

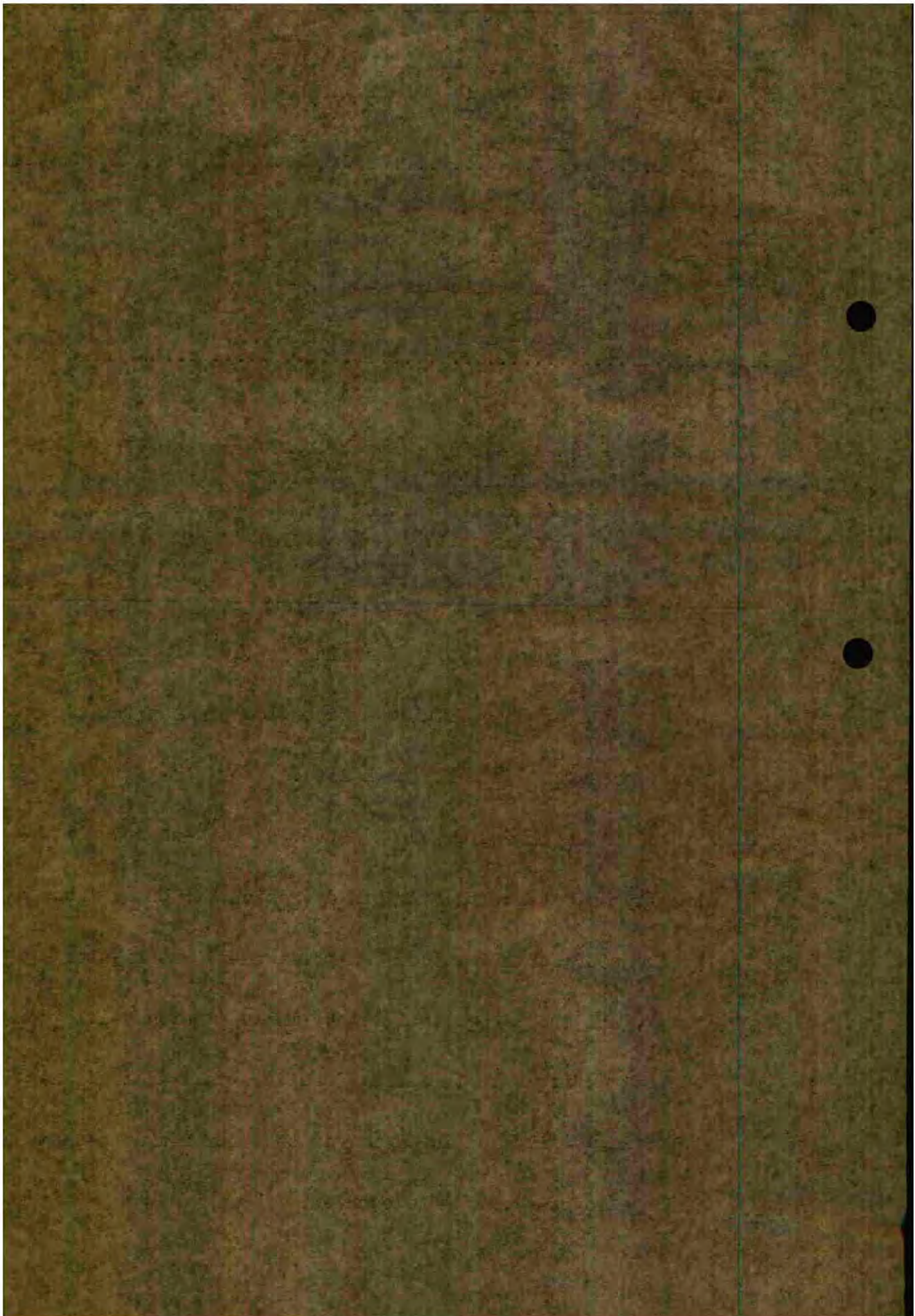
255

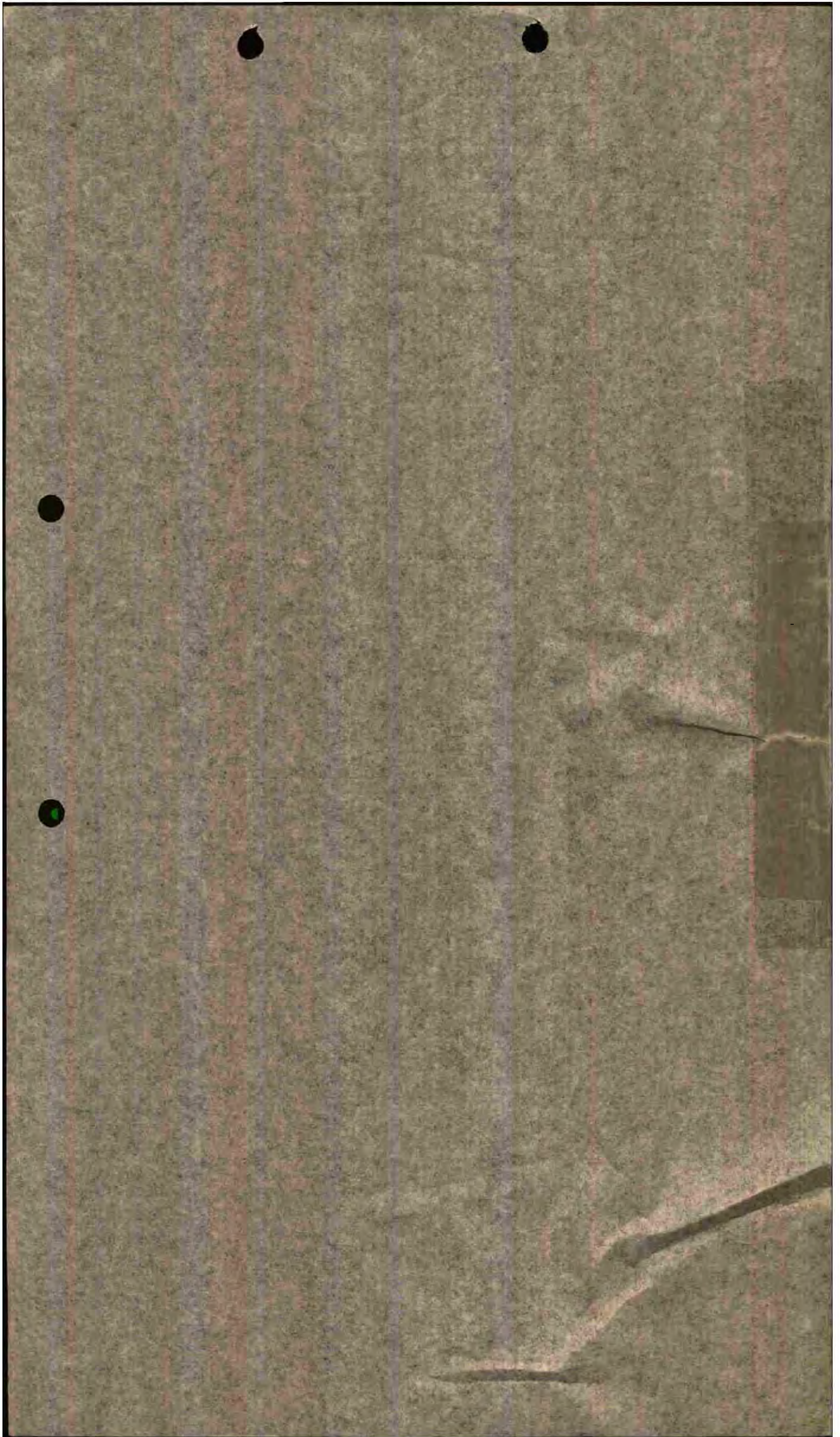
CHAPTER TWO
APPENDIX 15---Continued10. a. Initial Targets for Attack.

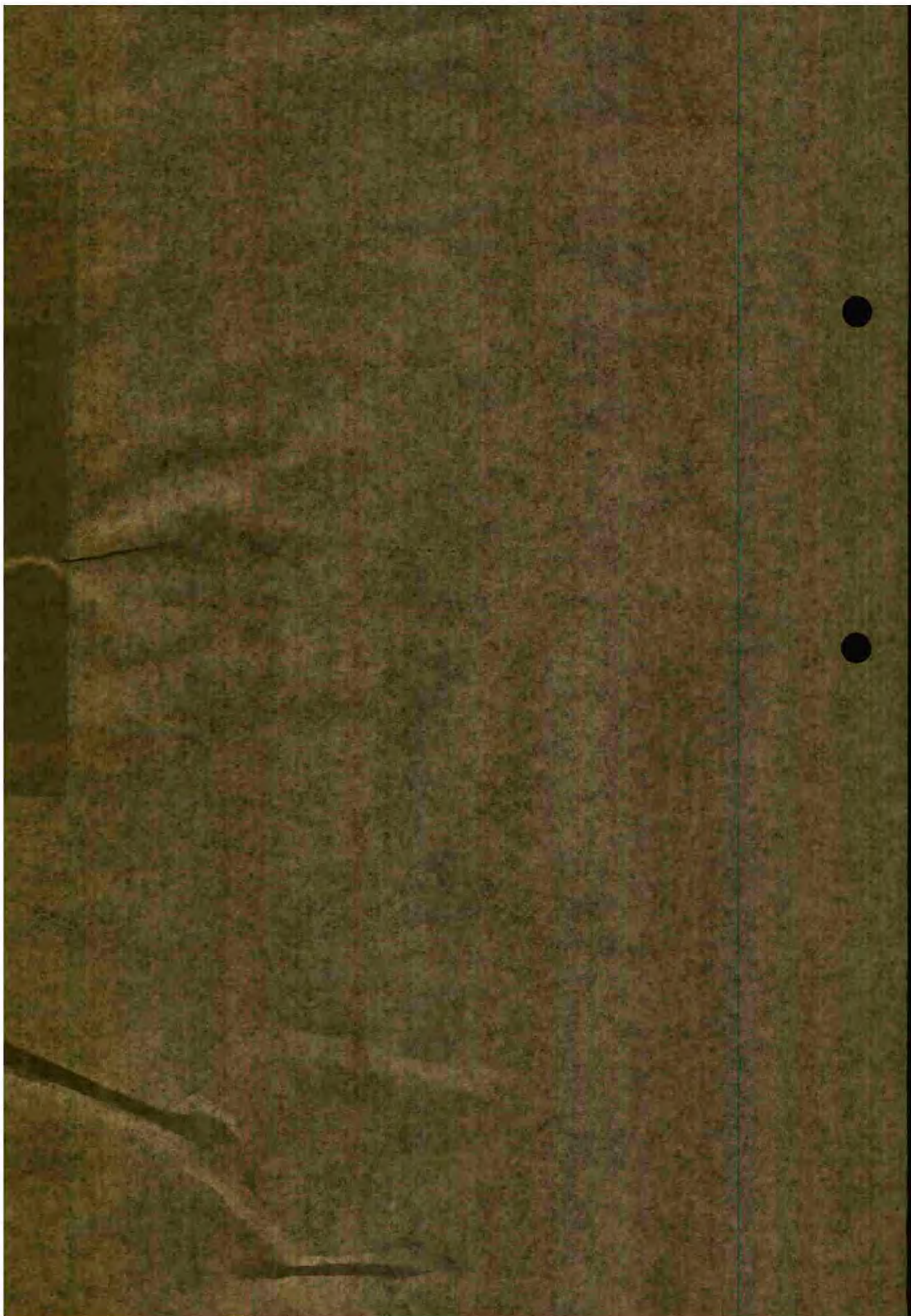
Corps	One group to attack each of following targets	Target	Leaves available to Corps	
I Air Corps	Amiens-Glis	1052	4 groups	
	Amiens de Wal (in II Air Corps zone)	1053		
	Dive Am.	1101		
II Air Corps	Reims-Champagne	1039	6 groups	
	Louvrois	1001		
	Thionville-Basse-Yutz	10103		
	Metz-Neuf	10109		
V Air Corps	(7 bomber groups)	Reims-Leslay	10100	2 groups
		St. Dizier	10177	
		Séennes la Partise	10163	
		Reims A.S.	10104	
		Reims-Neuville	10199	

b. The opportunity existed on the first day of attack to deliver a powerful punitive blow against the enemy air force which should be fully exploited.

With the exception of a number of five-bomber units directly supporting the Army in operations to break through the frontier fortifications and the twin-engine fighter groups, all groups assigned definite missions will therefore be committed in the first active attack against airfields in Belgium and in the zones of Cambrai-Amiens-Chateau Thierry-Troyes-St. Die-Diedenhofen.







Main emphasis will be on action against enemy fighter

forces. No definite information is available on enemy fighter

units. Apart from the ^{initial} targets of attack quoted in Paragraph

10a, above, units will search them out primarily in the follow

in airfields:

	<u>Target</u>
Bezny-et-Leizy	10498
Laon-Chambry	10 75
Athies-sous-Laon	10 76
Juvincourt	10455
Chatel-Chéhéry	10102
Proenes-le Patron	10513
Suippes	10 96
Vitry-le-François-Veuclery	10175
Ecury-s. Joole	10404
Villeneuve-les-Vertus	10167
Mars-la-Tour	10106
Chambley-Haguéville	10107
Troyes-Barberey	10165
Vittel-Auzainvilliers	10186

Uncommitted groups which initially cannot be assigned targets because of inadequate reconnaissance information as to the enemy ground installation in operation, will attack airfields detected by battle reconnaissance units as being used by the enemy and open fuel storage depots and dumps. Battle reconnaissance will commence with the first border crossing.

If weather conditions make it necessary to delay take-off for the ~~first~~ planned initial attack, individual groups

or the majority of the groups not committed for specific missions, as the current situation requires, will be held in reserve for Army support operations.

c. Should the enemy forces commence their drive before the opening of the German offensive, all units of the I and II Air Corps from the outset will be committed in support of the Army. In such case the V Air Corps alone will carry out the planned initial surprise attack against enemy air bases and airfields from which enemy air forces are known to be operating in the areas of Cambrai-Aziens-Rouilly s. S. (inclusive)-Troyes (inclusive)-St. Dié-Diedenhofen. Main emphasis within the whole area will be in the northern parts. The action thus planned under the Instant Operation (Sofortfall) will be ordered at the appropriate time by the Air fleet headquarters.

d. In the event of Y-Day having preceded D-Day (1-15) the targets assigned under Paragraph 10a, above, for the initial attack will not be binding for the II and V Air Corps. These corps will select their own targets, under such circumstances, on the basis of the latest reconnaissance reports and the results achieved in Operation Y.

11. After execution of the first strike against the enemy air forces, the mission of direct support for our army attack and of combat action against enemy reinforcements moving

forward by rail and/or road will take precedence over all other missions. For these purposes:

I	Air Corps	will cooperate directly with	Fourth Army	and
II	"	"	"	"
			XII, XVI, and XIX	Army Corps.

The basic "Directives for the Conduct of Combat Operations in the Battle of Defense" (WFL. Kdo. 3 Nr. 1450/39 L. Kdos. v. 27. 10. 1939 I. and II. Ed.), which will be issued shortly, and the directives for Rail and Road Interdiction Operations (WFL. Kdo. 3, Nr. 1135/39 L. Kdos. v. 13. 10. 1939) remain effective.

Bridges will only be destroyed in agreement with the locally responsible army level headquarters. Attacks against sizable towns (with more than 5 000 inhabitants), including military targets they might contain, are subject to prior approval by the air fleet headquarters. Excepted from this restriction are attacks against troop concentrations at the entrances to or exits from such towns.

To insure that profitable targets can be attacked without delay, corps headquarters will hold in reserve, dive- and other bomber units constantly alert for immediate takeoff.

b. On the first day of attack, dive- and other bomber units will be required to fly two missions. The second strike will be primarily against moving motorized enemy columns as

soon as reconnaissance can establish definitely that strong enemy forces are advancing towards and across the Meuse and Semois Rivers. In the following few days also, efforts will be made to have units flow several missions daily, at least until the Belgian rear defense lines behind the Ourthe River, at St. Hubert and Neufchateau have been breached.

c. If the attack by the Fourth and Twelfth Armies should make particularly good progress, the Commander in Chief of the Air Force has reserved his decision to transfer the VIII Air Corps to the Third Air Fleet so as to give these armies increased air support from D-Day plus 1 or D-Day plus 2 on.

Under direction by the Commanding General of the I or ^{Air} II Corps, VIII Air Corps units then would operate from VIII Air Corps' assembly area.

If committed in the zone of Fourth Army, VIII Air Corps will establish its command post in prepared premises at Kronenburg and will receive the I Dive-Bomber and 77th Fighter Wings from the I Air Corps; if committed in the zone of Twelfth Army, the VIII Air Corps will establish its command post in prepared premises at Bitburg and from the II Air Corps will receive the I Group, 136th, and I Group, 79th Dive-Bomber Wings, and the 3d Fighter Command.

d. The II Air Corps must be ready whenever the need might arise to support the Sixteenth Army ^{with strong forces} in action to repel an enemy counterattack across a general line from Montmedy-Biedenhofen.

The V Air Corps would at the same time receive instructions to prevent the forward movement of enemy reserves into the area of Verdun-Bail le Duc-Nancy-Metz.

e. In addition to supporting the attack by Army forces, systematic reconnaissance will be conducted to detect enemy air forces in the operational zones of the air corps and take them under attack, initially only in the areas of Cambrai-Amiens-Troyes-St Dié-Biedenhofen.

If the I and II Air Corps because of requirements for Army support should temporarily have no units available for such action, V Air Corps support will be ^{requested} ~~requested~~ in good time from the Third Air Fleet.

If bomber or twin- or single-engine fighter units detect enemy fighter units on the ground, action against them will take precedence over all other missions. However, the forces committed in such action must not exceed those required by the size of the target involved. To what extent the same principle can be applied against enemy bomber units detected on the ground will depend on the current mission and the size of the target detected, but efforts must be made to

detail at least some elements for an attack.

12. Once the advance reaches the Meuse River, the following missions might develop for the various Air Corps:

a. I Air Corps. Air Support for the Fourth Army in ~~crossing~~ crossing the river, probably near or at Dinant, with all forces of the I Air Corps, all dive- and other bomber units plus 2-3 fighter groups of the II Air Corps, and if necessary the VIII Air Corps participating (see Paragraph 11 c, above).

The necessity might also develop for air support in crossing the Meuse River at Huy. This will only be possible, however, if the attack at this point does not coincide in time with the attack at Dinant.

b. II Air Corps. Air support for the XIX Army Corps crossing the Meuse River, probably between Charleville and Reuzon, with all units of the II Air Corps, the dive- and other bomber units of the I Air Corps, and if necessary, the VIII Air Corps (see Paragraph 11 c, above), plus 2-3 fighter groups from I Air Corps and XII Air District Command participating.

c. V Air Corps. In circumstances a and b, above, the V Air Corps will commit all or part of its units to block roads leading to the points of crossing. For this purpose

displacements to airfields in the southern areas of XII or the western areas of XIII Air District Commands might become necessary. The main mission, however, will remain combat action against the enemy air forces.

Preparations for

d. Action supporting the ground forces crossing the Meuse River will be arranged by the various air corps in agreement with the locally responsible army level headquarters in accordance with order "Ufl.Kdo. 2, Pzshr. Abt., Ia 07-27, 395/39, A.Kass. Umfacha v. 3. 12. 1939."

If Fourth and Twelfth Armies should attack simultaneously across the Meuse River, the air fleet will commit its main power to support that army which is in the area of main effort.

13. a. The fighter units of the I and II Air Corps, consolidated under a single command (within the corps) will be stationed as far forward as possible. This will at one and the same time provide protection for Army air reconnaissance units, bomber units operating over the front areas, rear communication lines, and the ground organization.

b. An important requirement to neutralize enemy air power is the commitment from the far rear of fighter forces in superior strength on missions adapted to the currently fluctuating situation. If the tactical situation and weather conditions make enemy air action seem likely, the route of

attack of the Fourth Army and of Army Group A will require constant protection by fighter forces in the strength of at least one group. This force should be reinforced if impending large-scale ground operations make it seem likely that the enemy will commit stronger air forces over the field of battle.

14. Reconnaissance.

a. I, II, and V Air Corps will conduct reconnaissance within their zones up to the boundary stated in Paragraph 5, above in accordance with their assigned missions.

Primary requirements are to establish

the whereabouts of British, French, and Belgian air units;

the appearance of British and French air units in Belgium;

displacements of units to areas in Northern France.

Within the scope of their reconnaissance activities, the air corps will insure the maintenance of continuous ~~XXXXXXXX~~ patrols over the Meuse River line during daylight and at times during night.

b. The 123d Reconnaissance Group within its assigned reconnaissance zone will determine the disposition of the enemy air forces, with main emphasis on the areas

between Paris and the coast;

in and around the general area of Paris;
and in the areas of
Chartres-Etampes-Orléans-Chateaudun;
Bourges-Nevers;
the Saon River valley-Dijon-Lyon.

In addition the reconnaissance group will maintain surveillance over rail and road routes as specified in the Directives for Rail and Road Interdiction Operations (Richlinien fuer Bahn und Strassenbekämpfung).

c. Measures must be taken to insure direct exchange of information between the I and II Air Corps and the Tactical Air Support Commands of the armies they are supporting, as well as between Headquarters, 123d Reconnaissance Group and the Tactical Air Support Commands of Army Groups B, A, and C.

15. Main emphasis in air defense activities by the XII, VII, and XIII Air District Commands initially will be on providing protection for the rear communications of Army Group A and all airfields in operation (particularly those west of the Rhine River), and on action far forward preventing the penetration by enemy air units over German territories. Steps must be taken to insure that large towns and military establishments have at least the indispensable minimum of anti-aircraft artillery protection.

b. Should the enemy attack target areas and target

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categories in a ~~YALIAK~~ systematic pattern other than that anticipated, the air district commands, with approval from the air fleet headquarters, may regroup their antiaircraft artillery forces. For this purpose, the available transportation space will be assigned according to schedules to those units intended primarily for displacement. If no enemy air attacks occur in their areas, the VII and XIII Air District Commands must anticipate having to release antiaircraft artillery units to the XII Air District Command.

c. The fighter units of the XII Air District Command will be responsible for air defense in the areas between the Moselle and Rhine rivers and over Frankfurt-on-Main and Mannheim. In critical phases of combat the command will receive orders to assign 1-2 fighter groups temporarily over the zone of the Sixteenth Army.

The fighter units of the VII Air District Command will provide air defense for the area from the boundary with the XII Air District Command to the Swiss border, with main concentration in the Stuttgart area. The necessity might develop for the air fleet headquarters to order temporary release by the air district command of one fighter group to the II Air Corps, or to the XII Air District Command.

16. I AAA-10-11.

With the mission of supporting the Twelfth and Sixteenth

Artillery as well as the XIX Army Corps, the I AAA Corps during the initial stages of the Battle of Defense will provide protection for the assembly of Army Group A forces, with main emphasis on the XIX Army Corps, against air attack. Requests by either of the army headquarters for temporary assignment of individual battalions or batteries to support operations to break through the Belgian and French frontier fortifications will be met if it will still be possible to perform the AAA corps' other missions.

b. As the advance on the ground gains territory, protection of the advance and of supply movements across the numerous river lines (the Ur, Sauer, Moselle, Clerf, Wilts, Alzette, Wamer, and Semois Rivers), against day and night attack, will take precedence. Another important mission will be to protect airfields in use by German units in the Belgian-Luxemburg areas.

c. As the AAA corps advances with the Army forces, the XII Air District Command will take over its defense responsibilities in the Ur-Sauer Rivers areas.

d. Throughout the operations the organization of the AAA corps units must be adapted to the necessity to commit strong elements in battle for enemy fortification lines or in action against bunkers and tanks to protect the army group's left flank.

B, employing all liaison and reconnaissance media, the corps must maintain itself constantly thoroughly oriented on the tactical situation at the combat front and along the routes of the armies in order to be able to arrange the forward displacement of its units by echelons in consonance with the advancing front.

17. For the antiaircraft artillery units assigned under the I Air Corps, the directives for the I AAA Corps apply in principle.

With the opening of the operations the main requirement here will be to protect the traffic bottlenecks in the ~~front~~ mountainous frontier terrain and the forces crossing the Amblève, Ourthe, and Meuse River lines against air attack.

Particular attention must be paid to flank protection against action from Liege. The antiaircraft artillery units committed at the boundary between the Fourth and Twelfth Armies will coordinate their forward displacements through personal contact between the unit commanders.

At the appropriate time the VI Air District Command will take over the protective responsibilities of the 202d AAA regiment as far as the Belgian-German frontier.

18. It is obligatory to maintain strictest secrecy concerning all operational preparations connected with the

ADDENDA

The past pages 1-18 contained the original text of the "Directives for the Conduct of Combat Operations in the Battle of Defense--(Weisungen fuer die Kampffuehrung in der Abwehrschlacht)."

What now follows is a compilation of supplementary instructions inserted later in the form of supplementary sheets (Deckblaetter) and based on the "corrections" marked in in handwriting, according to

"Lfl.Kdo. 3 Buehr Abt Ia op.Wr. 324/39 .K.Chefe.II Ang. von 5.1.1940"

" " " " " " " " III Ang. von 10.1.1940."

" " " " " " 264/39 " " von 15.1.1940."

Par. 8: Codeword "Verlegenuebung" will be replaced by the newly adopted codeword "Rheingold."

Par. 9: Codeword "Freiheit" will be replaced by the newly adopted codeword "Express,"

Codeword "Rhein" by "Koeln,"

Codeword "Elbe" by "Hamburg."

Par. 10: The Table of Initial Targets for Attack is to be amended as follows:

I Air Corps.

a. At "Target Amiens-Glisy" the following footnote is to be inserted: "The attack against Amiens-Glisy will only be carried out in weather conditions which offer some cover during approach and home flight. against observation. If the weather is cloudless the attack will be cancelled."

b. Target "Liege-Ams" to be deleted.

II Air Corps.

At "Target Metz-Fresc," insert as follows: "This attack to be cancelled if reconnaissance by D-Day detects more profitable targets north of the line St. Dié-Troyes in the form of air ports. The Commanding Generals, II and V Air Corps will then designate the targets."

V Air Corps.

The above clause also applies to "Target Epinal-Dogneville."

Paragraph 10 b: At the end of the list of targets insert:

The targets to be attacked by the uncommitted groups in the initial attack will be reported by secret teletype message to air fleet headquarters by 1800 on D-Day plus 1.

Paragraph 11: Delete:

From "The basic directives" to "until issued." The following sentence opens: "The instructions....."

Paragraph 11e: After Sub-Paragraph 11e insert as Sub-Paragraph 11f:

If weather conditions are suitable, night attacks will be directed against large rail intersections, easily identifiable road intersections, and airports for night operations. These attacks will take the form of harass operations. Aircraft crews from the bomber groups involved will be relieved of duties in daytime attacks for this purpose.

Paragraph 14b: Insert at end

To detect enemy troop landing operations, the Channel coast, particularly Le Havre, will be kept under surveillance.

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CHAPTER TWO
APPENDIX 13--Continued

Paragraph 19: Insert at end:

Special Instructions for Reconnaissance see "Lfl.Kdo.
Nr. 1969/39 . . . Kron. v. ZD. 11. 1939."

Special Instructions for Administration Services see
"Lfl. Kdo. 3, Nr. 357/39. . . . Kron. Chefs. v. 28 v. 12, 1939."

Identification Service see Annex 3.

Measures following statement of probable D-Day see
Annex 4.

Special Instructions for Supplies see "Lfl. Kdo. 3
Nr. 52/40 . . . Kron. Chefs. v. 9. 1. 1940."

ORDER OF BATTLE AND ASSEMBLY AIRPORTS OF THE
DIVE-BOMBER AND FIGHTER FORCES OF THIRD AIR FLEET

(Compiled from order "Luftflottenkommando 3, Fuhrer-Abt./
Ia op. Nr. 13/40 z. Kdos., Stabs. vom 5. 1. 1940, betr.
Kriegsliederung der Fl. Kräfte zur Verteilung der Be-
sonderausstattung im Bereich der Luftflotte 3 fuer die
abwehrschlacht," and Annex 3 to the same order: "Reinigung
und Maefen fuer den Aufmarsch der Fliegerkorps sowie
der Jagdverbände des 3. Kommandos und des III. Korps
zur Abwehrschlacht.")

Command HQ	Unit	Assembly Airport	
<u>I Air Corps</u>	<u>1st Dive-Bomber Wing</u> Headquarters	Wahn	
	I Group	"	
	III " , 51st Wing	"	
	II " , 2d Wing	Bonn-Hangelar	
	<u>77th Fighter Wing</u> Headquarters	Peppenhofen	
	102d Fighter Group	Darstekoven	
	I Squadron	Odendorf	
	152d Fighter Group	Odendorf	
	I Squadron, 5d Fighter Group	Peppenhofen (during reequipping of 152d Fighter Group)	
	I Group, 26th Twin-Engine Fighter Wing	Niedermendig	
		
	<u>II Air Corps</u>	I Gp, 186th Dive-Bomber Wing	Koblenz-Larthaus
I Gp., 76th Dive-Bomber Wing		" "	
<u>33d Fighter Flg., HQ</u>		Trier-Buren	
V Gp, 1st Twin-Eng Eng Wing		Lambel-Sandh. XXXXXXXXXX	
I Gp, 53d Fighter Wing		Waltzborn	
II " 53d " "		Itzesheim	
III " 53d " "		Trier-Buren	
<u>2d Fighter Wing, HQ</u>		Bassenheim	
I Group		"	
I Gp, 76th Wing		Jangerohr	
.....			

Command HQ	Unit	Assembly Airport
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V Air Corps	<u>176th Fighter Group</u> 10th Sq, 72d Wing	Brosseltingen
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VII Air District Command	<u>52d Fighter Wing</u> Headquarters	Lamheim-City
	I Group	Lachen-Speyerdorf
	II "	Lamheim-City
	I " 51st Wing	Speyer

VII Air District Command	II Gp, 51st Fighter Wing	Wittingen
	I Gp, 54th " "	Boeslingen

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CHAPTER TWO
APPENDIX 16

COPY

Der Chef der Luftflotte 2
und Befehlshaber NordFührungsabteilung
Nr. 7340/39 u. Mos.
Chefsache

Headquarters, 31 December 1939

Officer Courier Only

Tenth of twentyfour copiesDIRECTIVES FOR INSTANT ACTION OPERATION (Sofortfall)

In the event of a surprised invasion of Belgium and Holland by Anglo-British forces, the immediate commitment of all available German forces for an advance into Belgium and Holland might become necessary (Instant Action Operation--Sofortfall).

The following detailed instructions are issued against such an eventuality:

1. On the whole the plans of the Second Air Fleet and the missions of its assigned forces as stated in Directive No 5 will remain unchanged.

In details the missions of some of the units will change, insofar as ~~IMMEDIATE CHANGES HAVE NOT ALREADY~~ as the assembly planned against this event for the Battle of Defense has not yet been completed.

2. The operation by the 7th Air Division and the Special Operation will be cancelled; accordingly, the protective mission of the IV Air Corps and/or the 2d Fighter Command also will be cancelled. The transport units of the 220th Air Command will nevertheless be held ready for action.

3. IX Air Corps to the extent possible with the combat units available for immediate commitment will support the advance by the Sixth Army, in particular the battle for bridges in the Meuse River areas between Turnhout and Maas-tricht. The corps will move forward into their intended assembly airfields the units it is assigned according to Directive No. 5. For this purpose, thirtyfive Ju-52 transport planes of Experimental Unit Friedrichshafen, with headquarters at Hildesheim, will be made available to the corps immediately after issue of the codeword "Sofortfall."

With the fighter units available to it initially, the corps will protect German and prevent enemy Army air reconnaissance operations from the first day of the Instant Action Operation.

The 125th Fighter Group will remain assigned under the VIII Air Corps.

The I Fighter Group, 2d Training Wing will be returned to the VIII Air Corps.

4. IV Air Corps on the first and second days of Operation Instant Action will support the advance of the forward elements of the Sixth Army (the Instant-Action Forces) by continuous action of its bomber forces against Belgian troop concentration and transport movements in the Meuse River areas

(with main emphasis on support in cross-river and cross-canal operations) and will continue this action on the required scale until the units of the VIII Air Corps are ready to take over this mission.

Corps reconnaissance will be conducted at an early stage in preparation for the commitment of the bomber forces against Franco-British Army forces west of the line Antwerp-Loewen-Namur (localities included).

The IV Air Corps can rely on having available the 26th Twin-Engine Fighter Wing with its II Group, plus the I Group, 2d Twin-Engine Fighter Wing, as soon as this unit arrives, during the initial stages. The Commander in Chief of the Air Force has reserved his decision concerning assignment of the 26th Bomber Wing.

5. Reconnaissance.

a. The 1.2d Reconnaissance Group will have the initial mission of ascertaining the extent of the enemy advance into Belgium-Dutch territory and the size of the forces involved in the areas of Bruges-^vstende-Bunkirk-St. Omer-Arras-Cambrai-Valenciennes-Charleroi-Nivelle-Lille-Alost-Ghent by means of reconnaissance over the major rail and road routes.

b. IV and VIII Air Corps will rely on the own reconnaissance units for their missions under the Instant Action

Plan.

6. II AAA Corps. The mission of this corps remains unchanged. Following more detailed instructions from the Sixth Army, the corps will integrate all units available to it with the forward and attack movements of the Army forces.

7. The VI Air District Command will move its AAA Force Wagner into combat areas arranged with the X Army Corps and the Sixth Army.

The two fighter groups of the 51st Fighter Wing will only arrive later.

8. The XI Air District Command will concentrate its 8th AAA Regiment (initially without a fighter group) in the areas agreed upon with the X Army Corps and will advance with the forces of that corps.

9. Supplements to the Special Instructions No. 3 to Directive No. 5 for the supply services in the event of Operation Instant Action will follow.

10. The day on which the codeword "Sofortfall" is issued will be D-Day for Operation Instant Action. It can be expected that the code message will be issued by 1800 hours.

Insofar as this has not already taken place, the necessary preparations for Operation Instant Action, particularly the agreements to be reached with the Sixth Army, will be completed immediately.

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CHAPTER TWO
APPENDIX 13--Continued

Completion of preparations will be reported by 6 January
1940.

Distribution:

S/ Pelay
General der Flieger

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CHAPTER TWO
APPENDIX 17

COPY

(Taken from a copy)

OBERKOMMANDO DER WEHRMACHT
Nr. 22010/40 g. Klos. Chefsache
WFA/Abt. I (Ib)

Berlin, 17 January 1940

Second of ten copiesSUBJECT: Severer Measures for Naval and Air Warfare.

Order OKW Nr. 22348/39 g. Klos. Chefs. WFA/Abt. I 1 is rescinded. Its place is taken by the following instructions:

1. Navy [Not copied here]

2. For the Air Force the past restrictions on the conduct of air warfare against the Western Powers will be cancelled with the opening of operations in the West subject to the following conditions:

a. For the duration of operations in the West, main emphasis in air warfare will be on direct support of operations on the ground (consonant with Directive No. 6, Paragraph 4).

b. Outside of the actual areas of operations the main mission will be

to attack troop transport movements from Britain to France, Belgium, or Holland, at sea and in loading and unloading ports;

to attack the British air forces, also within Britain insofar as they are operating from there against the Continent and to tie down as strong fighter forces in Britain.

However, it is not in the interests of the overall conduct of the war to take the initiative in air warfare against

CHAPTER THREE

DEVELOPMENTS IN PLANNING FOR AIRBORNE OPERATIONS
DURING THE WAR OF WAITING

A presentation of overall planning for Air Force operations would be incomplete without a review of planning for airborne operations, which in part conformed to general planning, but in part explored different channels ahead of the general pattern.

The subject of planning for airborne operations has already received broad treatment preceding the presentation of final plans for the western offensive which started on 10 May 1940.⁴² However, the presentation given there does not reveal the internal developments nor does it permit a definite recognition of the times at which the various plans developed for airborne operations. This can only be done on the basis of the previously quoted directives, in Chapter Two, above, and a few orders and other records for the end of 1939 and early 1940, which are only available in an incomplete form.⁴³

The original documents being thus incomplete, the examination necessarily also cannot be complete and exhaustive. An effort is nevertheless being made to obtain as clear a picture of

42. Part Three, Chapter Four and Appendix 1, below.

43. These records only reached the present author after completion of Part Three.

43 these planning developments as possible, since planning for operations by the new and decisively important arm justify a separate treatment.

The main difficulty in such an examination ~~is~~ from the historical viewpoint is due to the secrecy maintained at the time. In Air Force and Army directives and basic orders all planning for airborne operations were either merely referred to in a general sentence, as will be seen from Chapter Two, above, or, and this was very frequently the case, the high levels of command were not informed on the subject at all. Oral instructions from Hitler as well as basic directives from the Commander in Chief of the Air Force in most cases were forwarded directly to the 7th Air Division, with information to the Second Air Fleet, the headquarters actually responsible in only some cases. Records on such orders are no longer available. The only records actually available are a few interim orders from the Commander in Chief of the Air Force and from the Second Air Fleet, which will now be discussed.

In the basic document, Directive No. 4 of 23 September 1939 there was still no mention of any planned airborne operation.⁴⁴

The only item to be gathered from the ideas of the Commander in Chief of the Air Force was known orally on 30 September.⁴⁴ See Part One, Chapter Four, Appendix 2.

49 September was that ground installations were to be prepared for reception of the 7th Air Division in the area around Gue-tarsloh.⁴⁵

No copy is available of the Air Force High Command Direc-tive No. 5, which followed.

It is certain, however, that Hitler at the end of October ordered that the 7th Air Division and the 22d Infantry Division were to be committed immediately at opening of the western offensive in an operation designed to capture the Ghent bridge-head of what was called the Reduit National.⁴⁶

In the Special Instructions for the Signal Services issued by the Air Force High Command on 1 November 1939⁴⁷ the 7th Air Division appears for the first time, with the information that it had headquarters in Scholau Rhoda near Wislenbrueck.]

This was followed on 7 November 1939 by Second Air Fleet Directive No. 5⁴⁸, which only reveals that the 7th Air Division was to "concentrate in accordance with special directives."

Without doubt this referred to Operation G (Ghent), the first plan for airborne operations ever drafted.

Then followed an order from Second Air Fleet on 17 Novem-ber 1939 regulating "radio deception during operations by the

45. Part One, Chapter Five.

46. Greiner, see Source 5.

47. Annex 6 to "Ob.d.L., Fuehrungsstab Ia Nr. 5330/39 g. Kdos. Chefache gen. Fuehrerweisung No. 5--Neufassung vom 1 No- vember 1939."

48. Chapter Two, Appendix 1.

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49
7th Air Division, but the order mentions neither the time nor the locality of the planned operations. There is nevertheless no doubt that a definite plan of operation already existed at this juncture, and it can at least be presumed that the objective in the planned attack was Belgium (Operation G).

The final version of Directive No. 5 by the Commander in Chief of the Force dated 7 December 1939⁵⁰ again mentions "an airborne operation by the 7th Air Division" together with the remark "More detailed instructions have been issued separately." As can be deduced from the text, this was another reference to Operation G.

In the same connection first mention is made of the planned airborne operation by the VIII Air Corps against the fortress Eben Emael, without the objective being definitely named, and again with the remark "More detailed instructions have been issued." Here it might be mentioned that the operation against Fortress Eben Emael was the first plan drafted for an airborne operation, a plan which was never abandoned and was first discussed at the highest levels of command in October 1939.⁵¹ By mid-November ~~XXXXXXXXXXXXXXXXXXXX~~ plans for

an operation by the VIII Air Corps against Eben Emael had

49. "Luftflottenkommando 2, Wehrungsabst. Ia Nr. 7222/39. Kos. Chefsache v. 17.11.1939."

50. Ober Ob. A. L., Wehrungsabst. Ia Nr. 5350/39. Kos. S. Ang. vom 7.12.1939. See Chapter Two, Appendix A, above.

51. Jodl Diary, 21 Oct 39: Chief of Joint Military High Command reports on individual ideas (Air-Landing Division) cargo lifters. Decision necessary concerning Eben Emael, whether to use fire and smoke or air-carried troops.

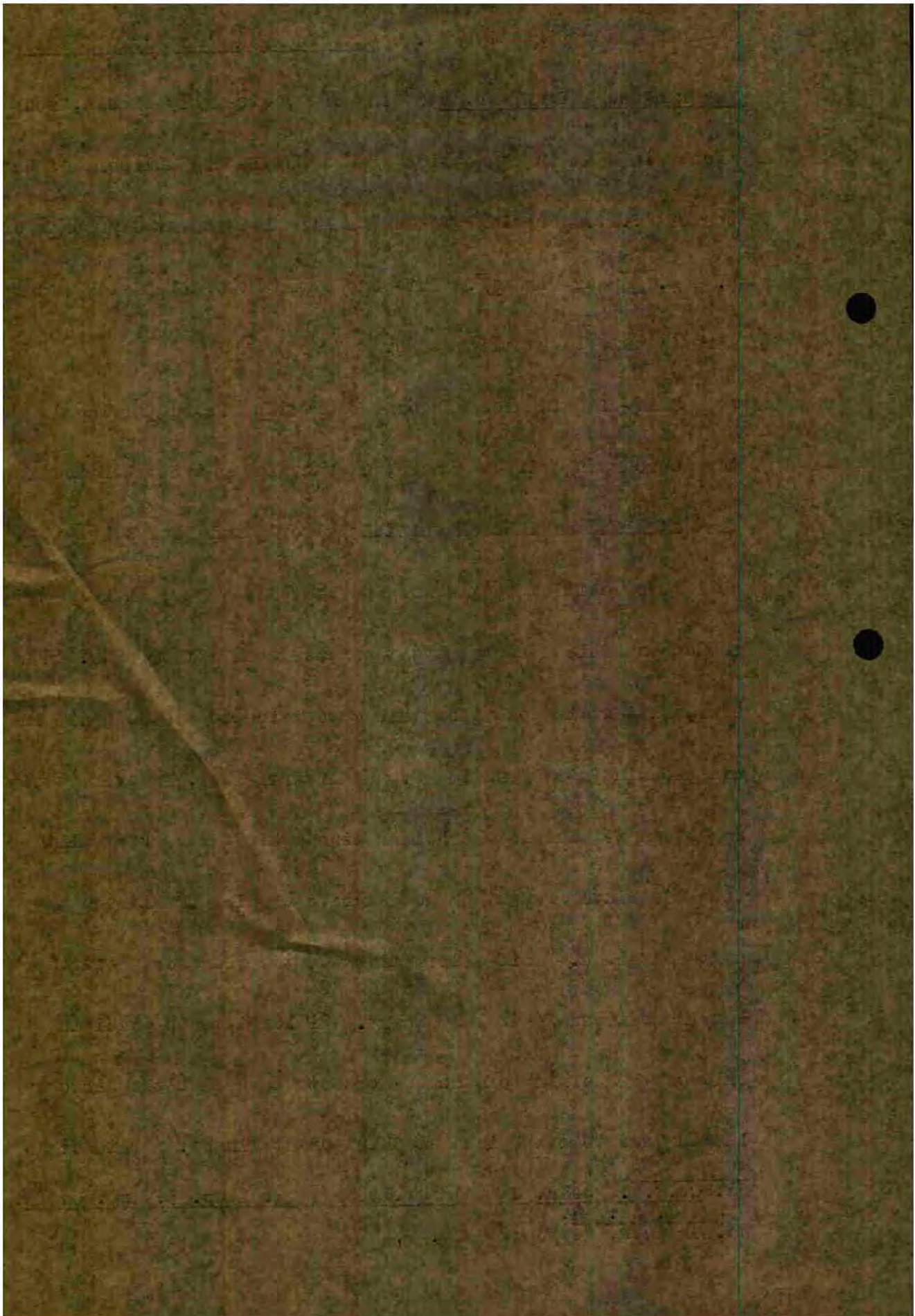
taken concrete form.

(7 December 1944)

On the same date Directive No. 5, the Air Force (Luftwaffe) and issued "Instructions for the Conduct of Combat Operations under Directive No. 5 (Anweisungen über die Befehlshaltung zu Weisung Nr. 5)"⁵² in which, strangely enough, mention is made in connection with a completely unimportant matter of "...Operation of the 7th Air Division at G [Dinant] or H. - B. [Namur-Dinant]". This shows that the alternative plan already existed at this stage.

This plan for airborne operations is surprising in the current circumstances, and the fact that mention here that ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ the original plan was to be in opposition to the ~~XXXX~~ and the Air Force, although it is not possible here to give the reasons in either case. However, Hitler did not allow this opposition to alter his plan for Operation C. He nevertheless, however, took an alternative plan into consideration against the possibility that the Sixth Army will not achieve a quick breakthrough north of Liège. This alternative was the plan for an airborne landing between Namur and Dinant. Hitler intended deciding only on the basis of the day of attack whether the airborne landing was to take place at Chert or at Dinant.⁵³ This arrangement

⁵² "Op. F. u. Luft. Stab Nr. 5350/39. Kap. 5. Anl. Opera. v. 7. 12. 44."
⁵³ Gräner, see source No. 5.



51 arrangement must have been made in the second half of November and obviously was connected with the previously stated plans for a possible shift of main effort in Army operations to the center.

52 Orders from the Second Air Fleet to the 7th Air Division in implementation of Directive No. 5 and of special orders from Hitler now followed in rapid sequence, namely, as follows:

1. On 14. 12. 1959 Second Air Fleet issued an "Order for the commitment of XIV Air Corps at the beginning of the Battle of Defense (Operation G and Plan Keller)"⁵⁴

In this first Second Air Fleet order available on the subject of airborne operations also it is characteristic that the airborne operation is only mentioned but not even specified by any reference to the actual target area: "7th Air Division will carry out an airborne landing operation--See Special Order for 7th Air Division)"

The text of the order regulates the preparation of and support for the airborne operation by the IV Air Corps under General Keller, but it does permit the reduction that Operation Ghent was involved. However, even at this early stage attention is drawn to the possibility that the operation by the 7th Air Division might take place in "some other area," for which purpose a main "special order" was to be expected.

54. "Der Chef der Luftflotte 2 am Befehlshaber West, Ficht. Abt. Ia Nr. 7506/59, Mos. Chefache," 14 December 1959.

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2. On 6 January 1940 the "special order" referred to above arrived. For the first time Second Air Fleet issued two orders providing at least some insight into the two plans for airborne operations.

Both orders⁵⁵ are attached to this chapter as Appendixes 1 and 2.

What is important about these two orders is that at this juncture, early January 1940, plans for Operation M [Maur] existed in addition to the previous plans for Operation G. The new plans were to be prepared "against the eventuality that Operation G is cancelled." Both possibilities are left open, and preparations for both were to proceed concurrently.

The important differences between the two plans were as follows:

a. Responsibility for the planning and, if it materialized, direction of Operation M is transferred from Second to Third Air Fleet, which, in addition to the 7th Air Division was also to receive the 2d ~~XXXXXX~~ Fighter Command and the 220th Air Command.⁵⁶

b. In Operation M only commitment of the 7th Air Division is planned, no provisions are mentioned concerning participation by the 22d Infantry Division--which was to participate in the case of Operation G.

55. "Der Chef der Luftflotte 2 im Befehlshaber Nord, Fuhr. Abt. Ia Nr. 700/40 i. Kloc.," 6 January 1940, and "Chef der Luftflotte 2 im Befehlshaber Nord--Continued

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Even these orders give no details on execution of the operation, and in particular no information on the geographical area concerned. Details were given in "oral" orders.

One particular complication for the execution of either of the two alternate plans was that the Supreme Command obviously only intended deciding at the very latest possible moment, which operation was to be carried out.

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Immediately after Hitler's decision for dual planning, the Air Force Command again expressed concern over the matter, which pointing out at a conference on 29 December the difficulty of implementing a decision of this nature at the last moment.⁵⁸ However, the issue of orders continued on the already existing basis.

3. On the same day, 6 January 1940, a special "Order for the Operation" by the VIII Air Corps regulated the chain of command in the 7th Air Division operation planned from the outset against Fortress Eben Emael and the Albert Canal

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bridges. For the execution of its mission of supporting the

57. The vitally important passage reads: "The order to execute the operation will be given by the Fuehrer in a telephone message directly to the 7th Air Division if at all possible on D-Day minus 1, at latest in the night preceding D-Day."

58. Greiner, See Source 40.5.

59. "Der Chef der Luftflotte 2 und Befehlshaber Nord, Fuehr. Abt. Nr. 7009/2. Kios. Chefs." 6 January 1940.

P. 235, Footnote 55--Continued: "Fuehr. Abt. Ia Nr. 7010/40. Kios

P. 235, Footnote 56: Air Command 220 (Fliegerführer 220) was a headquarters staff without tactical units. Its mission was to prepare operations by airborne infantry units: neutralization of enemy defenses in the target area prior to and during and after the airborne landing, air transport, fighter protection, supplies, etc. By the opening of the offensive change to Special Purposes Air Command (Kommando-Postelle der Generals S.b.V.) For T/O See Part Three, Chapter Four.

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Sixth Army the VIII Air Corps was to receive Assault Battalion Koch (Sturmabteilung Koch) also known as Experimental Battalion Friedrichshafen (Versuchsabteilung Friedrichshafen), "assigned for the operation." On the other hand, however, the next sentence reads "The 7th Air Division (which will keep the VIII Air Corps currently posted on the status of preparations) by order of the Commander in Chief of the Air Force is responsible for direction of the preparations (including training and equipment).

This somewhat strange compromise arrangement, strange particularly in view of the decidedly headstrong officers at the head of the two commands, could easily result in friction and complications, and the solution does not appear very sound.

4. Finally, reference is due to the basic order issued at the same time in the Directives for Operation Instant Action (Weisungen fuer den Sofortfall)⁶⁰. According to that order all planned airborne operations were cancelled in the event of Operation Instant Action.

No orders are available for the next few weeks in 1940 concerning the airborne operation, and the reader is reminded here that in January of that year new plans for the offensive in the West were drafted and issued as orders. These were to

60. Chapter Two, Appendix 14.

lead to the final execution of the plan for an airborne operation, namely, to the operation by air-carried forces against the Fortress of Holland.³¹

56 The first draft for this final operational plan (Operation B) came from the Air Force itself, under the following circumstances.

In response to the criticisms expressed by the Chief of the Air Force General Staff concerning the dual planning currently in process, a recommendation was submitted to provide for an airborne landing in the area of Amsterdam in order to breach from within the so-called Fortress of Holland for the Eighteenth Army, which was to form the north flank of the entire advance in May 1940. This recommendation was submitted on the same day as that on which the Mechelen incident occurred, on 10 January 1940. This Mechelen incident, or Rainbarer incident as it is known in German circles, which involved a crash landing by two German Air Force officers in Belgium, is mentioned here because of ^{its} coincidence with the original idea of new planning by the Air Force. The incident itself is treated in Chapter Two, above.

Not because of, but probably partly due to the influence of the Mechelen incident, the Chief of the Joint Military High Command ordered an immediate start at new planning, SOF 301, Part Three, Appendix 1.



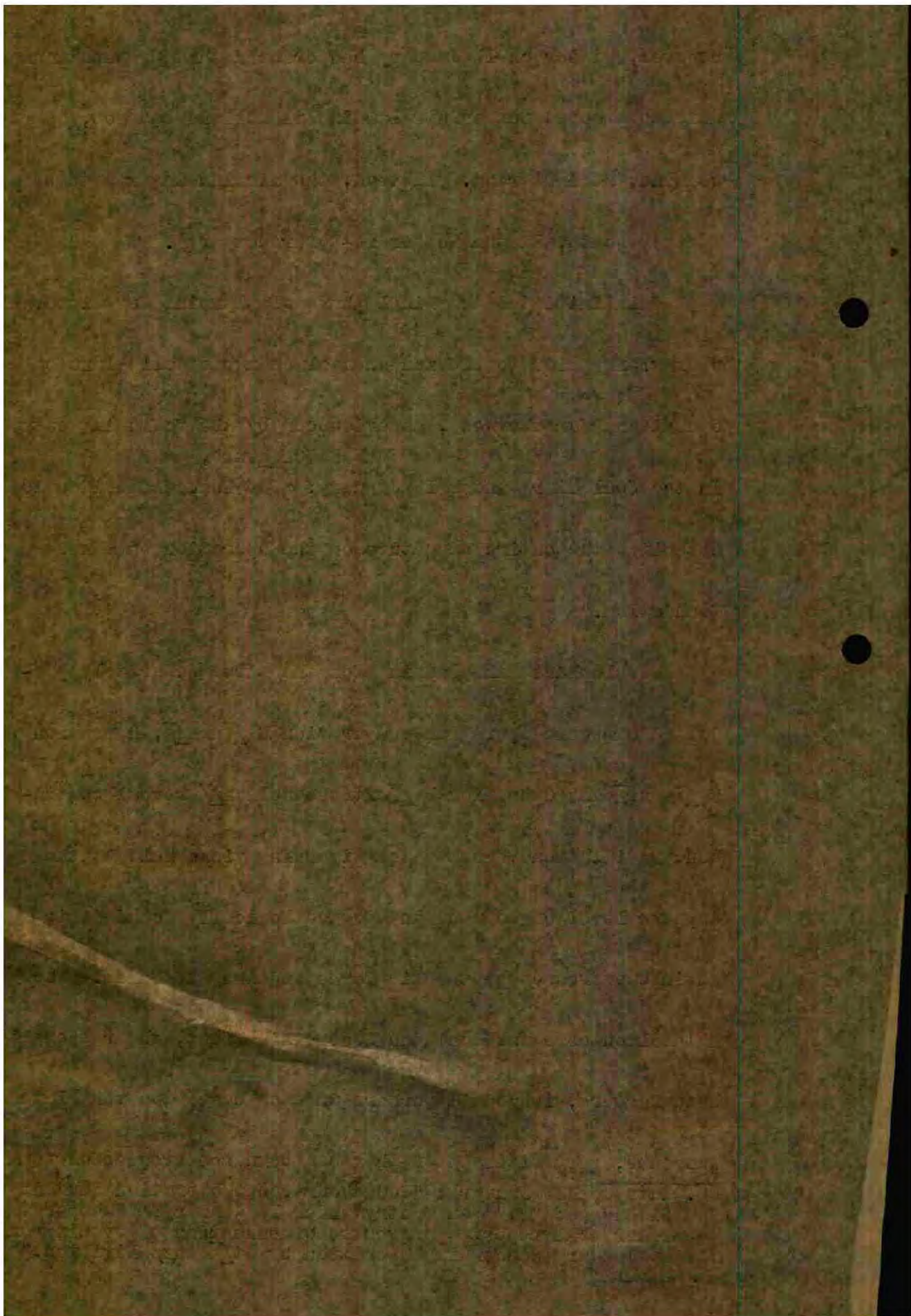
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56 the airborne operation, as is evident by an entry in the Jodi
Diary.

57 Contrary to the original recommendation by the Air Force,
however, Hitler on 1. January had ordered that preparations
were to proceed for an air landing in Holland but not, as re-
commended, at Amsterdam. Instead, the air landing was to be
further south, in the Rotterdam-Dordrecht area.

This initiated the final phase of planning for airborne
operations prior to the fundamental change of all plans of
operations for the West, as evidenced by the following entry
at 1700 hours,
in the Jodi Diary under 13 January: "The Fuehrer decides to
establish the entire structure of the operation on a new
foundation."

Developments in planning for the three separately pro-
jected airborne operations: Operation G [Germany], Operation
H [Amur] and Operation F [Fortress Holland] reveal contin-
uous vacillations, due to the diverging views held at the
supreme level of command and to the logically founded mis-
givings expressed by the Air Force and Army Commands. The
natural outcome was that the Second Air Fleet, the responsible
headquarters, issued its orders in each case at a very late
juncture, very often after they had been rendered obsolete.
Entry on 13 January: "2000 hours, after operation Student
cancelled: "H" an entry under 14 January: "Fuehrer
after oral reports moves recommendation of evening on
13 January concerning operation D, Student Division."
W. Wagner



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By current events, a fact proved by the directives and orders quoted.

However, it is also evident that in this special field the written orders available are present for historical research actually reported herein. More than a consolidation and confirmation of oral and written detail orders previously issued. Even at the time under discussion Second Air Fleet Headquarters in practice encountered complications in relation to the various directives and oral and written detail orders for a common denominator because of the quality of command as exercised by the Commander in Chief of the Air Force. Another complicating factor was that Hitler intervened personally in the details of planning for airborne operations and issued orders directly to lower level commands, which frequently only came to the knowledge of the responsible headquarters by chance or not at all.

It is verifiable to appear that this effort has been successful in tracing the development of the idea of airborne operations, on the basis of the available directives and orders, right through to the execution of the plans worked out.

Of the major plans of operations involved only Operation Sedan is known, the precise time periods of which it has not been possible to establish because of the lack of records. The present author personally recalls a conference at the Reich Chancellery in Berlin (see Joint Story, Italy



58

Footnote 64--Continued: 5 March) on 5 March 1940 at which Hitler had the field officers earmarked for execution of the airborne operations against Fortress Eben Emael report to him on all detail of the planned operation. He personally gave orders regulating the action of each individual assault team. It was only due to a fortunate chance that the higher level field officers happened also to be present.

TOP SECRET!

Der Chef der Luftflotte 2
und Befehlshaber Nord
Fischman, sub. 12
Nr. 7008/40 J.Kos.

Headquarters, 6 January 1940

Ninth of twentyfour copies

Reference: Der Chef der Luftflotte 2 und Befehlshaber Nord
Nr. 7000/39 J. Kos., 11 December 1939; Generalstab
der Luftwaffe 1. Abt. Nr. 5507/0 J. K. Chefache,
7 January 1940

Supplement No. 2 to Directive No... for the Battle
of Defense "Operation N."

In the event of a cancellation of Operation G of the 7th Air Division, the intention is to execute Operation N if certain circumstances exist (For details see Special Order).

In such an event the following modifications or supplements are necessary to Directive No. 5:

1. Second Air Fleet Mission. The mission of the Second Air Fleet remains as stated in Paragraph 7 of Directive No. 5. Only responsibility for the operation by the 7th Air Division in the operational zone of the Second Air Fleet and the protection of the Division's movement and unloading will be omitted. This responsibility the Third Fleet will assume.

2. Allocation of Forces. For this purpose the following units from the command zone of the Second Air Fleet will be placed under tactical command by the 2d Fighter Command,

Third Air Fleet (I Air Corps):

<u>HQ, 26th Twin-Engine Fighter Wing</u>	(to displace from Boeninghardt to Vogelsang)
I Group, 1st Wing	(in Moench-Gladbach)
I " 78th "	(to Eudennach, only in case of frost to Moench-Gladbach)
II " 25th "	(to Vogelsang)
<u>HQ, 27th Fighter Wing</u>	(to displace from Krefeld to Gyanich)
1st Fighter Group of VIII Air Corps	(to Gyanich)
1st Fighter Group of VI Air District Command	(in Bonn-Mangelar)
I Group, 2d Training Wing	(in Gyanich)

In agreement with VI Air District Command possibilities will be examined to accommodate another fighter group from the VIII Air Corps. According to weather conditions and the available accommodation Odendorf and Muervenich (previously named Ollesheim) would be suitable.

Another fighter group will be transferred from the VI Air District Command to Duenstekoven for assignment under the 77th Fighter Wing, with headquarters at Peppenhoven).

The displacement and assignment of 2d Fighter Command and the fighter and twin-engine fighter units enumerated above to the Third Air Fleet (I Air Corps) to take place immediately after receipt of decision by the Supreme Commander concerning commitment of the 7th Air Division for Operation D. Efforts will be made to effectuate the displacements on D-Day minus 1. The code message initiating the movements will be "Student-TorEpol."

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3. The mission of the VIII Air Corps will remain as stated in Paragraph 10 of Directive No. 5 and communication "Der Chef der Luftflotte 2 und Befehlshaber Nordfluehrungsabt. Nr. 7009/40 . Klog." 6 January 1940.

Owing to changed mission of the I Air Corps, VIII Air Corps on the morning of D-Day will commit adequately strong units to attack the Bierset and Ane (at Liège) airfields. The (Paragraph 7) newly defined boundary line allows for the reduced strength in fighter units available to the VIII Air Corps.

4. Mission of IV Air Corps. Protection for the airlanding operation by 7th Air Division will no longer be necessary.

The corps will launch a surprise attack as the first mission to destroy the Dutch and Belgian fighter forces south of the Waal River on their airfields. (for zone of operations see Paragraph 7).

The Commander in Chief of the Air Force has reserved his decision concerning transfer of the 26th Twin-Engine Fighter Wing.

5. The 7th Air Division will receive separate orders assigning it its mission.

6. The VI Air District Command can rely on the return of its two fighter groups of the 26th Fighter Wing on the evening of D-Day.

7. Boundaries.

- a. Between Second and Third Air Fleets unchanged.
 - b. Between IV and VIII Air Corps on D-Day: Venlo-Weert-Hasselt-St Trond-Hannut (localities to VIII Air Corps)-Huy.
 - c. Between VI and XI Air District Commands unchanged.
8. Supplements concerning supplies will follow.
 9. Supplements concerning signal services will follow.

S/Felay
General der Flieger

Distribution:

...../all command headquarters assigned under the Air Fleet

TOP SECRET

Der Chef der Luftflotte 2
und Befehlshaber NordFührungsabt. Ia
Nr. 7010/40 g.Kass.
-Chefsache-Generalstab der Luftwaffe
I. Abt. Nr. 5506/40 g.K.
Chefsache v. 7.1.1940

Headquarters, 6 January 1940

Officer Courier Only!

Fourth of Fifteen Copies.Reference: "Der Chef der Luftflotte 2 und Befehlshaber Nord,
Führungsabt. Ia Nr. 7535/39 .Kass. Chefsache
25 December 1939.Order for Commitment of the 7th Air Division in the
Event of Operation M.

1. In the event of a cancellation of Operation G, execution of Operation M is intended if certain circumstances exist.

2. For this purpose the reinforced 7th Air Division has the mission of taking possession of the Meuse River bridges on both sides of Y in a raid-like attack, to prevent their being blasted, and to keep them open for the army forces which will follow.

Commitment of the 23d Infantry Division in Operation M is not planned.

3. Deadline for Execution of the Operation. The time scheduled for the first elements of the transport units to fly over the German frontier in Operation M will not be before D-Day H-Hour.

4. Protection of Operation M will be a responsibility of the 23d Infantry Division, employing a total of 24--

of the 2d Fighter Command, employing a total of five twin-engine and ten single-engine fighter groups. For this purpose the 2d Fighter Command will be assigned tactically under the Third Air Fleet (I Air Corps). Command Post at Stadtkyll.

Other details to be arranged by Third Air Fleet.

Combat

5. ~~XXXXXXXXXX~~ action against enemy forces west of the Meuse River to protect the air-landed elements of the 7th Air Division will be by bomber units of the I Air Corps.

6. Light and other Visual Signals. In addition to the visual and light signals and markings specified in Instruction No. 3 to Directive No. 5, German troops and their positions will be marked by Swastika flags.

7. The 7th Air Division will insure adequate supplies.

8. The Fuehrer and Supreme Commander will decide whether Operation G or Operation N is to be carried out or both cancelled.

If at all possible, the order to carry out the operation will be issued on D-Day minus one. At latest it will be issued by the Fuehrer personally in a telephone message in the night preceding D-Day to the 7th Air Division, by the Second Air Fleet to the 2d Fighter Command and the IV Air Corps, use being made of the following code messages:

Student G (Jeor.) meaning the Operation G will be executed
 or Student H (Kordol) " " " " " " " " " " " "
 or Keller, meaning that both operations were cancelled.

9. For both operations the 7th Air Division (for Operation G in agreement with the 22d Infantry Division) and the 22d Air Command will complete all preparations in such manner that either of the two operations, Operation G or Operation H, can be executed on D-Day if ordered by the Fuehrer.

10. The order "Der Chef der Luftflotte 2 und Befehlshaber Nord Nr. 7333/39 . . . Kdos. Chefsache," 25 December 1939 is rescinded and is to be destroyed.

Distribution:

S/ Polay

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CHAPTER Four

59

SIGNAL SERVICE ORGANIZATION IN THE WEST

status 1 November 1939

Preparations for what was called the "Battle of Defense" in the West, in reality preparations for the intended "attack battle" within the scope of the operational and tactical objectives required a thorough and above all long-range regulation of the whole signal communication service.

The deployment and commitment of air signal units of all types was an integral part of all command measures.

Experience in the Polish campaign of 1939 had shown the significance and value of a smoothly functioning signal communication system for the higher and intermediate levels of command, both within the command organism of the Air Force itself and in maintaining contact between the Air Force and the Army. The experience thus gained and the lessons learned had been absorbed and adapted.

The first plans drafted for offensive action against the western Powers in October 1939 had already regulated the organization of the signal services, the allocation of signal units, and the assignment of signal missions in all details.

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The signal communication system available to the Second and Third Air Fleets during the first few months of the war

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had been established under peacetime conditions and expanded and improved after the outbreak of the war. It had been sufficient for the weak forces initially in position in the Western Theater, but was by no means adequate for a change-over from defensive to offensive warfare. The concentration of all air power in the West necessitated entirely new planning. In particular it necessitated the redeployment of all air signal units from East to West as part of the shift of emphasis.

The original orders and instructions available at writing make it possible to develop a relatively clear picture of the situation around 1 November 1939 so far as the signal communication system in the West was concerned.⁶⁵

An attempt will therefore be made here to present in broad outline the missions of the signal forces and the forces available for the purpose. This attempt is important because it will not only establish the situation as it actually existed on or about 1 November 1939 but will also provide a basis for the study of all other planning during the War of Waiting and for an understanding of the situation as it existed at the opening of the offensive in the West on 10 May 1940.

⁶⁵. The following presentation is based primarily on the following original orders: (1) Annex 1 to "Ob. I. L., Chef NVV Abt. 1 Nr. 75/39 G. Kdoz., (Chefs.) vom 23.10.39," which regulates the receipt of signal units and their allocation between Second and Third Air Fleets; and (2)--Continued

61 This planning for offensive action undoubtedly entailed changes and a reshuffle of forces, but in principle the system as such and main emphasis for the Air Force remained the same as they had been around 1 November 1939. No records at all are available concerning the situation in respect to the air signal services at the opening of the offensive in the West ~~XXXXXXXXXXXXXXXX~~ for which reason it appears all the more important to at least clarify the situation on 1 November 1939 as a basis for a study of the situation during the War of Waiting and at the opening of the offensive.

I. THE ALLOCATION OF UNITS.

At the beginning of the war, the Second and Third Air Fleets initially had only numerically small assigned air signal forces available. It is not possible to reconstruct the strengths or the composition of these forces for the air fleet or for these units assigned under the air district commands.

The previously mentioned Decree No. 1 by the Commander in Chief of the Air Force (Footnote 65, above) at the end of October regulated the allocation of units after the air signal units had been redeployed from East to West and assigned to the Western Theater. Appendix 1 to the present chapter:

Allocation of Air Signal Units within the Operational Air

Footnote 65, p. 300--Continued: "Beschläge Anordnungen fuer Nachrichten-Verbindungs-Dienst," Annex 6 to "Ob. d. L., Nachr. St. Ia Nr. 5530/39," Kap. 1, Abs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

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Arm. in the Western Theater--Status 1 November 1939 (Aufstellung der In-Einheiten auf die operative Luftwaffe in Westen--Stand vom 1 November 1939)" is a compilation of these units and at the same time serves to show their allocation to the various commands in the Western Theater. The tabulation gives the status on approximately 1 November 1939.

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Other factors which must be taken into consideration in an appraisal of the allocation of forces can be taken from Appendix Ia to this chapter.

II. THE MISSION IN BROAD OUTLINE.

According to the whole pattern of planning for the commitment of the air signal services, two main requirements were of decisive importance, besides the mission of developing what was strictly an Air Force command network as the main responsibility. These two requirements were:

1. The lateral communication networks between the Air Force and the Army (Air Fleet-Army Group and Air or AAA Corps-Army level headquarters) definitely had to be established in time and maintained operable in all situations. These established lateral communication lines were to be supported by signal (radio) teams from the air corps attached to the ground forces *the fighting going "up front",* and thus ^{or} communication channels *to the foremost units.*

front line

For this reason the location of the various air and

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and army command posts were stated at this juncture. These command posts have been compiled in Appendix 2 to this chapter.

2. The Command Network of the Air Force was to be extended into enemy territory as rapidly as possible through the construction of trunk lines.

For this purpose, and once the frontiers were crossed, the air fleets in consonance with the advance by the ground forces were initially to establish main trunk lines extending as far as possible forward of the current field army level headquarters in accordance with the following pattern:

Second Air Fleet, First Main-Trunk Line in Sixth Army

Zone: from Muenchen-Gladbach in the general direction of Roermond-Diest;

Second Main Trunk Line: from Aachen in the general direction of Maastricht-Tirlemont-Brussels.

Third Air Fleet.

First Trunk Line in the zone of the Fourth Army from Statkyll (?) in the general direction of Melmedy-Dinant.

Second Trunk-Line in the zone of the Twelfth Army from Neuerburg (?) in the general direction of Wiltz-Libramont.

Third Trunk Line in the zone of the Sixteenth Army

63 from Welschbillig (?) in the general direction of Longwy-Arlon.

Development of the lateral lines connecting the individual main trunk lines remained subject to decision by the Commander in Chief of the Air Force.

To insure the establishment of lines capable of long-distance communications between the command posts and forward command posts of the air fleet headquarters to the Commander in Chief of the Air Force was another self-understood requirement.

64 III: Measures in Detail.

1. Special instructions regulations to cover wire communications traffic by means of a systematic pattern of deceptive communications conducted by the air fleets.

2. Orders also prescribed systematic patterns of radio deception and concealment to cover up actual radio communications. In the case of the II and V Air Corps these played a particular role within the scope of the air activities these corps had orders to simulate.

For the 7th Air Division orders prescribed a particularly careful and refined regulation of radio deception.

All air and AAA units of the air and AAA corps concentrated for the attack had orders to maintain radio silence up to the moment the border was crossed.

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3. In the aircraft reporting service, the aircraft reporting companies (motorized) of the western air district commands were to cooperate very closely with the fighter units or were assigned under them. During the advance into enemy territory on the ground they were to ^{be} moved as far forward as would be necessary for the purpose of creating the necessary outpost area or early warning area for the Home Air Defense System. The aircraft reporting companies assigned under the air and AAA corps were to be employed by the corps to meet the requirements of current developments in the situation. This also in very close cooperation with the fighter forces.

ALLOCATION OF THE AIR SIGNAL UNITS WITHIN THE
OPERATIONAL AIR AREA--APPROXIMATELY 1 NOVEMBER 1939

The review of the allocation of the air signal units within the operational air area in the Western Theater, status approximately 1 November 1939 presented in the preceding appendix (Appendix 1) is based on Annex 1 to Air Force High Command order "Ob. d. L., Chef E.V.W., Abt. 1 Nr. 75/39 Kdos. Chefsache," 25 October 1939, which regulated the assignment of the air signal units. This Annex 1 is the only part of the original order still available in a copy.

2. The review is organized on the one hand according to the territorial jurisdiction of the Second and Third Air Fleets, secondly according to the various commands assigned under the two air fleets, and thirdly according to the air signal units assigned to these various commands.

3. The compilation of commands does not quite correspond to the tactical chains of command effective at the time, but has been arranged according to the territorial control of the two air fleets over the commands concerned.

For this reason the I and X Air Corps, for example, are listed under the Second Air Fleet, since territorially they were within that air fleet's area of jurisdiction though assigned tactically one under the Third Air Fleet and the other directly under the Commander in Chief of the Air Force.

4. A brief glance at the allocation of air signal units, as command instructions, to the two air fleets reveals the area of main effort in operational planning: the Third Air Fleet, in the South, has the larger complement of units assigned than the Second Air Fleet. The First Corps, for example, received no air signal units at all assigned. Even without any previous knowledge of the operational intentions, the massing of signal units and also of special air district commands makes it evident that, in planning, the area of main effort, where a decision was to be sought in the main, offensive was in the North, in the zone of the Second Air Fleet.

5. Composition of the Air Signal Units. The abbreviations appearing in the column "Number and Composition of the Lower-level Units (2nd Air Fleet, 3rd Air Fleet, 1st Air Corps)" denote company size units of the following types and for the following missions:⁴

* Since the area involved (Appendix 1 to Chapter Four) is not available in the copy of the manuscript under translation, the abbreviations are translated on the table in separate sheets to facilitate use as a legend with the German copy.



ABBREVIATIONS USED IN THE GERMAN TEXT OF CHAPTER
FOUR, APPENDIX 1

Tspr.	Telephone Operating Company
Tspr. Bau	Telephone Construction Company
Tel. Bau	Telegraph Construction Company
Fl. H. Nachr. Züge	Air Base Signal Platoons
Ger. Kol.	Equipment Company
Flugsich.	Air Traffic Control Company
Funk	Radio Company
Kl.L.M.S.St.	Air Report Collecting Sub-Center
Gr.L.M.S.St.	Air Report Collecting Center.

Smaller units, such as individual platoons have been omitted in the compilation.

LOCATION OF COMMAND POSTS
(Status approximately 1 November 1939)

1. Air Force.

Second Air Fleet	Gremmendorf bei Muenster Advanced CP: Kaarst bei Neuss
IV Air Corps	Hanover
VIII " "	Schloss Dyk bei Rheydt
II AAA Corps	Moenchen-Gladbach
7th Air Division	Schloss Rhoda bei Wiedenbrueck
Third Air Fleet	Bad Orb
I Air Corps	Koeln-Mielenforst
II " "	Bad Neuburg
V " "	Hechingen
I AAA Corps	Rangsdorf bei Neuwied

2. Army.

Army Group B	Bad Godesberg
Fourth Army	Euskirchen
Sixth Army	Grevenbroich
Army Group A	Koblenz
Twelfth Army	Mayen
Sixteenth Army	Bad Bertwich (?)
Army Group C	Frankfurt on Main
First Army	Bad Kreuznach
Seventh Army	Calw

CHAPTER FIVE

THE CONDUCT OF AIR WARFARE DURING THE
WAR OF WAITING
IN THE WESTERN THEATER

Actual events in the conduct of air operations by the belligerent air powers during the War of Waiting period hardly provide any justification for use of the word "air warfare" at all. Nevertheless, when compared with the completely passive behavior of the ground forces, both opposing sides did actually conduct active combat operations, even though with limited objectives, changing missions, and small commitments of strength.

The reasons for this reserved behavior were completely different on the two opposing sides.

The German Command was firmly resolved to take aggressive action, and that action was to take the form of a large-scale offensive on the ground and in the air to force a decision. The only reason for remaining passive was the resolution to wait for the most favorable time for action. This depended on weather conditions. The German Command intended to retain the initiative and force events on the enemy.

67 Once the fundamental decision had been taken not to commence separate operational air warfare unrelated to operations on the ground:⁶⁶

Once the "recipe for victory" of the Polish campaign

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had again been elevated as an axiom, according to which air power was to be committed primarily to support the impending Army operations:

And once the overall operational concept was thus established, the German Command had no interest whatever in provoking enemy air operations. Such action would have compelled it to disclose its cards prematurely, to dissipate and weaken its potentials in ~~MAKING~~ combat action of small importance to the overall outcome of the war, and possibly to draft entirely new plans for the continued conduct of air warfare.

Thus, if the western air powers also continued the policy of a war of waiting, this could only serve the interests of the German conduct of the war. If they did not do so, however, the German side had prepared for a counter-blow which could be delivered at any moment with all forces available.

The important point for the German Air Force, therefore, was to maintain a policy of extreme reserve and for the time being to refrain from any attacks against France and/or Britain. Operations against both powers were for the time being to be restricted to cautious and later a little more intensive air reconnaissance to verify already available intelligence information and to procure new information.

cc. The reasons for this decision have been discussed more exhaustively in connection with other matters, namely in Part Three, Volume One, Chapter 2, III: "The Problem of Separate Operational Air Warfare (Die Frage des selbststandigen operativen Luftkrieges.)"

One fundamental difference existed, however, between the conduct of air operations against Britain and against France, in that combat action against British seaborne targets was authorized at a relatively early juncture and gradually intensified as the months passed. In such action the order remained effective to carefully avoid the air over British territory including British territorial waters, until this restriction also was gradually relaxed.

The Allied Command for their part still had no interest in provoking open air warfare, although their reasons were different from those of the German Command. Both Western Powers in their military operations were playing for time. Their air armaments urgently required reorganization and expansion, and this applied particularly to Britain.

So far the British conduct of operations had been designed exclusively for defense, if for no other reason than because her control of shipping lanes could only be maintained if the air remained open. The British had consciously neglected their aggressive air forces. They had adequate aggressive air power to attack German North Sea ports and, within the penetration ranges achieved, to attack German targets of importance to the military economy (Ruhr region).

France necessarily had to withhold action because she was in no position to wage all-out air warfare alone.

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However, France also had another reason: she had to fear exceedingly heavy retaliatory attacks as a consequence of any air operations against German territories. Furthermore, the viewpoint had gradually gained ground in the French Command that the air units must be employed primarily in support of the French ground forces if the German side were to launch an offensive.

The reasons for refraining from air warfare were thus due to widely differing motives: the German Air Force could have waged air warfare, but did not want to; the Western Powers wanted to but were unable to do so.

In examining the consequences of this mutual, though differently motivated, restraint in the matter of air warfare on a basis of facts and events, the initial situation evolves that the period of the War of Waiting was governed by the factor of two "theaters of air warfare" geographically and in point of command separated one from the other, each with its own objectives, combat conditions, and weather conditions.

The one theater, in the North, comprised the North Sea areas. Here, the Second Air Fleet conducted aggressive air warfare against the British Navy; reconnaissance activities in the areas also primarily served this purpose.

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The other "theater of air operations" in the South, comprised Metropolitan France: here the Third Air Fleet was

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restricted by orders to reconnaissance of ground targets. This means that, strictly speaking, only the reconnaissance activities of the Third Air Fleet over French territories served directly as preparations for the planned German offensive in the west, whereas the reconnaissance and combat operations against British naval forces could only indirectly and in the long run be considered within the overall strategic pattern.

Separating these two distinct "theaters of air operations" was the block of neutral states, namely, Holland, Belgium, and Luxembourg, whose borders the German Air Force for the time being had strict orders not to cross.

A picture thus evolves of a complete separation of the areas for German air operations into two distinct zones, between which no connection of any kind is discernible. This all the more so since it was only in the South that the tactical front in the air corresponded to the tactical front on the ground.

It thus appears perfectly logical that in the following presentation the events are not discussed in their time sequence for the entire front, but rather by areas of operations and thus by air fleets. Apart from this division of the subject material according to command factors, it also seems advisable to treat the subject in two separate time phases, making the division at the turn of the year.

71 The reason for this division into wide phases will be given later.

Finally, a word on the inclusion here of the subject of the conduct of air warfare at sea.

As the present author heard only after completing the present study, in the draft form, the subject of air operations at sea is being dealt with separately by another author and is to serve as supplementary to the present study.

Nevertheless, it is necessary to discuss the subject, even though only briefly, in connection with the subject of combat operations in the zone of the Second Air Fleet during the period known as the War of Waiting. From the viewpoint of air strategy, air operations against the British naval forces and later also against British convoy movements and the dock installations in British ports were an integral part of the conduct of air warfare by the Second Air Fleet. In this light, the "air theaters of war" cannot simply be separated into a "land air theater" and a "naval air theater." The point here is to show that the Second Air Fleet was actually constantly in action, even during the most quiet period of the campaign in the West.

Even after the Second Air Fleet was no longer "tactically" responsible for the North Sea area--after the X Air Corps was

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transferred to direct command control by the Commander in Chief of the Air Force, the air fleet still remained "territorially" co-responsible for the provision of facilities making air operations against Britain possible (the ground organization, supplies, signal communications, air defense, and so forth). To ignore here the Second Air Fleet's participation in the conduct of air warfare at sea would be tantamount to a misrepresentation of facts.

The risk naturally exists that the presentation offered here of combat operations over the North Sea might be found to conflict in parts with the presentation given in the main and separate study on the subject. However, the possibility of such contradictions must be accepted as unavoidable within the scope of the present study and can be amended later.

FIRST PHASE

AIR WARFARE IN THE WESTERN THEATER FROM 67
OCTOBER 1939 TO THE END OF THE YEAR 1939-1940

I. SECOND AIR FLEET OPERATIONS AGAINST BRITAIN, AND BRITISH
COUNTERACTION.

In the Western Theater the bombing of targets in enemy territories was initiated by Britain, not by the German side.

Only one day after Britain's declaration of war, 4 September 1939, British air units attacked Wilhelmshaven.⁶⁸ The

German side took no counteraction. Germany's opponents also

67. In writing this presentation of the first phase of air warfare in the Western Theater, the author had available a study by the Military History Branch (Branch G) of the Air Force General Staff under the title "Air Warfare XXI against the Western Components in 1939 (Luftkrieg gegen die Westländer im Jahre 1939)". Photostat copy in Karlsruhe Document Collection, 4/15. See Source No. 1. One chapter of that study dealt with German air activities under the title "Activities of the German Air Force in the West in 1939 (Die Tätigkeit der deutschen Luftwaffe im Westen im Jahre 39)".

Although the reference study was based on original records of the Commander in Chief of the Air Force, and from the air fleets and air corps, such as operational orders and war journals (the numerous sources used are listed) it is elementary and incomplete. It appears to have been a first attempt at a compilation of source materials.

Another drawback is that large and by no means unimportant parts are missing in the photostat copy.

It has nevertheless been used as a basis in the present discussion, because at least the dates and events recorded appear to be authentic for the period up to the end of 1939. The first part of Chapter Five presented here for this reason is based primarily on the reference study by the German Air Force General Staff.

68. See Part One, Chapter Three.

Footnote 69, p. 518: For example: against Borkum on 28 November, Helligoland on 5 December, Borkum and Sylt on 14 December, Nordney and Sylt on 16 December.

Footnote 70, p. 518: An opinion on this matter has been given in the discussion of later developments in Part One, Chapter Three.

74 for some time made no efforts to repeat a massive action against targets within Germany. German ships and the German North Sea islands occasionally came under small-scale attack.⁶⁹

It was 18 December 1939 before the British again flew a sizable attack against Wilhelmshaven. Of the fifty-two Vickers-Wellington bombers participating in this attack, German fighters shot down 36, or two-thirds of the whole force. The attack was a complete failure and apparently failed to penetrate to the actual target. That is about the sum total of British aggressive air action in 1939.

Other activities of the British Royal Air Force can hardly be considered as a massive action; they remained limited to reconnaissance and propaganda flights by individual planes, usually at night, over the areas of northwestern Germany. The missions in which British aircraft, with increasing regularity, dropped pamphlets over Germany the German side regarded merely as "propaganda activities." The question must remain open here whether these flights at this early stage in air warfare were not designed to give aircraft crews orientation in their future areas of attack and to try out newly developed methods of radio navigation.⁷⁰

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The assigned mission of the Second Air Fleet underwent no change due to the British initiative in aggressive air
 71. The areas for authorized attack against seaborne targets is shown in Part One, Chapter IV, Appendix 3: Outline Map.
 72. Part One, Chapter Three.

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action. It remained strictly defensive, in accordance with the various directives received. The only action authorized after the British air attack against Wilhelmshaven was that of weather reconnaissance over Middle and South Land.

Shortly thereafter, orders were issued to attack British naval units detected approaching the Bight of Heligoland of the proclaimed mine areas in the outpost areas of the Bight of Heligoland.⁷¹ From then on the main mission of the Second Air Fleet steadily developed into one of exploiting every possible opportunity for effective attack against British naval units throughout the entire North Sea areas. However, air attacks against enemy naval units in naval ports or in the English Channel still remained subject to prior approval by the Commander in Chief of the Air Force.

The first opportunity thus offered for units of the 10th Air Division (which later became the X Air Corps) was on 26 and 27 September. The execution of this attack and the results achieved are already known.⁷²

Then comes a gap in the account by Branch B of the German Air Force General Staff. This gap must be filled by information by the Gaul study, previously and repeatedly referred to, according to which the X Air Corps, reinforced for the purpose again carried out a sizable attack on 9
 For Footnotes 71 and 72 see p. 313.

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October,⁷³ when 143 aircraft attacked British naval units in the northern reaches of the North Sea and reported good results achieved, which later were found to have been incorrect. On 17 October smaller forces against attacked British war ships in Scapa Flow, once again without any real results.

In November a number of missions were flown in the form of "armed reconnaissance" against the Shetland Islands, for example on 13 November and 17 December) but again without impressive results.

In defensive action, on the other hand German units occasionally and with fluctuating success went into action against enemy forces penetrating into the Helligoland Bight area and the coastal areas of Germany as well as into northwestern Germany. German fighters again shot down a number of the enemy planes but also incurred losses.⁷⁴

Throughout the period reconnaissance operations continued with varying success. Seasonal and climatic conditions steadily reduced possibilities for such action. The primary objective was to maintain surveillance over the south of England and over Scotland.

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Finally, on 1 November 1939 the Commander in Chief of the Air Force authorized air reconnaissance over Northern France. Missions flown into the areas of Lille-Dunkirk-Abbeville were more or less productive, although weather

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conditions and British fighter action seriously hampered operations in the target areas, and although Belgian neutrality compelled the reconnaissance planes to approach their target areas from the sea. High-altitude (23,000 feet) photo reconnaissance in these operations in some cases produced useful results, providing important information for preparation of the necessary data for the planned western offensive.

The above reconnaissance by the Second Air Fleet was supported by operations of the reconnaissance group of the Air Force High Command. Initially, the units of this group were unarmed and operated at altitudes around 30,000 feet. When British fighters shot down the first of these planes, however, it was decided that they could not rely on their improved flight performances achieved without the weight of weapons.

In order to intensify long-range reconnaissance, the Second Air Fleet finally established what might be called a "large reconnaissance force (Luftwaffen Fernverband). On 15 November the reconnaissance squadron of the IV Air Corps plus the headquarters squadrons of that corps ^{boomer} wings were placed under direct command by the Second Air Fleet Headquarters Reconnaissance Group. Besides insuring closer reconnaissance coverage of the areas in Northern France, this measure made it possible at the same time to orient the

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the bomber wings on their future areas of operations. For a few days of favorable flying weather these concentrated reconnaissance operations produced highly satisfactory results, but then weather conditions put an end to these penetrations into the far rear of enemy territory.

This broad and therefore incomplete presentation of events in the northern part of the Western Theater up to the end of 1939 and early 1940 must suffice to outline the activities of the Second Air Fleet during the first phase of the War of Waiting.

Fundamentally, only the reconnaissance operations over Northern France, which commenced so late, are really related to the topic treated in this study, which deals with the Western Campaign as such. German air operations against the British naval forces are only loosely related to the preparations for the offensive in the West.⁷⁵

⁷⁵ The reader is again referred to the previously mentioned study by Gaul, which treats the special subject of the conduct of air warfare at sea. (See Source No. 4).

II. THIRD AIR FLEET OPERATIONS AGAINST FRANCE AND FRENCH COUNTERACTION.

A study of Third Air Fleet activities reveals a completely different picture. These were restricted clearly to reconnaissance and protection for the reconnaissance units employed and, naturally, action to repel France reconnaissance units and their escort fighters.

From the very outset, a major phase in the assigned reconnaissance mission was to uncover the disposition of the French air forces, including their ground service organization and supply facilities and establishments. At the same time information was to be gathered on the French transportation system, with photos of its main traffic centers, in preparation for operations against the routes used in the French strategic concentration.

The zones to be covered by the air fleet's reconnaissance units had been carefully coordinated with the reconnaissance operations conducted by the various armies.

Initially, however, the planned reconnaissance operations remained prohibited. It was only after French reconnaissance activities had steadily increased, that the German Command on 10 September authorized the commencement of air reconnaissance by the air fleet, but only within a very limited scope across the frontier.

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79 On 13 September the Commander in Chief of the Air Force
 authorized "an inconspicuous conduct of long-range recon-
 naissance at great altitudes,"⁷⁶ but now weather conditions
 80 prevent any such operations. Reconnaissance between 13 and
 26 September then produced the first information on the
 French air bases in operation. On 27 September air photo
 reconnaissance detected a total of 216 single- and 40 twin-
 engine aircraft on fields in the Charleville-Laon-Troyes-
 Chaumont-Strasbourg area.

Reconnaissance activities continued on both sides.

On 4 October Third Air Fleet Headquarters moved to
 the command post at Bas Orb and early in the month expanded
 its reconnaissance program. To the mission of ascertaining
 and keeping under surveillance the French air force's ground
 organization now came that of reconnaissance over the main
 rail and road routes, as well as the training areas of the
 French army.

The program was thus expanded, but the possibilities
 of effectuating it remained restricted: the existing direc-
 tive remained in force that reconnaissance aircraft were to
 operate only in weather conditions which permitted flight
 at their maximum operating altitude⁷⁷, and that not more
 than two crews per squadron were to be dispatched on any
 77. "Dienstvorschriften:" the maximum operating altitude for
 the fully equipped aircraft.

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one day.⁷⁸

Weather conditions in the last two weeks of October restricted reconnaissance on both sides to a minimum. However, limited as they had been, the past reconnaissance activities had produced a relatively comprehensive picture of the French air forces, the overall strength of which at the time was estimated at 36 dive- and other bomber groups, totalling 540 bomber aircraft, and 19 single- and twin-engine fighter groups totalling 475 aircraft.

Another important point discovered was that some of the French air units were dispersed in very small elements stationed on alternative and dispersal fields, well camouflaged and in many cases under fragment proof shelters. They had at least partly learned from what had happened in Poland and applied some of the lessons learned. Due to weather conditions, both sides carried out little reconnaissance in the first part of November.

Later in November, the French stopped their reconnaissance and--a new departure for the French, propaganda flights over German territory. The Third Air Fleet counteracted by sending bomber units of ten to twelve aircraft three times daily from the II and V Air Corps to drop pamphlets. However, these flights were restricted to nights or to daytime flight above the clouds, and to the immediate

For Footnote 78 see p. 326.

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front areas.

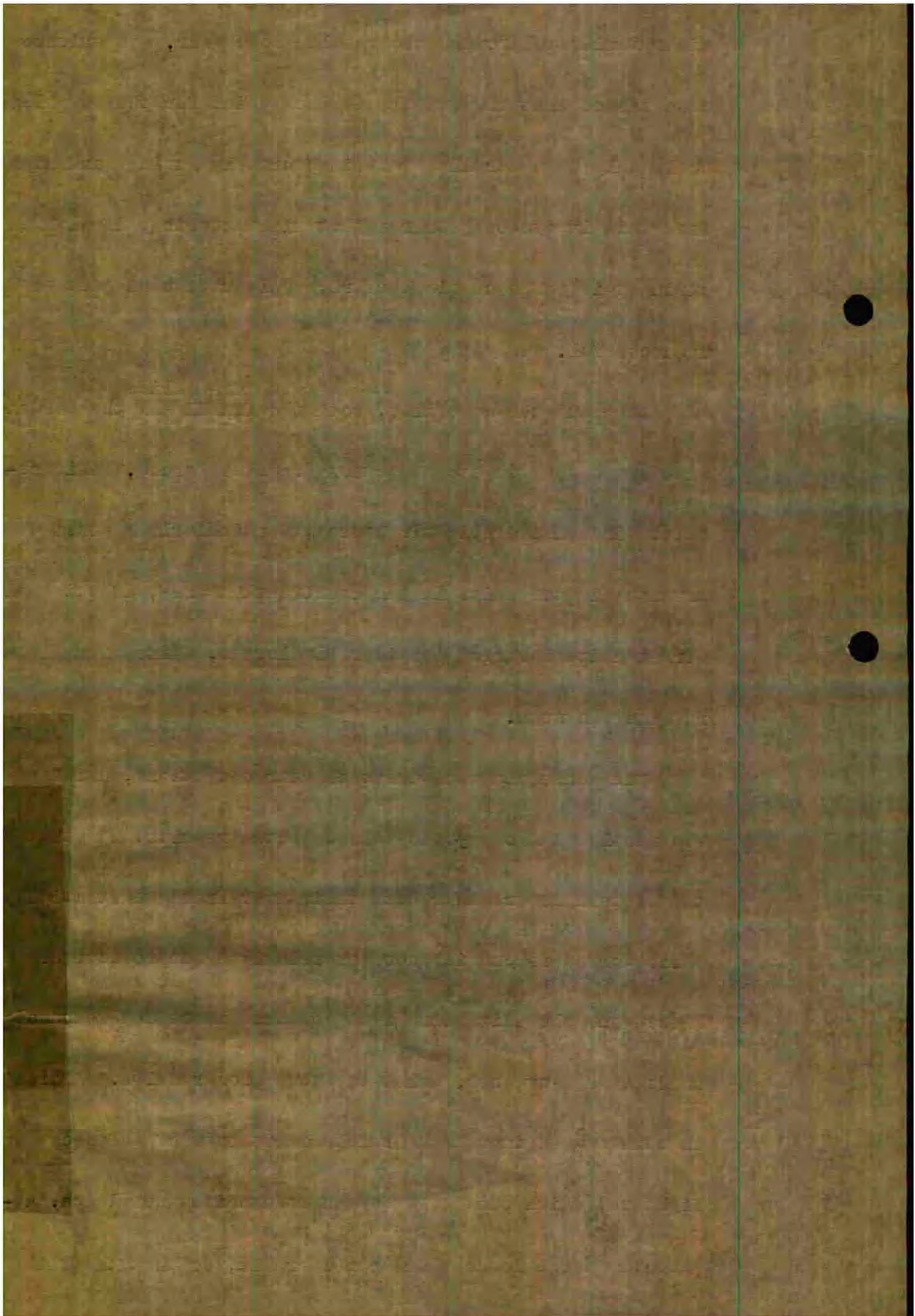
the Third Air Fleet

On 5 November sent its units farther into the French rear, as far as Paris-Lyon-Marseilles. However, these operations failed to produce the results hoped for. Experience soon showed that the stipulated drop point for the pamphlets could only be determined very inaccurately during dark nights. From this it can be gathered that night bombing, if planned during this stage of air warfare, would have been just as unsuccessful.

Western Allies

At about the same time, both the ~~XXXXXX~~ and the German side commenced dispatching strong fighter forces. This resulted in considerable air combat, particularly against British fighter units in the Saarbruecken area, in which the German units incurred considerable losses, while enemy losses remained unknown.

One consequence of these fighter operations, which apparently did not produce the expected results, was that the Western Powers increased their near front penetrations, while German reconnaissance was relatively unproductive. Thereupon, the Third Air Fleet ordered increased reconnaissance on 21 November, which produced good results. This in turn caused increased French commitments of defense fighters, which shot down German reconnaissance planes. Apparently these losses were considerable, so that the Third



82 Air Fleet on 24 November again reduced its air/reconnaissance activities.

From now on each reconnaissance squadron was to send out only one plane daily and arrangements had to be made insuring that escort fighters would meet it over the front areas on its return.

83 From the end of November to the end of December weather conditions were bad almost throughout, so that German and enemy air activities were practically at a standstill. The French continued their propaganda operations, exploiting the westerly wind to send drift balloons with pamphlets over Germany.

In contrast with developments in the West of the Second Air Fleet, in the North, neither bombing nor armed reconnaissance missions were flown in the South, the zone of the Third Air Fleet. Air operations remained restricted to cautious tactical and strategic reconnaissance, propaganda flights, and defense against enemy air action.

The War of Waiting on the ground had found a counterpart in warfare in the air.

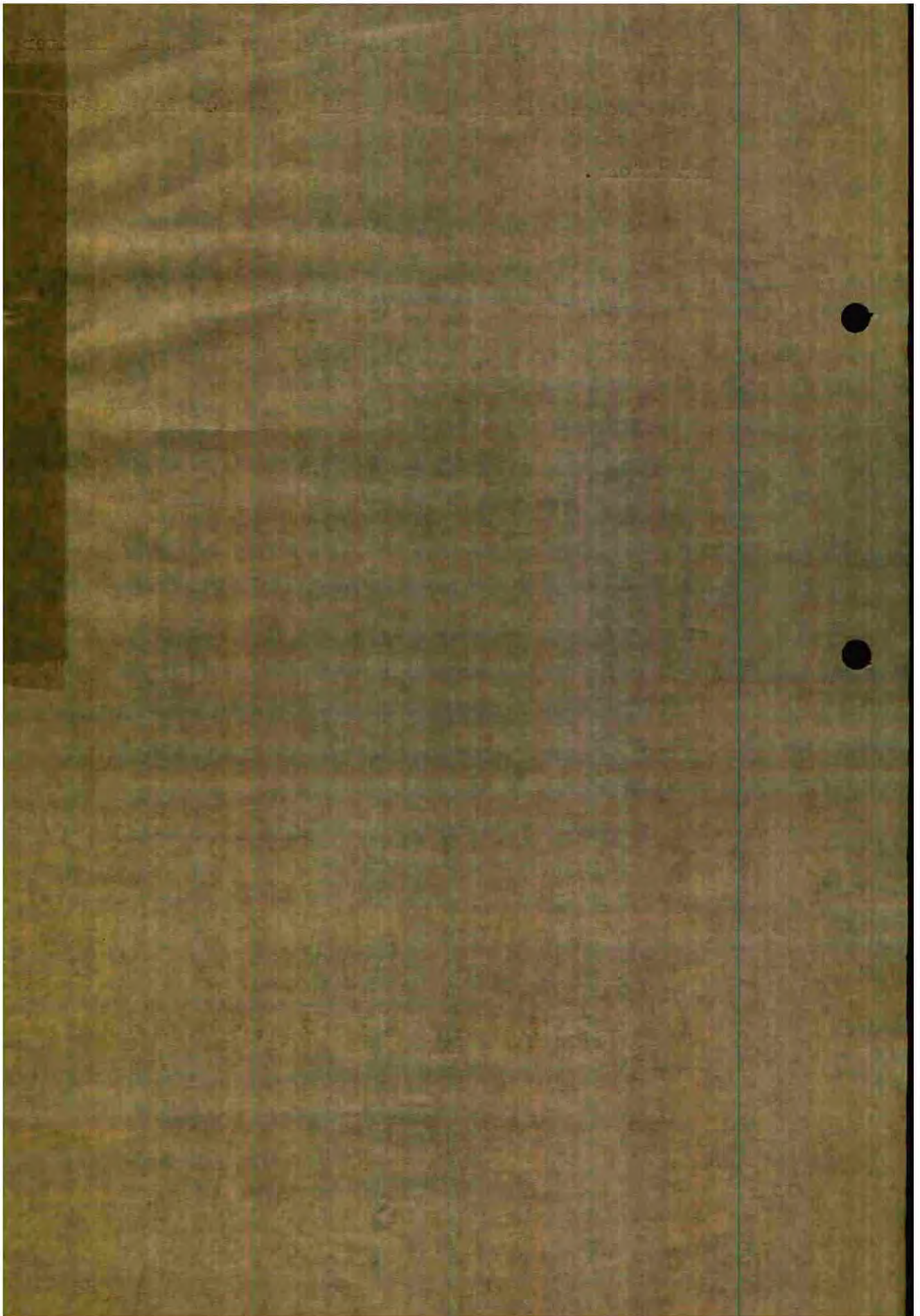
Not having the actual reconnaissance reports of the time available, it is not easy to determine in retrospect the actual results achieved through reconnaissance operations. The impression given by the available records XXXXXXXX is, however, that the results achieved up to the end of the

Footnote 78, p. 325: See Source 1.

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85

year were not as fruitful as the German Command had anticipated. The reasons were: the late juncture at which the Commander in Chief of the Air Force authorized reconnaissance activities; the continuing effectiveness of the enemy fighter defenses; and finally the steadily deteriorating weather conditions.



III. AIR OPERATIONS IN GENERAL IN THE WESTERN THEATER.

An intelligence report by the German Joint Military High Command (OKW) in October 1939 gives an account of the activities, successes, and losses of both German air fleets during the first weeks of the war of waiting.⁷⁹ The following passages are quoted from that report:

In the Western Theater the conduct of air warfare on both sides has up to the present remained restricted to reconnaissance missions and defense action by fighters and antiaircraft artillery. No bombing attacks have occurred. Effective German defense action by fighters and antiaircraft artillery forces in the Western Theater has brought down 60 enemy planes, among them 12 British, since the beginning of the war.

These figures do not include enemy losses in aircraft over the German interior or the coastal outpost areas. German losses due to enemy action in the Western Theater during the period from the beginning of the war to 17 October 1939 totalled 11 aircraft.

There can be no doubt that the figures given in the report were influenced for propaganda purposes. Above all they give no real information on the actual German losses.

⁷⁹. "Bericht des OKW vom 19. Oktober 1939." Source No. 1.

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84 Furthermore, the report obviously gives no consideration to the conduct of air warfare by the Second Air Fleet in aggressive and defensive action against the British naval forces in the North Sea areas, or to defense activities in the northwest areas of Germany. The losses incurred in all of these operations would change the overall picture.

No records are available showing overall German successes and losses in the Western Theater up to the change over of the year 1939-1940.

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SECOND PHASE

AIR WARFARE IN THE WESTERN THEATER
MAY 1940 TO OPENING OF THE GERMAN OFFENSIVE

Although the end of 1939 is taken here merely as a division in time and not as a division in the military sense, it does appear justified in the present discussion for the following reasons:

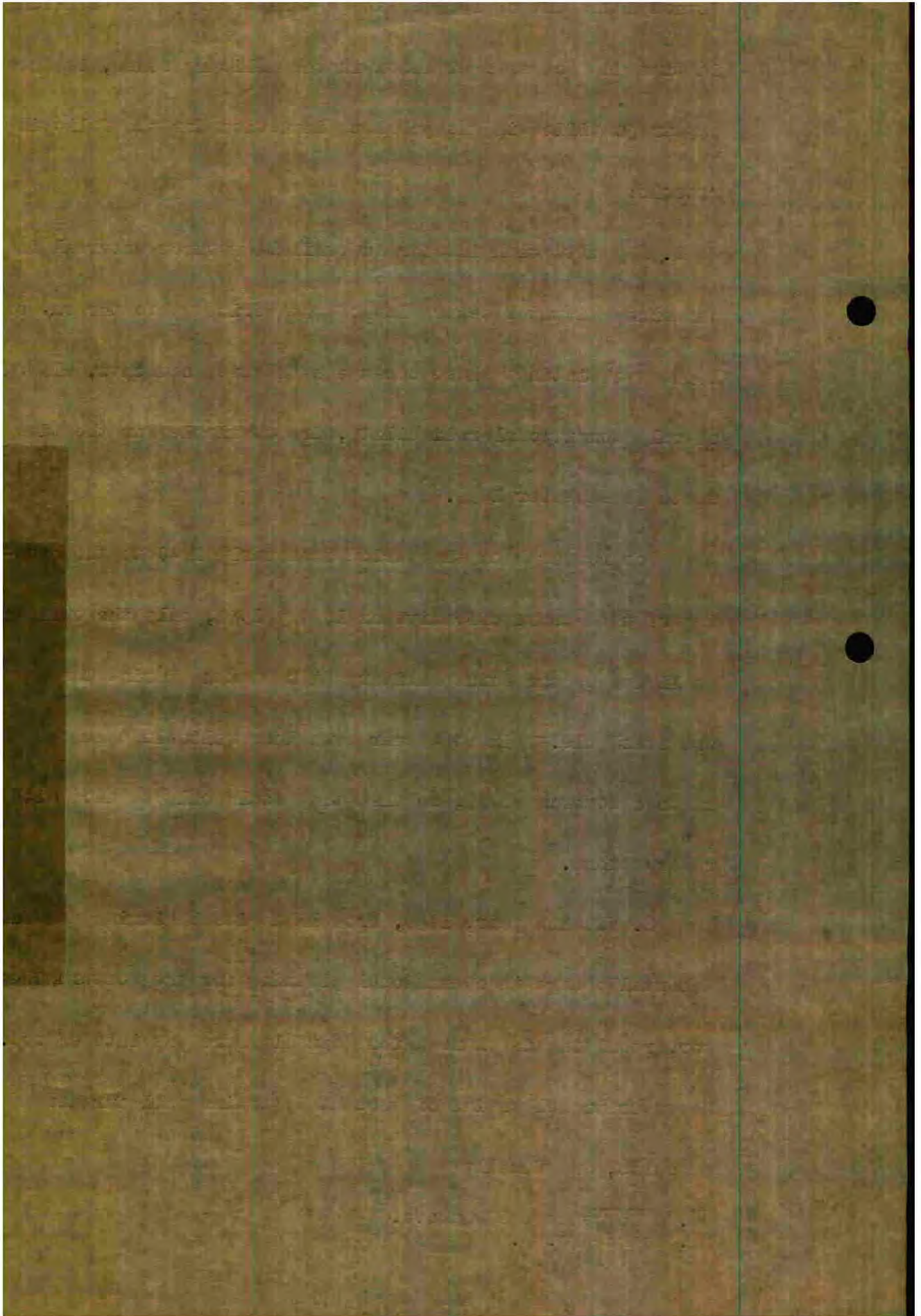
1. The situation insofar as available source material is concerned dictates separation of the period up to the end of 1939 as a distinct phase because authentic documents, although of only conditional reliability, are available for the time up to 31 December 1939.³⁰

For research on the period from early 1940 to the opening of the German offensive on 10 May 1940, only the bulletins published by the Joint Military High Command during the period are available.³¹ These appear even less reliable than the records covering 1939, so that they could only be used with reservations.

2. The new year, 1940, brought at its beginning the fundamental change in operational planning for the Western Theater, resulting in plans which actually were put into effect. New operational trains of thought determined all further measures, and finally

30. See Footnote 27, above.

31. Source No. 5.



3. The Western Theater, at least temporarily, was pushed into the background for those participating in events at the time and for present students by the sudden execution of Operation Weseruebung (the invasion of Norway and Denmark), the ex-centric strategic operation directed north, which had a considerable impact on the grouping of military forces, at least so far as air power was concerned.⁸²

82. For more detail on the interaction of planning for the Western Theater and for the North (Skandinavia) see Part Three, Chapter One: "Operation Weseruebung--Air Force Operations against Denmark and Norway and Their Impact on Operation Gelb (Die Weseruebung--der Einsatz der Luftwaffe gegen Dänemark und Norwegen und seine Auswirkungen auf den Fall Gelb)".

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SECOND AIR FLEET OPERATIONS AGAINST BRITAIN AND
BRITISH COUNTERACTION

As had been the case in the past three months, main emphasis in actual combat operations was again in the zone of the Second Air Fleet, where the missions on the whole had remained unchanged. The operations in execution of these missions varied in point of intensity and objectives in accordance with the weather and seasonal conditions, which were particularly difficult in March.

Nevertheless, events from January to early March show a steady increase in Second Air Fleet activities, namely in operations by the X Air Corps against British shipping, preceded by increased long-range reconnaissance against the east coast of England and Scotland and the areas between the mouth of the Thames River and the Shetland Islands.

Besides action against British naval forces, operations now commenced to interrupt convoy traffic along the east coast.

The various terms used in reporting, such as "reinforced reconnaissance," "reconnaissance drive," "armed reconnaissance," and so forth can be taken to indicate that initially only relatively small forces were dispatched on these long-range missions. However, the strengths committed increased as soon as attacks against the British naval

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89 base of Seaga Flow resumed--allegedly with resounding success in strikes against the British Home Fleet on 17 March and 3 and 9 April. However, these attacks were already closely related with the impending Operation Weserübung against Denmark and Norway.

Otherwise, reconnaissance continued in all weather conditions, the object being to keep the entire area of the sea east of the British Isles under surveillance.

The opening of Operation Weserübung on 10 April constitutes a clear cut dividing line in developments so far as the situation and missions of the Second Air Fleet are concerned. Although main emphasis remained with the X Air Corps, now under direct command by the Commander in Chief of the Air Force, the Second Air Fleet had heavy burdens of responsibility in the matters of supplies, signal communications services, and air defense. Second Air Fleet Headquarters had to think, view, and plan in terms of operations directed westward and northward.

While continuous reconnaissance was maintained uninterrupted over the areas in the southern parts of the North Sea and the French coastline in the English Channel, photo reconnaissance over Belgium and Holland also had not been neglected. Finally, the data available for planning and preparations for the attack included photos of the

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frontier fortifications in Belgium and Holland, the Meuse river bridges, Belgian rail interdiction targets, the canal ports, the major cities in Belgium and Holland, areas for airborne landings in Belgium and Holland (including oblique photos from close to ground level. With the exception of the three northern provinces, photo-map coverage was available on the whole of Holland.

In the first quarter of 1940 British reconnaissance and combat activities continued unchanged. However, the Royal Air Force refrained from any attempts to repeat their "large-scale" attack, such as the two flows against Wilhelmshaven; instead, small units attempted to attack airfields on islands, targets near to the coast, and shipping in the Bight of Holland. To use German technical terminology, these attacks could be described as armed reconnaissance operations.

British units continued to penetrate over northwestern Germany, usually at night, without carrying out any serious attacks. Apparently the British were continuing their orientation and navigational flights.

In these penetrations over northwestern Germany as well as into areas close to the coast, the British time and again violated the territorial rights of neutral states. A noticeable feature in the German Joint Military High Command

91 bulletins of the period is that they systematically placed strong emphasis, from January on, on the violation of neutral territory by British air forces, first the territories of Holland, then those of Belgium, and finally also of Denmark and Switzerland. In this way the ground was laid well beforehand, ~~for action in which~~ politically, psychologically, and propagandistically, for action in which Hitler was determined to disregard the rights of neutral states. Silence was maintained on the fact that German reconnaissance had long ceased to observe the neutrality of the states involved.

THIRD AIR FLEET OPERATIONS AGAINST FRANCE AND
FRENCH JOWITER-OPERATIONS

As had been the case during the first phase of the War of Waiting, both sides in the zone of the Third Air Fleet (which, strictly speaking, was the actual Western front) during the second phase restricted their air action to purely reconnaissance operations, which, however, naturally brought in their train convoy and defense operations by fighter and antiaircraft artillery forces on both sides.

However, a fundamental difference is again noticeable in the operations conducted by the two opposing sides: whereas the French limited their action to short-range drives by numerically small forces over German territory and thus refrained from systematic reconnaissance in the far rear, German activities increased steadily. German reconnaissance units extended their operations from the eastern to the western and southern parts of France, including, for example, the areas of Paris, Bordeaux, and the Mediterranean coast. The French fighter defenses were unable to prevent German reconnaissance, in contrast, British fighters in Northern France seriously hampered German reconnaissance operations and inflicted losses on the German units. Weather conditions also caused losses.³⁵

35. Early in 1940 (probably in February) for example, a sizable German reconnaissance operation in the areas south of Paris ended as a complete failure.

Some of the participating aircraft were blown off course during their return by the Mistral wind. A number of them made emergency landings on the south slopes of the Alps in Italy, others crashed--Continued.

The increased reconnaissance activities of the Third Air Fleet in the second phase of the War of Waiting served in a decisively important measure to complete and expand the existing information on the ground organization of the French air forces and on the dispersal of the flying units on airfields as far as a line from Rouen-Paris-Dijon. In addition, photo reconnaissance furnished data on the French frontier fortifications, the various French military headquarters, the canal ports and the Mediterranean ports of Marseilles and Toulon, favorable points for interdiction of ~~railroads~~ rail routes to be used in the French strategic concentration, and the major cities in the northeastern areas of France.⁸⁴

By the opening of the German offensive air reconnaissance had thus procured very precise data for the operations of the German aggressive air arm. The postponement of the date for the attack had produced only favorable results so far as the accuracy and the scope of intelligence information was concerned.

⁸⁴. According to Schmid

Footnote 83, p. 337--Continued: in the mountains. Twelve planes in all were lost. According to Schmid.

OVERALL GERMAN AIR OPERATIONS IN THE WEST

No consolidated report is available covering the activities, successes, and losses of the entire German aggressive air arm in the Western Theater during the second phase of the War of Writin_. However, a report is available by the Joint Military High Command dated 2 March 1940 under the title "Semi-Annual Report (Halbjahresbericht), which gives a consolidated survey over the entire period from the start of the war.

Although this report, like all other reports by the Joint Military High Command, was colored for propaganda purposes, it does provide insight into the overall German conduct of the War for the first half-year of warfare. The figures given in the report appear in no way convincing so far as accuracy is concerned, but they do seem important because they reflect the picture, as the German Supreme Command at the time saw it, of the German and the enemy situation.

Excerpts from the report which refer only to the German Air Force are presented in Appendix I to this chapter.

An intelligence estimate by the Commander in Chief of the Air Force shortly before the opening of the offensive provides a more realistic indication of the operations conducted and results achieved by the German Air Force in

94 the Western Theater at the close of the second phase. The
 estimate is based primarily on reconnaissance information pro-
 95 ceured by Third Air Fleet units over France and in broad out-
 line gives a sound appraisal of the potentials and plans of
 the enemy air forces. Future events, as shown later in this
 study in the account of the actual offensive, were to show
 to what extent German hopes and fears were to be fulfilled.
 The text of the intelligence estimate is included with this
 study as Appendix 2 to this chapter.

The Semi-Annual Report (Appendix 1 to this chapter) had
 given figures for enemy planes downed and for own losses.
 The figures for actual losses in first line aircraft during
 the decisively important phase of the War of Waiting, from
 early October 1939 to late March 1940 are offered for com-
 parison with the officially announced figures of the Joint
 Military High Command. They are taken from internal but un-
 doubtedly objective statistics maintained in the Office of
 the Commander in Chief of the Air Force:

Aircraft Type	October 1939 -December 1939	January- March 1940	Totals Oct 39-Mar 40
Close Recon	40	27	67
Strat Recon	38	24	62
Fighter	212	158	370
Twin-Eng Fighter	29	34	63
Bomber	99	147	246
Ground-Attack	10	24	34
Transport	17	13	30

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Aircraft Type	October 1939- December 1939	January- March 1940	Totals Oct 1939-Mar 1940
Naval	59	8	67
Liaison	10	9	19
Total aircraft losses, all types	514	444	958

95 The following should be noted concerning the above tabulation:

1. The figures given are for German aircraft losses after conclusion of the Polish Campaign and prior to commencement of Operation Weserübung against Denmark and Norway. This means that they can only represent losses in the War of Wavering in the Western Theater during the six months of the report, including losses in operations at sea, which probably accounted for the most losses.

2. The loss figures give no details on what were called "totally lost aircraft" which according to the Joint Military High Command totalled 78 aircraft up to 2 March. It can be assumed that the previously mentioned statistics included first line aircraft rendered only temporarily inoperable by enemy action, weather conditions, or troubles on the ground. It is not possible to estimate how long aircraft inoperable remained ~~operable~~ which were damaged but nevertheless returned from their missions.

3. No matter what the ratios may have been between

96 totally lost, badly damaged, and slightly damaged aircraft, both the figures for total losses and those for the individual aircraft categories reveal that even during the most quiet period of the whole war the losses in first line aircraft were so heavy that they created serious problems for the repair, resupply, and production services, which had an unfavorable impact on all production planning by the Air Force.

97 4. No comparative figures are available on personnel losses. However, it can be assumed that personnel losses were heavy, incurred primarily in operations at sea by strategic reconnaissance, bomber, twin-engine fighter, and naval units. This loss of highly qualified personnel undoubtedly had repercussions on the whole training program.

5. Since the ground-attack, transport, and liaison units were not committed in missions over enemy territory during the period covered by the tabulation, losses in these categories must have been due primarily to weather and ground conditions.

JOINT MILITARY HIGH COMMAND SEMI-ANNUAL
REPORT, 2 MARCH 1940

EXCERPTS

In its closing passages the report states as follows concerning the Air Force:

"The German Air Force made an outstanding contribution towards the victorious outcome of the campaign in Poland. Besides destroying the Polish air forces, it committed other of its elements to secure the air over Germany in the Western Theater. Its superiority in point of the devotion of its aircraft crews and the quality of its materiel time and again became obvious. The reconnaissance missions flown against Britain and France even under the most unfavorable weather conditions supplemented the data already available on the measures taken by the enemy. In reconnaissance against Britain, German aircraft time and again penetrated as far as the Orkney and Shetland Islands in spite of enemy counteraction.

"Attacks were flown repeatedly against enemy naval forces, armed merchant vessels, and convoys. Sixty-five ships totalling approximately 75 000 Gross Register Tons were sunk. The majority of these were enemy ships or neutral ships carrying contraband cargo for Britain, plus light naval units.

"In addition, he b hits badly damaged, and in part destroyed 52 ships totalling 200 000 tons, including

20 light British naval vessels

2 British cruisers of 15 300 tons

2 British battleships of 65 550 Gross Register Tons

1 British aircraft carrier of 22 600 Gross Register Tons

" Since the beginning of the war the German antiaircraft defenses and the Air Force ground organization have been fully developed to the extent planned, the aircraft reporting service has been placed in operation and tested, and passive air defense measures and passive air defense installations have been perfected throughout the Reich. Whenever large enemy forces endeavored to penetrate over German territories they were effectively repelled by fighter and antiaircraft artillery defenses.

"To date 235 British and French aircraft have been shot down. To this must be added 50 aircraft on one British aircraft carrier, so that our western opponents have lost a total of at least 335 aircraft since the beginning of the war. Nine enemy anchored balloons were also shot down.

"In comparison, the German Air Force in these six months has lost a total of 39 aircraft due to direct enemy action, while 43 failed to return from combat missions due to mishaps (emergency landings, etc).

Remark: Copied from "Deutschland im Kampf" published by the
Joint Military High Command (JMH) and the Propaganda Ministry
March 1940 issue; Verlagsgesellschaft Otto Stollberg, Berlin
W 9.

INTELLIGENCE ESTIMATE

(Air and antiaircraft artillery forces) by the Commander in Chief of the Air Force; Compiled by the Intelligence Division of the Air Force General Staff in early 1940 (April?). [The text given below was incorporated in the Operational Directives for the Air Force (Kaufanweisungen fuer die Luftwaffe) for the attack against France].

"In their entirety, the French air forces, including elements of the British air forces in France and the Dutch and Belgian air forces are inferior to the German Air Force.

"The following assembly bases have been detected:

Dutch and Belgian air units at their peacetime bases. They will also probably be there when the attack begins.

British Army air units in the areas of Northern France (Pas de Calais).

French Army air units in the assembly areas of the French Army extending from the Franco-Belgian and Franco-German frontiers to a line generally from Hirsch-Rethel-St. Menahould-Epinal-Belfort. The majority are stationed on front air fields.

French bomber units in the large air ports in the Champagne area.

French bomber units held as General Headquarters Reserve in the Loire River region south of Paris. Possibly British bomber elements are also in the same area. It is to be

expected that British and French air units will also appear in Belgium and Holland after commencement of the German attack.

"It seems likely that additional British air units will displace from England to the Western Theater.

"Particular attention is directed to the good camouflage concealment and wide dispersal of the French air units while on the ground.

"The primary mission of the Allied air forces will be to support the Allied armies in defense. For this reason attacks with bombs and weapons fire must be anticipated primarily against troop movements, assembly areas, and concentrations as well as against bridge positions and airfields in use within the Army zones of operations. French, Belgian and Dutch air units are not likely to attack targets within the German interior. In contrast it is to be assumed that British bomber units operating from bases in England will carry out day and night attacks against Rhine River bridges, rail interdiction targets, and supply depots.

"Enemy air attacks against targets in the German assembly areas must also be expected shortly before the commencement of operations.

"The assembly areas of the Allied armies are protected by fighter and antiaircraft artillery forces. Strong fighter and antiaircraft artillery fire action must be expected over

the sea ports of Amsterdam, Rotterdam, Antwerp, Dunkirk, and Calais. Strongly protected air defense zones are the areas of Paris and Marseille.

"The antiaircraft defenses of Allied Army units are relatively weak. In contrast, the French fortification installations (the Maginot Line) have strong, permanently emplaced anti-aircraft artillery defenses.

"The Belgian and Dutch fighter units are under alert. Once the borders are crossed, fighter defense action must therefore also be expected in Holland and Belgium.

"(For details see Orientation Volume France, Great Britain, Belgium, and Bulletin Netherlands, as well as the intelligence reports)."

[Remark: the above Intelligence Estimate is taken from General J. Schmid: "Beitrag zur Operationsstudie Feldzug gegen Frankreich 1940," pp. 7-8, Karlsruhe Document Collection 7.

CHAPTER SIX

EXPERIENCE GAINED AND LESSONS LEARNED
FROM THE WAR OF WAITING

The experience gained and the lessons learned from what happened during the War of Waiting period were manifold and highly diversified, although no concrete factual events can be taken as a starting point. A careful analysis of the available records on the period would provide a number of conclusions for application in future operational maxims in the most varied fields.

The narrow scope of the present partial study permits only a brief summary of those experiences and lessons which appear most important, and which on both contending sides are primarily of a negative nature. What makes such a summary appear all the more necessary is the fact that the application or disregard of these experiences was destined to affect not only the whole course of the 1940 western campaign but in part the whole future conduct of air warfare in World War II.

DAYTIME AND NIGHT ATTACKS BY BOMBER UNITS

The two frustrated and costly bombing attacks by Royal Air Force against Wilhelmshaven had proved that daytime attacks by bombers without fighter escorts against a target defended by enemy fighters must necessarily result in failure and heavy losses. The Royal Air Force drew the logical conclusion from this experience--although only after a second

attempt at this type of operational air warfare.

The German Air Force failed to draw the logical conclusions from such experience, otherwise it would not attempted the same kind of action a few months later in the "Battle for Britain." Although time for the purpose would have been available, the German side did nothing to apply the logical conclusions concerning tactically ~~XXXXXXXX~~ and technically adequately strong fighter escorts and improved defensive fire power for the bombers operating against the strongly defended targets in southeastern England.

2. Night Operations by Bomber Units. The nightly propaganda flights by Royal Air Force bombers, carried out almost night for night with typical British perseverance and particularly over the Ruhr region, were apparently not recognized by the German Air Command in their true significance. This was so in two respects:

a. The German Air Command failed to realize fully or at all that these flights were designed solely to serve as preparation for the conduct of aggressive operational air warfare. In retrospect there can be no doubt that these British penetrations, camouflaged as propaganda operations, served to train the crews in blind and night navigation; in target reconnaissance and detection; and also served to try out newly developed radio control methods adopted by

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the Royal Air Force.

On the other hand, no evidence is so far available that the German Air Force at any time carried out any such orientation flights or tests with radio control methods over France or, what would have been even more important over Britain, as the future enemy air powers. Instead, the German Air Force confined itself to target reconnaissance and genuine propaganda flights.

b. The failure of the antiaircraft artillery defenses

and the small results achieved by the the night fighter defense forces, which admittedly at the time were still very small, was not recognized fully by the German Air Command as a sign that new means and new methods were essential to prevent or at least seriously hinder enemy penetrations at night. It had to be assumed that the day would come when penetrating aircraft would drop bombs instead of paratroopers.

Time would also have been available for a fundamental revision of the whole defense system and methods, and above all for a proper development and organization of the night fighter defense system.

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c. The French Air Command. The French Air Command had failed to apply the lessons which could be learned from the German campaign in Poland:

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a. The French Command definitely should have anticipated the sudden concentrated attack by the German Air Force against the French air forces and their ground organization. Nevertheless, the French air forces were only partly dispersed on smaller air fields: the bulk of all units remained at the major peacetime air bases, which were known, where they were all detected by photo reconnaissance and would be destroyed in the German air attack which had to be expected.

b. The French Command must have been aware of the German air tactics, which proved so sound, of placing main emphasis on direct support for the Army on the field of battle.

The French nevertheless failed to take the obviously logical steps (1) of consolidating in point of organization and command control the air units intended for cooperation with Army forces in such a manner that they would actually be capable of direct Army support action; and (2) of so equipping their Army support air units and so training the personnel in those units that they could insure effective protection for the Army forces against air attack.

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The result was that the Allied ground forces were left practically without air protection and air support to face a German offensive which had to be expected daily.

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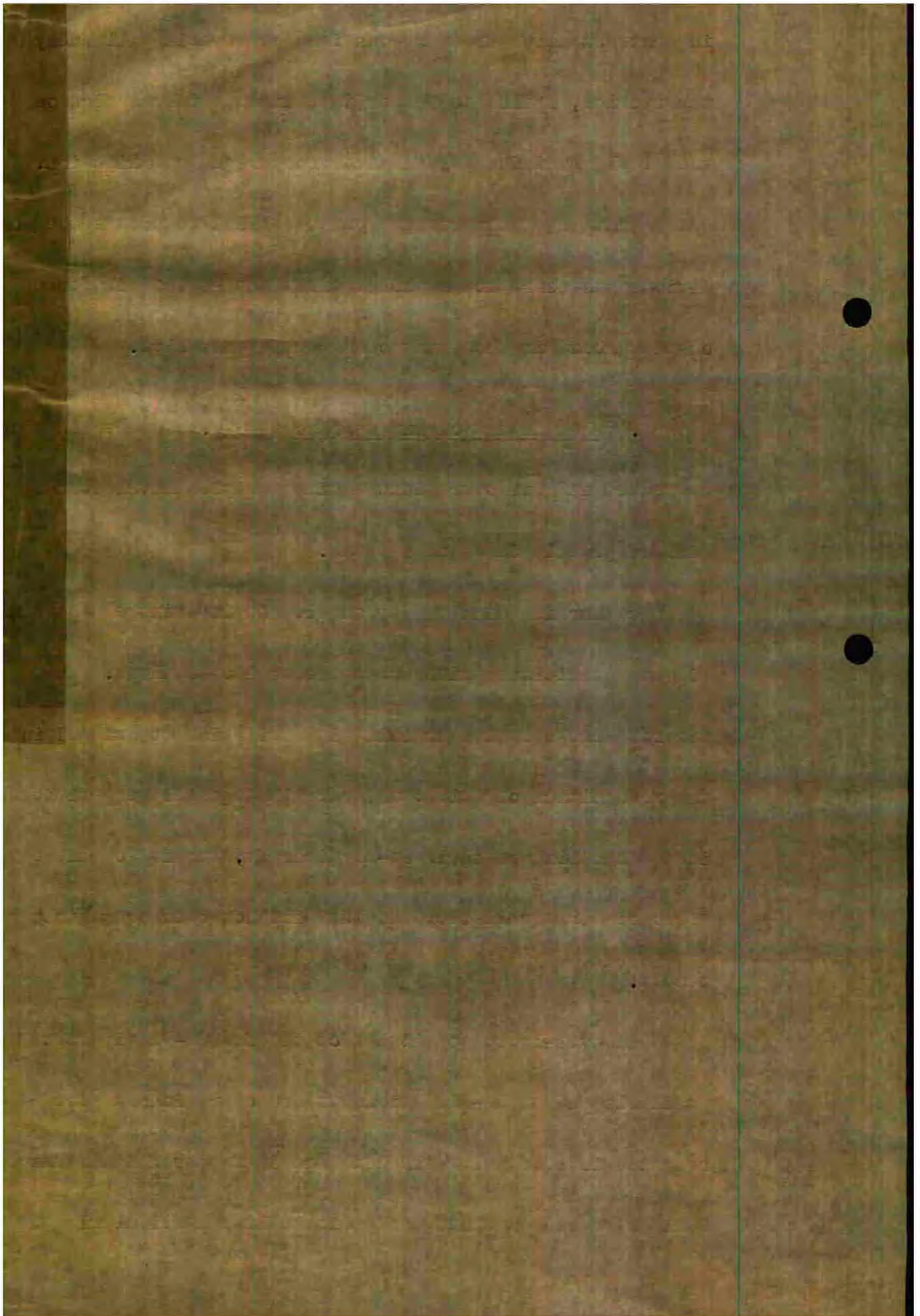
c. The French confined their air reconnaissance to drives into the near front areas. In doing so they refrained from reconnaissance over the far rear areas and thereby, in contrast with German reconnaissance covering all enemy territories, failed to gather intelligence information on the widely ramified German Air Force ground organization. This meant that they from the outset failed to create the conditions necessary for action against the German air forces on the ground in the event of a German offensive.

4. The Conduct of Air Warfare at Sea. The German side commenced its air operations against British naval forces with completely inadequate means.

Neither in point of personnel, nor in point of material did the conditions exist for successful operations. The aircraft crews lacked training in navigation at sea and in the recognition of ships, and were inadequately experienced in the handling of their Ju-88 aircraft, too few of these aircraft were available, and they had not been adequately tested.

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The over-hasty commitment of the few Ju-88 aircraft available and of He-111 aircraft for operations at sea resulted in losses for the 25th and 30th Bomber Wings which could have been avoided, and this applied particularly to



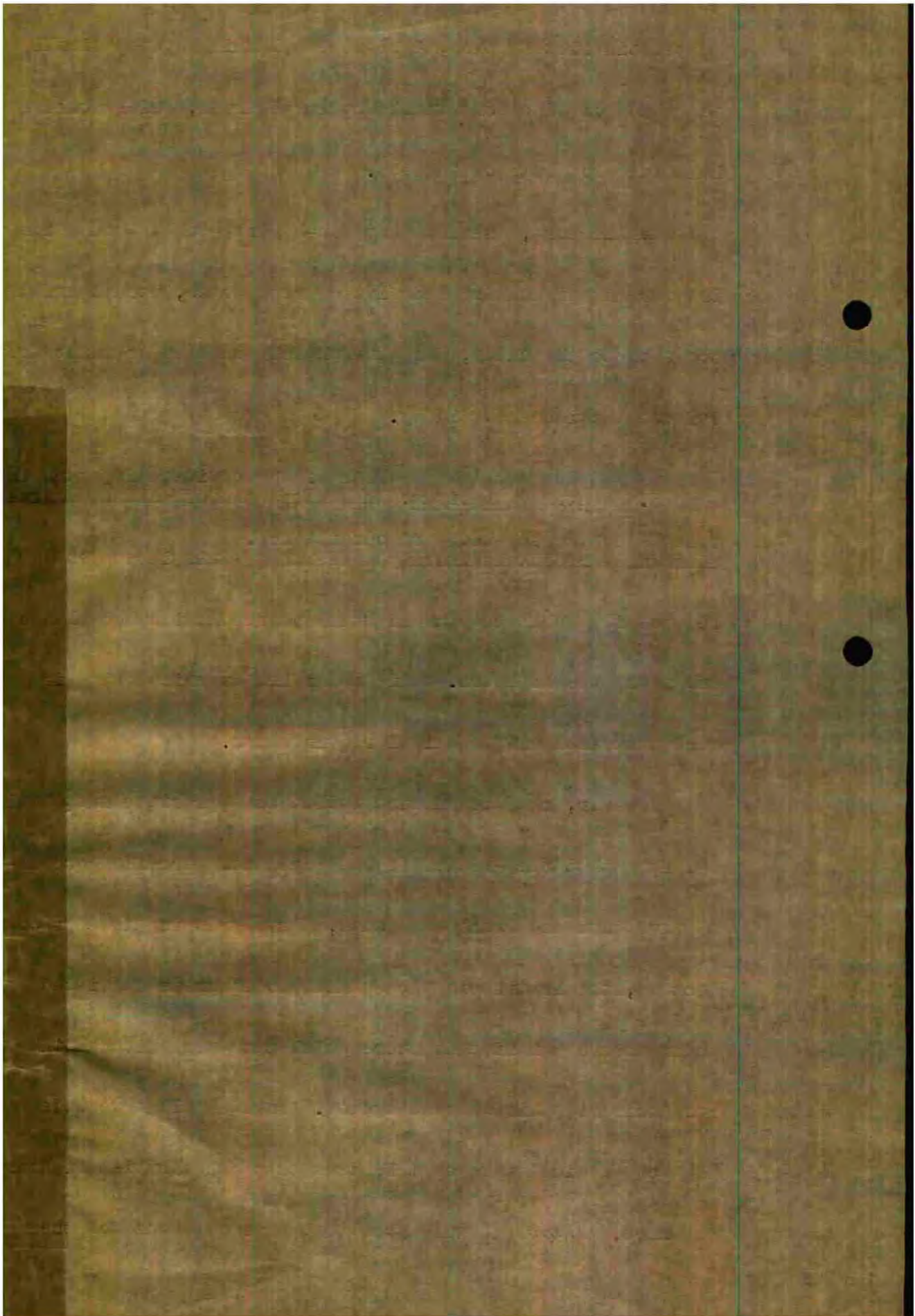
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the highly qualified personnel involved. Another outcome was that of faulty conclusions, which in turn resulted in self-deception on the results achieved. The German side resorted to the pin-rick tactics, instead of planning systematically and ahead of time for attacks by large units, which would have held out prospects of success.

Furthermore, the new heavy Ju-88 dive-bomber, on which the German Air Command had placed great hopes, became known too soon to the enemy, who were thereby enabled to adapt their defense tactics accordingly.

Both sides committed fighters in efforts to prevent enemy reconnaissance. 5. Fighter Operations. This inevitably led to air combat between fighter and reconnaissance planes and among the fighters. This furnished experience in air combat tactics and technical requirements.

However, the German side failed to appreciate adequately the fact that the British fighter defenses were far more effective than the French and that, already during the War of Witsin, the British in the Channel coast areas committed their modern Spitfire fighters which they were withholding for their Home Air Defense System. This should have made the German side aware of the strength of the British fighter defenses, a strength which was to become apparent for the



104 first time in the air battle over Dunkirk and later in full force in the Battle for Britain.

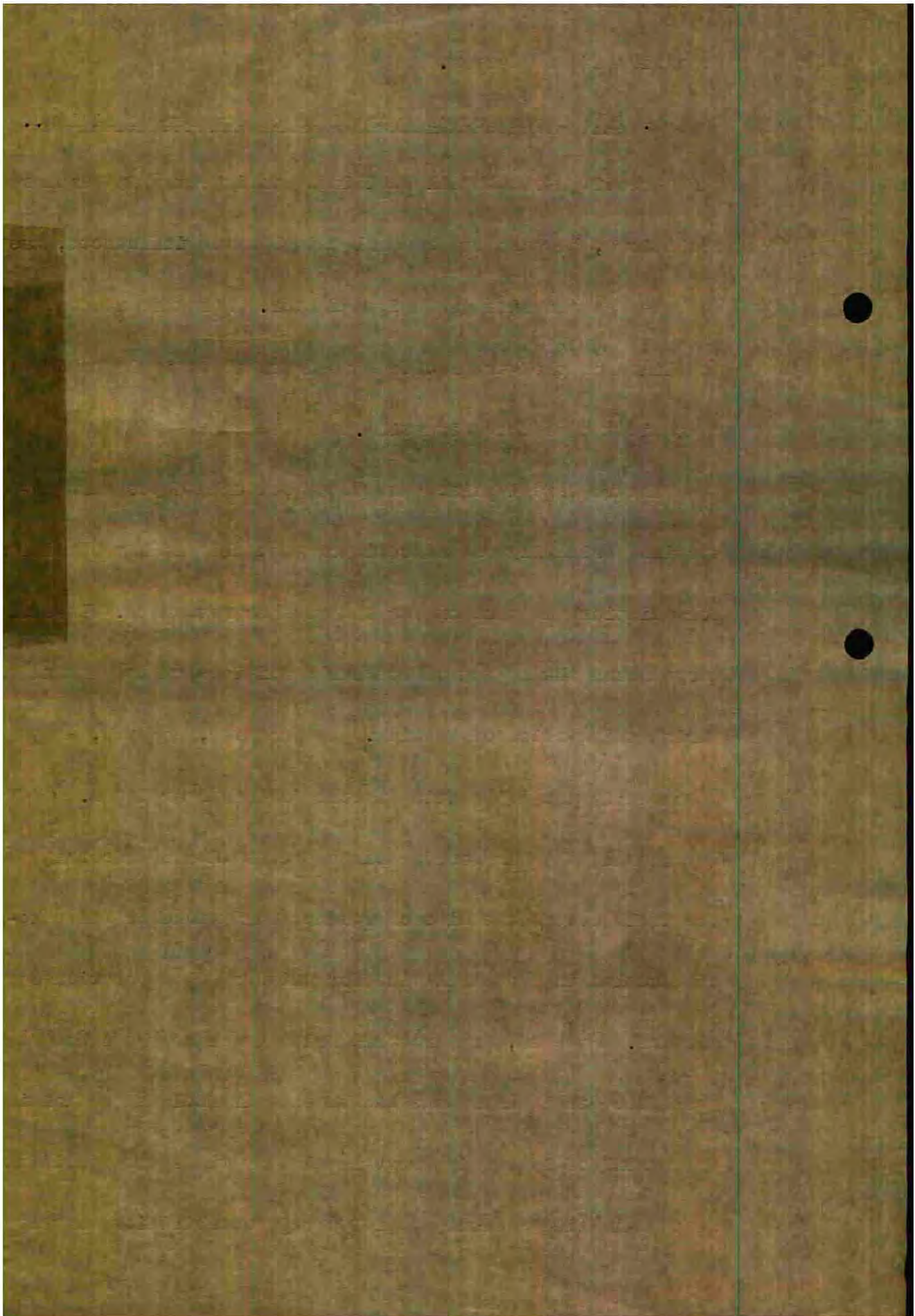
However, even in this first phase of air warfare, the German Air Force underestimated the potential strength of the British Home Air Defense System.

6. The Dependence of Operations on Weather Conditions.

The necessity to make all decisions contingent upon weather conditions, because of seasonal and climatic influences, was accepted at the time as a given factor. For this reason, the deadline for the German offensive depended entirely on developments in the weather situation.

The repeatedly fixed and then postponed dates were determined primarily on the basis of probable weather conditions for aviation and thus on current weather forecasts. Little is known about the impact of weather conditions on the ground during this period of waiting. In practice, however, they were really the determining factor for air operations.

Hardly any Air Force records are available concerning the influence at the time of weather conditions on the take-off and landing possibilities for units of the operational air arm. However, Army records which by chance have become available permit an impression of the air field situation in the spring of 1940 which reveals that at times the condition of the air fields alone precluded any possibilities for air



The question must remain open here whether the German Air Force Command drew from this experience the logical conclusions in the technical field for application in other theaters of operations. The political and strategic situation was not always such that it permitted complete dependence on weather conditions which could serve as justification for another War of Waiting of an indefinite period.

7. The Psychological Influences of the War of Waiting.

The psychological influences of the war of waiting on command and troops have been discussed repeatedly. They were of

35. Army Group A War Journal gives interesting information on this point. Although the journal entries undoubtedly refer only to the airfields of the reconnaissance and other squadrons assigned under the army group, they do provide an indication for the condition of airfields in general, and also thus for those of the operational air arm.

The fact must naturally be borne in mind that runways at peacetime air fields and bases, at which the majority of the operational air arm units were stationed were not so seriously influenced by weather conditions as the temporary type troop airfields. After commencement of the offensive, however, units of the operational air arm, and in particular the tactical air support units, were also to operate from the troop airfields. In any case, entries in Army Group A War Journal indicate that these airfields for long periods were in such condition that at least the Army tactical air reconnaissance units could not always operate from them.

The following are a few sample entries from the War Journal for early 1940:

Feb 23,	4	airfields not,	5	only conditionally fit for	landings
" 27	8	" "	3	" "	" "
Mar 1	5	" "	6	" "	" "
" 10	7	" "	6	" "	" "
" 11	8	" "	6	" "	" "
" 14-15		"		not fit for	landings.
" 16-Apr 4,		most	troop	airfields	not fit for
Apr 6	17	airfields		not	usable.
May 5-8		Condition		of	airfields
		improving.			

[The offensive commenced on 10 May]

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such significance that it is impossible ^{to} avoid re-emphasizing them once more in this closing summary.

It is an established fact that the ~~psychological~~ ^{psychological} strain of the war of waiting did nothing to shake the combat morale of the command and troops or their confidence in the supreme command. The risk that this could have happened was serious. Continuous vacillations evident in the decisions taken by the command at the highest level finally do have a very noticeable influence on the troops, who are highly sensitive to such changes. The danger actually did exist that they might lose confidence, but this did not happen. For the higher and intermediate levels of field command, however, who were usually unaware of the underlying causes and motives, the seemingly nervous changes in the decisions taken and orders issued by the Supreme Command really was a very serious psychological strain. However, seasoned troops accustomed to victorious action, as had been the case in the Polish campaign, can bear such strains with immunity, but unseasoned troops without a background of victory undoubtedly must be affected and perhaps seriously shaken by such conditions.

For the German Air Force things were different: its units had remained constantly in action or under intensive

106 training; their troops were not "rusty."

107 At the highest levels of German command no thought was given to considerations of this nature. Decisions were taken without any feeling for the front. Nevertheless, there were personalities at the highest level who had retained their "feeling for the front." Thus an entry in the War journal of General von Waldau⁸⁵ on 18 April 1940, shortly before commencement of the German offensive, reads as follows:

The frequent postponement of deadlines really did not serve to ease the tension during the winter. The constant demand for readiness for immediate action combined with requirements for activation of a considerable number of new units also placed the troops under a severe psychological strain, the consequences of which are not fully realized at the highest level. All the more reason is therefore due to the fact that morale and bearing have remained good. With their knowledge of all these deeply incisive psychological factors the question is: Will the commands "lead" well? The knowledge of these matters is not great and no troops can be led by means of slogans.

8. The German Air Force Command. It may seem presumptuous to attempt to criticize a command which can claim to have achieved total success. The outcome of the offensive

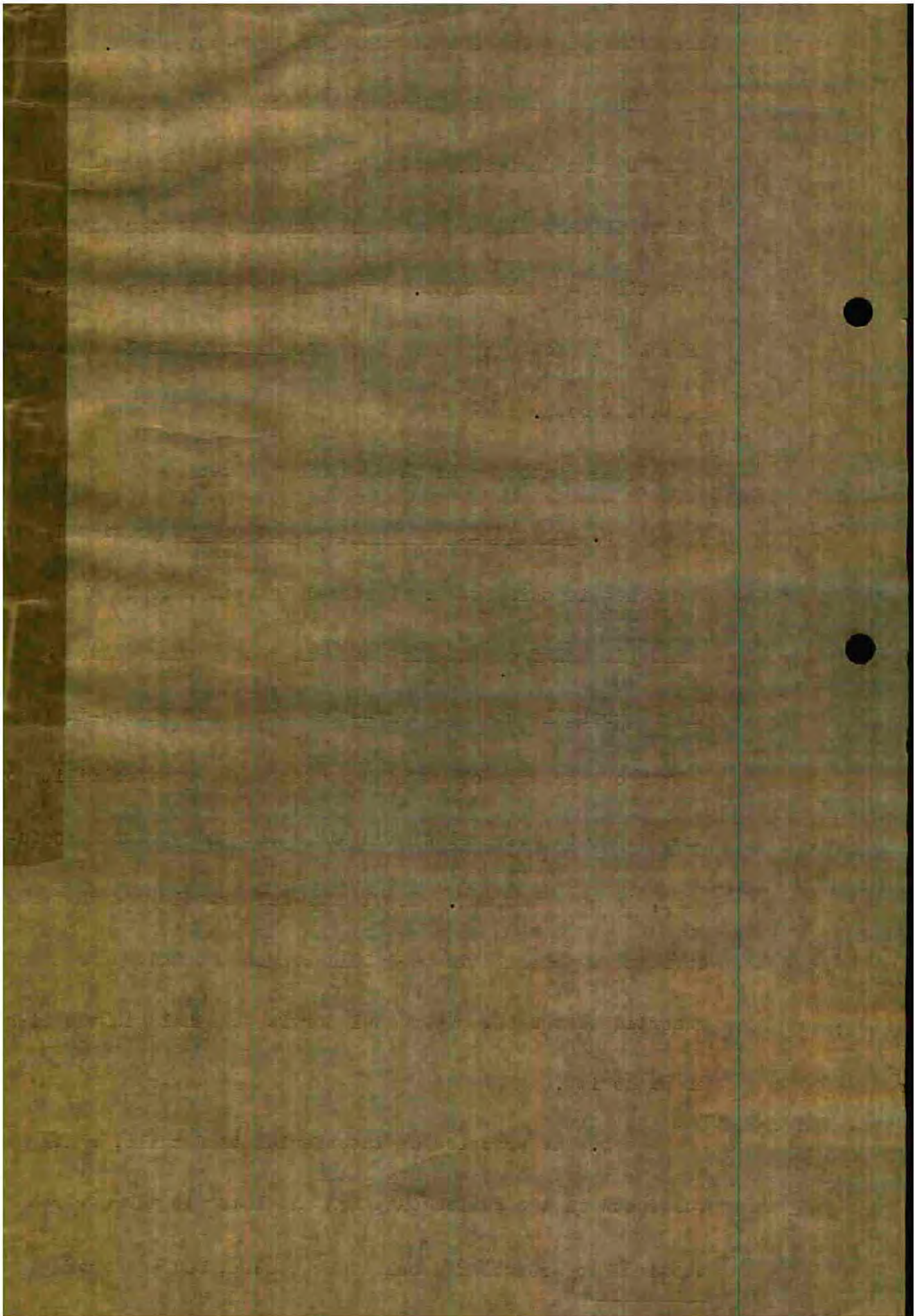
108 in the West served to vindicate the soundness of the command. Nevertheless, symptoms became evident already during the War of Waiting period which gave cause for concern over the future development of the whole command system.

The Commander in Chief of the Air Force naturally was bound by the decisions taken by the Supreme Command--the Joint Military High Command and thus in a certain sense also a victim of vacillations. Over and above that, however, he himself did more than enough to disquiet the field commands and the troops.

Three factors will be emphasized here:

a. The duality in the issue of orders previously mentioned in this study. Personal interference by the Commander in Chief of the Air Force in the measures taken by the responsible headquarters--the Second Air Fleet--in the matter of airborne operations weakened the responsibility of the Commanding General of the air fleet and produced confusion, if not distrust. The inescapable result was that subordinate commanders in the field became too independent and resorted to the easy "personal service channel" to the higher authority.

b. The practice of interfering in details, which had commenced in the Polish campaign and later in the war was destined to produce fateful consequences, became more



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pronounced during the War of Waiting period.⁸⁷ Slowly but surely this undermined the position of sole responsibility of the higher level commands. In his previously mentioned War Journal, and also on 13 April 1940, von Waldau writes of this subject:

A supreme command which is so presumptuous as to itself exercise direct control of details in so complicated a mechanism as a technical arm excludes itself in practice.

Nothing need be added to this remark.

c. The appointment of Special Commissioners, a system which was to assume particularly large proportions later in the war, commenced already during the War of Waiting.

Special representatives of the Commander in Chief of the Air Force were appointed in all possible fields of endeavor. Furnished with all powers of authority, they harassed the field commands and troops, whom they were supposed to check and coordinate in line with the ideas of the Commander in Chief. The persons chosen for such purposes were frequently very young officers who by some chance had found favor and gained the ear of the Commander in Chief.

Once again General von Waldau in his journal entry on 13 April 1940 coined the appropriate term for this system.

The entry reads:

⁸⁷ Well known to the present author from personal experience
Footnote 33, p. 357: General von Waldau, Chief, Air Force Operations Staff
March 1939-10 April 1942.

.....What is lacking, however, is a comprehensive coordination of all staffs. This weakness starts at the top and through ignorance about the process leads to unimproved views that bungled matters can be put right through on-the-spot appointments of persons furnished with powers of authority. The "kangaroo" system is in full swing.

The WEIMAR clear-cut and strictly military command machinery below the level of the Commander in Chief in logically directed work managed to overcome these complications in the planning of operational, tactical, and technical matters, and was able to smooth things out for the troops and, wherever this was possible, to protect them against the interferences and vacillations of the highest command level. The decisive point was to maintain the troops in a spirit of confidence and good combat morale. This was achieved in spite of the long duration of the War of Waiting.

Once again General von Walden is quoted to illustrate the causes for the success achieved by the Supreme Command but also the limits to its past behavior :

In juxtaposition to these factors of hesitancy there is a spirit of very definite self-assurance based on confidence in the superiority of [our] material and [our] own abilities. Combined with the present numerical

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superiority this creates a condition which for the time justifies the expectation that we can still maintain our lead in military matters.

But it must not continue all too long.

Finally, it is necessary to emphasize an "operational" viewpoint which gives cause for a critical examination, even though no actual operations occurred during the period under discussion here.

This is the problem of the development of areas of main effort, or main emphasis. This development of a clear-cut area of main emphasis in overall planning, called for an equally clear-cut main emphasis in the command organization of the Army and the Air Force.

In the case of the Army this condition existed: Army Group B was to direct operations in the area of main effort in ground operations and Army Group A was to protect the flank of the whole operation. This clearly defined command organization did not exist in the case of the Air Force.

The only possible and clearly obvious solution would have been to instruct

Second Air Fleet to support Army Group B and

Third Air Fleet to support Army Group A,

and to assign under each of these air fleets the units ~~they~~
Footnote 32, p. 300: As stated in the quotation from General von Waldau's journal in (b), above.

111 is required for the execution of its assigned missions so that in the case under study here the Second Air Fleet should have been assigned the I AAA Corps. Instead, the right flank units of the Third Air Fleet were included for participation in the area of main effort, so that the Third had to support the Second Air Fleet.

112 What makes the failure to adopt the simpler and more clear-cut relation all the more astonishing is the fact that the latest experience in the Polish campaign had shown that

(1) in an operationally separate area the execution of a uniform operation can only be properly directed if only one commander is responsible;

(2) the zones of command of army groups and air fleets must coincide if smooth cooperation between the two branches of the armed forces is to be insured at all levels;

(3) any overlapping of combat zones or zones of command jurisdiction (and, incidentally, frequent changes in the boundaries of such zones) necessarily must result in misunderstandings, friction, delays, and missed opportunities.

9. The Issue of Orders in the German Air Force. For the phase of the war in the Western Theater under discussion here, the source material available in the form of directives, operational orders, special instructions, and so forth, both from the Commander in Chief of the Air Force and from the

112 all fleets is so comprehensive that a cross-sectional study of it permits an appraisal of the procedural methods in the issue of orders.

It must be admitted that experience of both a positive and negative nature was available from the Polish campaign at the time. However, the conditions governing the conduct of air warfare in the Western Theater were vastly different--far more complicated and expansive in area and time. Furthermore, the German Air Force was now faced by an opponent who initially could be considered as its equal, an opponent in every respect considerably superior to the inferior defeated air opponent in the East, particularly in point of technological development. Only the future could prove whether the German Air Force was or would become superior in one or the other of the technical fields.

The command procedures of the air fleets ^{reveals} with what meticulous care and professional knowledge mastery had been acquired of all the intricately complicated fields involved in a weapon the main feature of which was technology and which, furthermore, was a new means of warfare. The whole complex of command procedures at this level in the best sense of the word can be described as "good general staff work," an achievement which merits all the more recognition in that its author at the same time had to combat dilettantish interference.

113 from higher headquarters.

The troops frequently complained over what they called an excessive volume of orders, directives, regulations, and interventions. However, too much in this field appeared better than too little. If orders did arrive in an exceptionally fast sequence, and if it was the case that one directive rescinded the directive just received before, this was due not to confusion at the field command levels but to the nervousness and desire of the highest command level to interfere in details.

114 Possibly, the objection will be raised here that it was merely because there was time to spare during the War of Waiting that "paper warfare" could develop in the form it actually did. At the same time, however, it must not be forgotten that no field commander knew how long he would still have time

All in all, the War of Waiting period thus developed into a period of high-level schooling in staff work and command procedures, and the success achieved in the offensive which was to come proved how necessary it is to do everything possible to make all preparations in all tactical and technical fields. All of these preparations were valid only for the first day, perhaps only for the first hour of their actual implementation. At that time, however, every action could cause a considerable measure of success or failure

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115 for all the measures prepared. It was not only own decisions but rather the decisions taken today by both opposing sides which would prove the deciding factors in tomorrow's drama.

That in the actual events of May 1940 it was only the German plans and decisions which were executed and effectuated was due on the one hand to the meticulously careful preparatory work done by the German Air Force. On the other hand, it was due to the long-range ^{operational} planning extending far beyond the beginning, a necessity which the German Air Force Command had not allowed to be obscured by the necessity to arrange all the details. Finally, of course, it was also due to the stereotype and passive behavior of the enemy.

The previous chapters of this study have referred repeatedly to the form in which orders were issued. During the War of Waiting both air fleets almost exclusively used the form of detailed orders, which had to be issued to the subordinate headquarters and troops as speedily as possible because the deadlines set by the Commander in Chief of the Air Force as a rule were extremely short. Furthermore, it was essential in many cases to first create the necessary conditions by means of coordination with the Army before it was possible to issue the orders concerned. This necessity for previous clarification with the Army increased in a direct ratio to the mounting emphasis on action in support of the Army.

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It necessarily delayed the issue of orders by the Air Force, which usually first had to inform itself on the intentions of the Army in detail.

The basic "directives" issued by the air fleets that in each case were merely a post-factum consolidation of all previously issued detail orders which had long since become effective and had been carried out or had already been superseded by the time the "directives" were issued. This is a point which must be borne in mind in any appraisal of the content and timing of the "directives" in the light of military history.

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In spite of the frequent time pressure in the issue of detail orders, foresight and careful deliberation were applied in the forming of major decisions. Circumstances were by no means such as the laymen, and in some cases even authoritative professionals, imagine them to be in a totalitarian system: quick and dictatorial orders issued from behind the desk!

On the basis of a draft for a directive or immediately after the issue of a basic directive, the Commander in Chief of the Air Force, or to be more precise the Air Force General Staff, required from the Second and Third Air Fleets submission of what were called recommendations concerning such command matters as the intelligence estimate, the attack objectives, the development of points or areas of main effort,

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the delimitation of the various zones of operations, the commitment of forces, and the envisaged continuation of operations.

The air fleet commander, in turn, required the corps commanders under their command to submit situation estimates and recommendations, and stated their opinions on the "probable solutions" thus received.

This careful general staff work formed the basis for the development and clarification of views and viewpoints, and it was only after this preparatory work that the final stage was reached in the final formulation of orders and/or directives.

It seems doubtful, however, that the Commander in Chief of the Air Force had any knowledge of these working procedures. By what is known of his whole nature he would necessarily have disapproved them.

10. Positive Results of the War of Waiting. The disadvantages accruing from the War of Waiting have been stated. The advantages it produced therefore must also not be forgotten. The most important advantage was that time was gained for preparations for the offensive designed to force a decision of the war.

This advantageous factor naturally applied to both opposing sides, and there is no doubt that the Allied air

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commands also took advantage of the time thus gained to perfect their equipment and training. However, there can also be no doubt that they ^{were} behind in the race against the German Air Force from the outset, and that they ^{had} more need for improvement than the German Air Force.

The German Air Force could claim the following as positive gains from the seven months preceding the commencement of the offensive:

- (1) The training status of the air units was considerably improved, so that the weaknesses discovered during the Polish campaign were wholly or partly remedied;
- (2) It was possible in relative quiet to reequip some of the units with more modern aircraft models in accordance with programs;
- (3) New units were activated in accordance with plans. The numerical strength and striking power of the Air Force as a whole increased;
- (4) The procurement of precise attack data through untiring reconnaissance activities created the basis for the coming conduct of aggressive air warfare;
- (5) Careful preparations for airborne operations in point of planning, training, and technical requirements created the conditions for the successful use of this new military arm in its first large-scale operation;

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(6) The opportunity was exploited to complete the organization and training of the other, improved, "new" arm, the AAA corps;

(7) The Air Force ground organization was so developed, above all in the matters of signal communications, supply stores, and resupply services, to make flexible operations by the flying forces possible in all situations foreseeable.

All in all, the combat strength and striking power of the operational air arm was increased and improved in a decisive measure during the War of Waiting period. One result was the almost drill-like sequence of action at the beginning of the offensive.

If one compares in retrospect the condition, situation, and potentialities of the German air force at the time when Hitler first decided to commence the offensive early in November 1939 with the combat condition of the same air force as it existed on 10 May 1940 it seems justifiable to doubt that the measure of success achieved in May 1940 could have been achieved in November 1939.

