject to discussion after the experience of World War II. Quite apart from the other organizations engaged in intelligence collection, which had their own evaluation units, the evaluation of military intelligence was not assigned to producing agency — the Counterintelligence Office of the Armed Forces High Command — but was the function of branches that the three services had especially established for this purpose. The transmission of incoming information without evaluation and generally also without comment to these "agencies", which were unrelated to the collection of information, could produce satisfactory results only as long as the responsible personnel in the general staff and in the counterintelligence agencies were operating as one team. This was the case in peacetime and during the first year of the war. However, as soon as frequent personnel change occurred, this carefully tuned instrument got out of tune."

The general staff officers assigned to evaluation duties in the respective branches of the three services had not been trained in counterintelligence or collection methods. This was particularly true of the young officer replacements. As a result, incoming reports from agents were often wrongly evaluated. This led to wrong evaluations of the situation by individual  

service, and -- even worse -- to different interpretations of the over-all situation among the services. Actually, each service prepared its own estimate of the situation, and the Armed Forces High Command based its decision on a make-shift evaluation by the Counterintelligence Office.

Since furthermore the "Commander in Chief of the Armed Forces" -- Hitler -- had a preference for using other organizations, this led to a terrible confusion in forming an opinion on one's own and the enemy's situation.

The lesson that should be learned from this experience is unequivocal.

The evaluation of intelligence information should be concentrated in one agency. It must be ascertained that the incoming information of all types is submitted to uniform evaluation procedures so that no detail, however unimportant it may seem, will be ignored because of insufficient awareness of background information. Such a central evaluation, solely analytical, and interpretation agency must be responsible to the chief of state, the government, and the military leaders that all sources of collecting and obtaining information have been exhausted. The agency must also be responsible for composing a factually correct picture of the situation from carefully examined and scrutinized information and for providing factually correct information for all those political and military top-level agencies, which need such information and knowledge or even an over-all estimate of the situation for the exercise of their
functions. The special requirements of certain political or military
top-level agencies would have to be submitted to the central intelligence
agency as request, and that agency would make every effort to provide
the required information. This is particularly true in the case of target
selection and analysis for the air force during peacetime. For its usage,
the air force will need other data than the army or the navy to fulfill
the tasks assigned by the joint high command or the chief of state. The
requirements of the other services, however, will also be different from
those of the air force. On the other hand, since most information will be
used by the three services, there will not be any difficulty in satisfy-
ing such special requirements.

The prerequisite for joint evaluation, interpretation, and analysis
is, however, a clear and unequivocal armed forces high command with a
joint general staff. It is necessary that all military leaders and general
well staff officers be acquainted with the significance of the collection,
evaluation, interpretation, and analysis of intelligence as well as with
the methods of operation of the organization. Only thus will they be in
properly a position to judge the value and worthlessness of individual items of
information and reconnaissance. The various branches of the intelligence
service and the methodology of evaluation, interpretation, and analysis
must be explained already to the officer candidate in very general
At the military academy for general staff officer candidates this branch of the service must be dealt with in detail. This is particularly true of the intelligence service of higher headquarters, which in wartime have to take care not only their own limited tasks but also have to contribute to the overall intelligence effort. In this connection one might mention the exemplary work done by the intelligence officer of X Air Corps in the Mediterranean area. And especially in this context it seems significant to point out the importance of the radio monitoring and direction-finding service. Many troop and general staff officer in World War II had no idea of the potentialities of the latter two service. The officers of all three services should be fully acquainted with these two media — they must know how to use them, as they use bread for their daily meal. The more a future war will be a war of the air waves, the more the knowledge of this branch will become part of the daily routine of higher, intermediate, and also lower headquarters. Obviously, radio monitoring agencies will be integrated into the organizational structure of every command. It cannot be admitted that these important sources of information become separate organizational entities — such as the radio monitoring service of the Luftwaffe in World War II — and that it be left to the personal initiative of individual commanders and headquarters to produce interesting results.
A very important problem is the choice of key personnel; this concerns not only the selection of the head of the organization but also the composition of the top-level and subordinate intelligence agencies. Since modern warfare is not only a war of soldiers and weapons but also a war involving economic potential and ideologies, it seems ineffective to put the military solely in charge of the over-all conduct of the war and above all of the intelligence collection, evaluation, interpretation, and analysis effort. In wartime all top-level command staffs should be led and staffed by the best available minds also from the political, scientific, technical, and economic spheres. Within the framework of the draft laws these personalities must be put under a peacetime obligation — instead of participating in military exercises — to make their knowledge fully available at any time in the position they would have to occupy during wartime. It is obviously wrong to make outstanding economists and technicians, excellent experts on foreign countries of interest to the war effort, work who know these countries' political structure, economy, etc., on potato powder, to use plain language. The German intelligence could have produced better results if it had taken such ideas into consideration. The mechanics, the organizational structure, its integration into the over-all framework of the command — these are all important matters, but far more important is that the
There have been some suggestions and initial steps toward centralisation of the intelligence effort in Germany. The previously mentioned study BLAU, which was concerned with operations against Great Britain and contained information for such an eventuality, produced shortly before the war, was for instance a composite effort of all military, technical, economic, and other civilian agencies. Since these agencies were the best qualified to provide contributions for such a study, this was the best ever produced in the field of intelligence evaluation, interpretation, and analysis.

During the course of the war, the Chief of the 5th Division of the Luftwaffe General Staff suggested that evaluation be concentrated within one single armed forces agency; the Counterintelligence Office of the Armed Forces High Command also made plenty of suggestions for more appropriate solutions. But all these remained without result because the supreme command agency lacked maximum proper understanding or anything more probable — because there was a lack of confidence in such an armed forces agency, the chief objection being that it would not function as desired.

The corresponding orders were therefore never issued. Hitler preferred to obtain his information from a variety of sources, and in so doing he selected the version he liked best. The unification of the intelligence collection of the Armed Forces High Command and the **Verwaltungsdienst** (State Security Service), which was carried out as of 1 May 1944, under the Chief of the
SD was not the type of solution suggested in this context. Rather it was a reversal of a meaningful organization, since the collection of information, that is to say the secret military intelligence service, was put under the tutelage of the police.

One of the basic principles learned from the course of World War II was that the intelligence service — collection as well as evaluation, interpretation, and analysis — must be given steadily increasing importance in the conduct of operations in the age of global warfare. For the employment of air force and for a war with intercontinental missile the entire structure of all potential enemy countries has to be studied in greatest detail. Any neglect in this sphere will have the consequence that the first decisive blow fail to hit their targets — a mistake which cannot subsequently be corrected.

Finally, a properly conceived intelligence service is not only a preparation for the employment of weapons in wartime but also a peacetime means of checking one's own position and on occasion a means of reminding oneself not to take a threat of war too seriously. If Hitler had properly used and taken into serious consideration the information produced by the military intelligence service — this is what a correct analysis of a careful evaluation of the enemy situation and his potentialities deserves — he could not possibly have taken the political and in wartime military
decisions that he actually made. His inclination toward ignoring the
information from military intelligence sources or even toward declaring them
absolutely wrong and interpreting them in such a manner that they suited his
intention, finally led to many wrong decision that in turn brought about
the defeat and loss of the war. His totally wrong decisions in the field
of air armament and the employment of the air force as a tactical support
force of the ground troops may be attributed to this factor. If he had
properly considered the information from the various intelligence sources,
he would not have felt tempted toward a military adventure at a time when the
German Armed Forces were still in the midst of their buildup. As the most
powerful and most effective element of a modern military force, the Luftwaffe
should never have been organized only as a tactical auxiliary arm with limited
industrial and manpower resources for its future development. Hitler
should have taken into account the information on developments in foreign
countries and should have provided the production and operational facilities
from the outset so that the Luftwaffe would have had the means to maintain
its superiority over all potential adversaries. Naturally, Hitler alone was
not at fault — his associates are all those who knew the situation abroad
and were aware of these developments and who did not have the courage to
express their opinions with the necessary
emphasis; nobody can relieve them of this responsibility.

In concluding one must state that it proved to be a fatal mistake to stop or neglect the intelligence effort vis-a-vis certain countries — alli- not to be excluded — because of political considerations.

The neglect and temporary stoppage of the intelligence collection effort in Great Britain and the United States and the interdiction to carry out collection activities in Italy led to disastrous mis-conclusions that could not possibly be corrected during the war.

Modern warfare is not entirely fought by arms — it is a struggle between nation and ideologies and perhaps a struggle between entire continent. All resources enter into the struggle and are used to defeat the enemy and to survive. The basic prerequisites for this struggle are created in peacetime by appropriate development in armaments and by protective measures suited to safeguard one’s own people and resources.

The necessary proportions correspond to the situation. Only a universal intelligence service without gaps can provide satisfactory coverage. The intelligence service therefore assumes even in peacetime a decisive role in winning any future war or — if one wants to say so — in preventing such a war.