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HISTORICAL DATA ON TACTICAL AIR OPERATIONS
(Phase II)

Disruption in Combat

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A Report Prepared for Headquarters USAF
Assistant Chief of Staff
Studies and Analysis
General Purposes and Airlift Studies
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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
I. THE LITERATURE OF DISRUPTION	4
II. DISRUPTION IN MILITARY HISTORY	9
III. ANALYSIS	22
IV. CONCLUSIONS AND RECOMMENDATIONS	30
APPENDIX A	32
APPENDIX B	36
BIBLIOGRAPHY	40

HISTORICAL DATA ON TACTICAL AIR OPERATIONS
(Phase II)

Disruption in Combat

An Exploratory Study by
The Historical Evaluation and Research Organization

Introduction

Terms of Reference

This study on "Disruption in Combat" was undertaken by the Historical Evaluation and Research Organization (HERO) as the third of three sub-studies of Phase II of HERO's Study on "Historical Data on Tactical Air Support," performed for the Assistant Chief of Staff, Studies and Analysis, U.S. Air Force, under Air Force Contract No. F-44620-69-C-0084.

The statement of the Objective of this sub-study, as approved by the "Saber Measures" Tactical Monitor on the basis of exchanges of memoranda and discussion, was as follows:

"To explore and--to the extent time permits--analyze available literature which deals with the effect of disruption (confusion, inhibitions on communications, inhibitions on leadership control, inhibitions on movement, panic, etc., resulting from enemy actions or interference) for the purpose of finding outstanding examples of disruption in military history (particularly military history of the 20th Century); this exploration will include any theoretical

studies and analyses that may be discovered on disruption and its effects on combat leadership and on combat performance."

The work plan for this sub-study, similarly approved by the "Saber Measures" Tactical Monitor, was as follows:

"This sub-study will be performed in two major steps:

(1) bibliographical search for theoretical studies and for accounts of outstanding examples of disruption, and (2) analysis of the results of the first phase, with a view to preparing recommendations regarding the possible utility of future U.S. Air Force studies programs of a more intensive study of this subject."

HERO was directed to allocate resources of personnel labor effort to this study on a priority below that of the other two sub-studies of Phase II of the overall study. It was recognized that this inhibition on study effort might result in some imbalance in the effort to be devoted to this sub-study and, in fact, such an imbalance has resulted.

Nature of Investigation

As planned, a bibliographical search was undertaken, with generally unsatisfactory results, as noted in Section I of the Report. However, two documents studied in the performance of the first sub-studies of Phase II contained some useful information. Also, the fortuitous discovery of previously unknown and unanticipated German air Force records in the microfilmed German Army records in the U.S. National Archives was exploited, to the extent permitted by availability of time and of professional effort budgeted under the contract.

The analytical effort envisaged as the second step in the work plan for this sub-study had to be delayed until the first two sub-study reports were completed and submitted. The intensive consideration devoted to this step, in a relatively brief time, is reflected in Sections II and III of the Report.

Sources Consulted

See Bibliography

Contributors to the Report

Overall direction of this sub-study, and most of the detailed coordination and analysis were performed by T.N. Dupuy. Other contributors were Brooke Nihart, Wlodzimierz Onacewicz, Leopold B. Koziembrodzki, and Grace P. Hayes. Brigadier General Edwin S. Chickering, USAF, Ret., was also consulted in the preparation of this report. Valuable comments on early drafts were received from HERO Associates: Marshall Andrews, Richard Leighton, and Theodore Ropp. Mr. Andrews' extensive, and particularly helpful, comments were based upon his own personal research in this area, and contributed greatly to the analysis.

As the principal author of this report, and as Executive Director of HERO, the undersigned assumes full responsibility for the report and its contents.

T.N. Dupuy

Dunn Loring, Virginia
15 February 1970

I. The Literature of Disruption

Underlying Assumptions

The underlying assumptions which have led to this exploration of "Disruption in Combat" would suggest that the subject is potentially so important to an understanding of success in battle and success in war that there should be a significant literature on the subject. It is therefore somewhat disappointing to report that no such literature appears to exist. Even more disappointing, and leading to a need to question seriously the validity of the assumptions, is that there does not even appear to be any substantial expression of theoretical opinion that there is a requirement for such a literature.

This state of affairs having been noted at an early stage in the exploration, the assumptions were re-examined, and still seemed to the investigators to warrant a continuation of the study, if only to ascertain the reason for the apparent contradiction. The results of this reexamination are shown later in this report. At this point it is only necessary to present the assumptions, and to expose the state of the literature.

The basic, underlying, assumptions are:

1. Disruption is a general state of impaired combat effectiveness in a military force resulting from some circumstances or conditions (usually, but not necessarily, the direct result of hostile action) inhibiting the planned, or programmed, or anticipated operational capabilities of one or more of the component elements of the

military force; the principal manifestations of disruption are: confusion, reduced communications capability, reduced leadership control, reduced movement capability, panic, and the like.

2. A basic objective of war and warmaking is to break the enemy's will and capability to resist; among the major means of accomplishing this is the disruption (as contrasted with destruction) of enemy operational capabilities.

3. Since, more often than not, the ability of a military force to operate effectively disappears before the physical elimination of its means or resources for combat capability, disruption has presumably been largely responsible for the disappearance of operational capability.

4. If it can be shown that one or more forms of disruption has affected the operational capability of a military force, analysis of the operations which led to this should reveal the qualitative impact of disruption on military forces, and should also suggest the quantitative effect of disruptive measures.

Disruption in Theoretical Literature

Some of the classic military theoreticians of the 18th and 19th Centuries noted the existence of disruption in warfare, and commented on it in varying ways as follows:

Frederick the Great: Everything which the enemy least expects will succeed the best. . . . And in another passage: When a general conducts himself with all prudence, he can still suffer ill fortune; for how many things do not cooperate at all with his labors! Weather, harvest, the officers, the health or sickness of his troops, blunders,

the death of an officer on whom he counts, discouragement of the troops, exposure of your spies, negligence of the officers who should reconnoiter the enemy, and finally, betrayal.

Napoleon: War is composed of nothing but accidents and, although holding to general principles, a general should never lose sight of everything to enable him to profit from these accidents; that is the mark of genius. In war there is but one favorable moment; the great art is to seize it.

Clausewitz: "Everything is simple in war, but the simplest thing is difficult. . . . So in war, through the influence of innumerable trifling circumstances, which on paper cannot properly be taken into consideration, everything depresses us and we come far short of our mark. . . . Friction is the only conception which in a fairly general way corresponds to that which distinguishes real war from war on paper. . . . This enormous friction . . . is . . . everywhere brought into contact with chance, and thus produces incidents quite impossible to foresee.

Dennis Hart Mahan: In the presence of an enemy who, having lost his communications, is entirely disorganized and demoralized . . . we have only to throw our forces into the midst of those broken-up fractions to determine them to fly. We may here attempt any blow; no movements can fail to turn out well except those which are too slow and methodical.

There was neither time nor opportunity for a thorough review of the theoretical writings of these or other respected military theorists, but a general survey of theoretical military literature

makes it appear safe to say that neither these authorities nor other respected military theorists, have devoted any comprehensive effort to a consideration either of the nature or causes of disruption, or to an assessment of its role or significance in warfare.

Perhaps even more surprising is the apparent lack of concern for disruption as a topic for research in the proliferating literature of research since World War II. While there are a number of studies in certain, narrow aspects of disruption, or on some of the rather specific results of disruption, there seems again to be absolutely nothing dealing with the topic as a comprehensive subject for research.

It was hoped that some of the behavioral scholars, in their analyses of human behavior in circumstances of stress or confusion, would have given at least some consideration to human behavior in disruptive situations in combat. We have made no effort to explore, or even to survey, this field of research, but three eminent behavioral scholars have informed us that they do not believe that there is anything directly pertinent in the literature of their field. They have, however, suggested that some literature on disaster might be useful; there has not been time to explore this.

Disruption in Operational Literature

In both primary and secondary source materials dealing with military operations the researcher can find massive documented evidence of disruption in combat. However, nowhere in the relatively limited samples which we have examined in this vast area of literature have we found any effort by historians or operations analysts either to deal analytically with a number of examples of disruption,

or to attempt any kind of comprehensive analysis of a single disruptive event or series of events.

Because this study is being performed for the US Air Force, and because of the obvious effectiveness of airpower as a disruptive force in combat, we gave particular attention to operational literature on the application of airpower for disruptive purposes. The general lack of analytical content in the literature has been noted above. However, there are some useful discussions of instances of disruption caused by both German and Allied airpower in World War II, and some of these will be considered in a subsequent section of this report.

A particularly determined effort was made to find documentation of disruption created by the Luftwaffe in some of its earlier campaigns in World War II, both in American and German records. However, by intensive screening of microfilmed German Army records in the US National Archives, some useful information was obtained-- though it may be questioned whether the results, at least for this study, were worth the effort. (An incidental benefit from this exploration, however, was confirmation that, in the light of the sad state of the German Air Force Records for World War II in the German Military Archives, probably the best and most complete source of reliable documentation of World War II German air operations is the German Army records.)

II. Disruption in Military History

General

In the performance of this study attention has been focussed primarily (but not entirely) upon German and Allied use of airpower for disruptive purposes in World War II. Some consideration has been given, however, to the immediate and general contexts within which these primarily air operations must be considered. This led us to survey not only the interrelationship of air and ground operations in terms of disruptive influences in World War II, but also examples of disruption in earlier military history.

The general historical survey confirms the prevalence of disruption--both accidental and resulting from conscious effort--in military operations since the dawn of history. A significant proportion of historical victories in battles, campaigns, and wars have resulted from the collapse, or reduced effectiveness, of one side before its military forces were physically overpowered or overwhelmed by the victor. In all such instances, we assume that the defeated forces have been the victims of disruption.

Military and political leaders have always been more or less aware of the bonus benefits to be derived from actions (particularly unexpected actions) that struck or threatened vulnerable people, facilities, or activities which were--or should have been--shielded by the hard fighting face of a military force. This realization led to the military concepts of ambush, envelopment, raid, and partisan or guerrilla warfare, all of which were directed at what the British call "the tail of an army," and all of which were demonstrated

effectively in combat even before the time of Alexander the Great.

It is also evident that disruption has historically not been necessarily the result of hostile threats or action alone. For instance, the outcomes of battles like Crecy and Waterloo were significantly affected by pre-battle rainstorms which inhibited troop movements; one engagement in East Africa in World War I was influenced by a swarm of bees; and US air operations in Italy in World War II were disrupted by an eruption of Mount Vesuvius. Similarly, disruption within a military force can be created by actions--or inaction--of individuals or groups within that force, resulting from incompetence, oversight, misunderstanding, or even treachery. Obviously, as in the case of treachery, the opposing force can often enhance the effects of internally-generated disruption, or disruption from natural causes, either through deliberate preparations, or by alert seizure of an unexpected opportunity.

Aircraft have, from their earliest appearance in warfare, been particularly useful as instruments of disruption. This is due partly to the fact that the essential characteristics of aircraft enable them to avoid a direct confrontation with "the hard fighting face" of the enemy by flying over it and moving directly against the more vulnerable and sensitive rear areas, and partly to the psychological effect of attack from the air upon fighting men on the ground. Thus, by literally adding a new dimension to warfare, it would appear that airpower has increased the potential significance of disruption in warfare.

In a very general survey of military history we have noted a number of specific actions which demonstrate the influence of

disruption on combat. It is beyond the scope of this study to attempt a detailed analysis of any of these. They are listed below, with a few brief comments for each, not only in response to the statement of the Objective of this study, but also to suggest how detailed analysis could contribute to future research, leading to improved understanding and utilization of the concept of disruption. We have selected only a few, random examples of the pre-airpower era, and of the brief transitional era from 1914 through 1938, and have concentrated attention on examples of disruption in World War II and since.

Pre-Airpower Examples of Disruption

Byzantine Warfare. Byzantine theories of warfare laid great stress upon the employment of all possible means to weaken an enemy before battle, and when battle was joined to strike at the most vulnerable elements of hostile forces. The use of bribes to stimulate and to encourage subversion and treachery, employment of detached forces for raid and ambush, and emphasis on enveloping maneuver in combat operations, are examples of how the Byzantines consciously attempted to bring about the collapse of their enemies without the necessity for physically overpowering them in costly frontal engagements.

The Seventh Crusade. The invasion of Egypt by forces under Louis IX of France presents some easily discernable examples of disruption from both natural and internal causes.

Mongol Disruptive Concepts. The Mongols, who were almost invariably greatly outnumbered by their enemies, were particularly

adept at the use of disruption through subversion, terror, and (particularly) both strategic and tactical maneuver.

The Battle of Germantown. This small operation is replete with diverse examples of disruption caused by hostile action, from internal causes, and from natural causes. It could, perhaps, be the classic case study of disruption.

Napoleonic Disruptive Concepts. Although Napoleon had no realization of the fact, the considerations that led him to develop his unique system of warfare were strikingly similar to those which led Genghis Khan to develop the Mongol system of warfare. It was Napoleon's strategic aim--frequently achieved, as at Marengo, Ulm, and Jena--to win a campaign before the first shot was fired. This was accomplished through various forms of disruption, with maneuver the primary operational technique.

The Crimean War. Few wars have been marked by so much disruption caused by incompetence as was evidenced on both sides in this war.

The American Civil War. An important consideration in this war was the ability of the Southern people and Southern leaders to endure the considerable disruption caused by the Union blockade, and to continue the war until their military forces were indeed physically overwhelmed. While there was considerable disruption evident among forces on both sides on a number of occasions, only a few of these had strategic significance, as Grant's disruptive strategy in the Vicksburg Campaign, and the disruption achieved by Sherman's marches in Georgia and the Carolinas.

Disruption in the Transitional Era.

World War I. There is perhaps no more dramatic example of disruption than the collapse of Germany in 1918, while the German armies in the field were still essentially intact and undefeated. Any intensive study of disruption in modern war should include consideration of this phenomenon, and the role of Ludendorff in the collapse and in the events leading up to it. Other aspects of World War I which warrant further study in relation to disruption are:

a. The role of airpower (particularly in the Balkans and in Palestine), and the apparent lack of realization at that time, and in the interwar years, of the disruptive capabilities of airpower in support of ground combat;

b. Chemical warfare and disruption;

c. Examples of disruption in battle, particularly:

(1) Tannenberg

(2) The Marne

(3) Gallipoli

(4) Nivelle Offensive

(5) Caporetto

(6) The German Somme Offensive

(7) Megiddo

Italo-Ethiopian War. The disruptive value of airpower was very clearly demonstrated here, and is particularly noticeable in comparison with the last previous Italo-Ethiopian conflict, some forty years earlier, which had culminated in Italian defeat at Adowa.

Spanish Civil War. There are numerous examples of disruption, affecting both sides. Again the growing disruptive importance of

airpower is noticeable. Perhaps equally significant is the evidence that the Loyalist collapse, while perhaps inevitable, came suddenly as the result of disintegration due to disruptive influence.

World War II

As noted above, this was the focus of research leading to the preparation of this study. Examples below marked by an asterisk (*) were explored in more detail than the others; sources are shown in the Bibliography.

German Disruptive Efforts. Among the more important examples of disruption caused by, or exploited by, the Germans, are the following:

* Battle of Poland, 1939. Despite the fragmentary nature of Luftwaffe records, there is sufficient documentary material available in the German Army World War II microfilmed records in the US National Archives to permit intensive study of the manner in which the Germans used airpower to cause disruption in Poland and the Polish armed forces. Particularly worthy of separate study are the interdiction campaign of the German Air Force against Polish military installations and facilities, and the bombardment of Warsaw in the closing days of the campaign. (For German terror bombing, see below.)

* Terror Bombing as a Disruptive Force. Deliberate terror bombing was done by the Luftwaffe in Poland, in the Low Countries, in the Battle of France, and in operations against Britain. The reasons for success in some instances, and failure in

others, should be determined by comparative analysis.

- * Norway, 1940. German use of airpower for disruptive effect, particularly in the Namsos-Andalsees operations, warrants further study.
- * Battle of Flanders, 1940. The disruptive aspects of blitzkrieg were most dramatically revealed in this campaign. Particularly noteworthy are the success of air strikes combined with airborne drops at Fort Eban Emael and elsewhere; also the successful interdiction campaign, the destruction of the Allied air forces in the first four days of combat, and the role of the Luftwaffe in the Meuse crossings and at Dunkirk warrant study. The German use of terror bombing is noted elsewhere (see above).
- * Battle of France, 1940. With one exception, the principal disruptive aspects of this campaign could be considered together with those of the Battle of Flanders, noted above. That one significant exception is the collapse of the French Army, which has been almost exhaustively analyzed--but never in terms of disruption in combat.

Battle of Crete, 1941. This is one of the few operations in history in which it can be demonstrated that airpower was the single, vital determinant of victory. The disruptive use of that airpower should be given separate attention.

Operations in Tunisia, 1942-1943. This was one of the last campaigns in the war in which German airpower was employed to achieve significant disruptive successes. Particularly notable were the German use of airpower in the halting of the initial Allied drive into Tunisia, and Rommel's use of combined arms

in his success at Kassarine Pass.

- * Ardennes Offensive, December 1944. This is an interesting example of use of weather to avoid hostile disruption, and of the success and failure of a number of other disruptive efforts. Despite the extensive bibliography that exists on this, it warrants another review from the standpoint of disruption. The existing studies can facilitate this review.

Allied Disruptive Efforts in Europe-North Africa

British "Dirty Tricks." The British effort to strike back at the German occupiers of Western Europe after Dunkirk should be studied for its disruptive aspects, both in concept and in results. Access to British records should be attempted through British military channels.

Dieppe Raid, August 1942. Allied efforts to disrupt the German defenders were largely unsuccessful. The Germans were more successful in disrupting the attackers.

- * Allied Interdiction of Axis Mediterranean Communications, 1940-1943. The Allied air and sea interdiction campaign against the Axis sea line of communications was essentially a disruptive effort, and was perhaps the most important single element in Rommel's eventual defeat in North Africa.

- * Bombardment of Pantelleria, May-June, 1943. The account of this operation in the World War II memoirs of Marshal of the Royal Air Force Lord Tedder provides a useful preliminary to a separate study. Tedder also refers to a contemporary study of the operations by Sir Solly Zuckerman, which may make a most useful contribution to any modern study of the topic of

disruption. Presumably access to that study can be obtained through British military channels.

* Bombardment of Monte Cassino Abbey, 15 Feb., 1944. This, perhaps the most ill-conceived air bombardment of World War II, was not only a complete failure, it was counterproductive, and was more disruptive to the Allies than to the Germans.

*Bombardment of Cassino, 15 March 1944. This disruptive effort, which also failed, warrants study not so much as an illustrative example of a failure (although there were some serious mistakes); it is noteworthy as an instance where exceptional combat capabilities of a small unit (the German defending battalion) influenced the outcome of a major engagement.

Operation "Strangle," March-May 1944. While not studied independently by HERO in the preparation of this report, the significance of the results of "Strangle" in facilitating subsequent Operation "Diadem," and the Rome Campaign, were particularly noticed in a recent HERO study. In fact, it was the desire to evaluate these results more precisely that led directly to this study.

* Operation "Diadem," May-June 1944. Few campaigns in history are so revealing of both the value and limitation of disruption. For purposes of analyzing disruption, two entirely separate studies are warranted. The first would focus on the Allied air strike of 12 May 1944, against the command and communications facilities of the German Tenth Army. (See Appendix A of HERO Study Report: "Ground Operations and Tactical Air Support for Operation 'Diadem', or the Rome Campaign,"

Phase II of the study: "Historical Data on Tactical Air Operations.") The second of these two studies would be concerned with the effects of disruption on the German forces during the remainder of the Rome Campaign, and particularly on their amazing ability to survive this disruption. (See Appendix A, herewith, a brief summation of this subject, prepared by Col. Wlodzimierz Onacewicz.)

The French Resistance. This was an essentially disruptive partisan activity. It should be restudied in this context.

- * Pre-D-Day Isolation of Normandy, 1944. The disruptive effects of the isolation of Normandy are discussed tangentially in two HERO reports prepared for the study: "Historical Data on Tactical Air Operations," one dated 9 April 1969 on the Rommel-Rundstedt controversy, and another dated 28 October 1969 on German Evaluation of Allied air interdiction. This subject, however, warrants further study from the standpoint of disruption.
- * Operation "Overlord," June 1944. The same comments apply to this example as to the previous one.
- * Bombardments of Caen, July-August, 1944. These bombardments failed for reasons similar to the failures at Cassino. They are particularly instructive when compared with a success further west in Normandy, at St. Lo (see below).
- * Carpet Bombing of St. Lo, 24-27 July 1944. This was perhaps the one instance in World War II when the shock-disruptive effects of massive air bombardments were adequately exploited by the Allies. It would unquestionably be useful to explore the