Terror From Above: The Impact of Strategic Bombardment on English and German Morale During World War Two

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Introduction

Chapter I

A. Aims of the Project

Late in the evening of September 3, 1939, ten Whitley bombers of England's Royal Air Force took off from northern England, set course for the German port cities of Bremen and Hamburg, and delivered England's first blow of the war against Nazi Germany. Instead of dropping bombs, however, the entire thirteen ton payload consisted of propaganda leaflets urging the Germans to depose Hitler and give up fighting a war that they could not possibly hope to win. As we know, the German populace refused this advice.[1] It was not long before airplanes began dropping bombs instead of paper. The air forces of both the Allied and Axis powers carried out strategic bombing campaigns during World War II, and between the years 1939-1945 the various warring nations dropped millions of tons of bombs on their enemies, causing an unprecedented amount of death, destruction, and suffering.

Since the Second World War came to a close numerous studies have attempted to assess the quantitative effects of strategic bombardment, such as the resulting loss in production, impairment of communications, and amount of resources diverted to combat the bombing offensives. Relatively little has been written about the psychological impact aerial bombardment had on its civilian victims and on those political leaders responsible for their welfare. The purpose of this study is to investigate the impact of strategic bombardment on civilian morale during the Second World War.

Civilian morale was a target of both the German air offensive

against England and the Anglo-American air offensive against Germany. Great Britain was subjected to aerial assault at the hands of Germany from 1940-1945, and Germany was the victim of the British and American strategic bombing campaigns during that same period. This study will present a general overview of the strategic bombing campaigns against each nation and analyze the effects of these campaigns on civilian morale. By studying the impact of strategic bombing on the above mentioned nations' civilian populations, it will be possible to discover how the two different nationalities and cultures withstood attack from the air.

B. Definition of Terms

Before investigating the impact of strategic bombardment on civilian morale, one must first understand the meaning of strategic bombardment, and then have a working definition of civilian morale. Essentially, strategic bombardment seeks to destroy an enemy's warmaking capabilities by unleashing continuous and long-term aerial attacks against non-military targets.[2] Under the doctrine of strategic bombardment, the air force is used independently of the other armed forces and brings about the defeat of the enemy by destroying his capacity to wage war. Strategic bombardment differs from tactical bombardment in that under the doctrine of tactical bombardment, the air force works in conjunction with the army or navy, and attacks specific military targets.

As an example, if an air force attacks an advancing column of enemy tanks, or bombs a bridge to prevent enemy troops from arriving at a battle zone, this would be tactical bombardment. When the German Army rolled across Poland in the opening weeks of World War

II, the Luftwaffe provided tactical support by bombing Polish troop concentrations and defensive positions.[3]

In contrast, an attack on a shipbuilding factory in enemy territory is an example of strategic bombardment, because the desired result of the attack is to prevent the construction of an object essential to the war effort. Since tactical and strategic bombardment have different goals, their implementation requires different strategies, and to a large extent, different types of airplanes. For instance, dive bombers, which are suited to tactical raids, such as attacking enemy tank columns, cannot carry heavy enough bomb loads to wipe out a factory. Conversely, a high altitude heavy bomber has a hard time hitting a small moving target.

The objective of strategic bombardment, destroying the enemy's warmaking capabilities, is achieved by attacking vital economic targets, such as factories and communications and transportation networks, and by undermining civilian morale. Defining civilian morale is a bit more difficult than defining strategic bombardment, if only because morale is a more nebulous concept. Webster's Third New International Dictionary defines morale as: "A confident, resolute... often courageous attitude of an individual to the function of tasks demanded or expected of him by a group of which he is a part based on such factors as... faith in its leaders or its ultimate success. A state of individual psychological well-being... based on such factors as physical or mental health, a sense of purpose and usefullness, and confidence in the future."[4]

The United States Strategic Bombing Survey (USSBS), in its report The Effects of Strategic Bombing on German Morale, provides a more concise definition, stating morale to be, "The willingness

and capacity of the bombed population to wage war."[5] For the purposes of this study, the definition of morale will be derived from both of the above mentioned definitions. Therefore, civilian morale will be considered to be a person's willingness to wage war based on such factors as physical or mental health, faith in leadership, and confidence in the future success in the war effort.

As Larry J. Bidinian points out in his work, The Combined Allied Bombing Offensive Against the German Civilian, 1942-1945, civilian morale can be broken down into attitudinal and behavioral components.[6] The former refers to the way a civilian feels towards the war effort, while the latter refers to his conduct in regards to the war effort. Thus, if a bombing attack causes a civilian to believe carrying on with the war is hopeless, then his attitude towards the war has been depressed. If that same attack causes him actively to protest the continuance of hostilities, or no longer contribute to the war effort, then his behavior has been affected.

C. The Historical Development of the Doctrine of Strategic Bombardment

After Orville and Wilbur Wright made their historic flight at Kittyhawk, North Carolina in December of 1903, the possibilities of putting the airplane to constructive uses seemed endless. It was not long, however, before this radical new invention inspired fear as well as awe. To many, the airplane was seen not as a godsend that had set mankind free from the confines of the earth but as a terrible weapon for which there could be no adequate defense. More specifically, if men could fly above the earth they could drop things down on it, possibly things which would explode upon contact.

Nowhere was the fear of such developments felt more keenly than in England. The English Channel, backed up by the Royal Navy, had been an effective barrier against invasion since the days of William the Conqueror. With the advent of flight, however, a suitably equipped enemy could fly over the channel, rather than fight his way across it. In this way, England was an island no more.

This fear of aerial attack came to a head in 1909. In that year "The Great Airship Panic" occurred, as excited Englishmen spotted enemy airships lurking behind every cloud. Eventually the panic subsided. Cooler heads pointed out that no other nation yet possessed an air fleet large enough to pose any threat to England. The message, however, was clear: The English Channel and the Royal Navy were no longer able to insure the safety of the realm.

In that very same year, the noted science-fiction author H. G. Wells published The War in the Air, which described man's successful endeavors at flight as resulting in "death raining on the earth from above."[7] At the time The War in the Air was published Wells was already very popular and had a large and loyal audience. Many believed his novel to be as much a prophecy as a story and consequently viewed the continuing advances made in the field of aviation with much trepidation.

Progress continued, however. As aircraft performance improved, many nations began to develop the military potential of the airplane. Thus, by the time the First World War erupted in August of 1914, the various warring factions all had aircraft marked for military use. England, France, and Germany had not yet developed air forces independent of their other armed forces, but all possessed enough

aircraft to extend the battle zone above the ground and into the sky. Wells' terrible prophecy, however, remained largely unfulfilled in World War I. This was partly due to the fact that no nation had developed any strategy for bombing behind the front lines. But a more important reason was technological. At the start of the war airplanes were simply not able to deliver enough bomb tonnage far enough behind enemy lines to cause much damage. In spite of technological developments made during the war, this basic fact remained unchanged.

Nevertheless, a number of aerial attacks against civilian populations took place during the First World War. Beginning in 1915, Germany unleashed a series of attacks against London, and towards the end of the war England's newly formed Royal Air Force carried out retaliatory raids against Germany.[8] These aerial attacks in no way influenced the outcome of the war, and the number of civilian casualties, numbering at most a few thousand, seemed insignificant when compared to the millions of men dying at the front.

Although the effects of aerial bombardment were negligible during World War I, the inter-war years witnessed a number of attempts to outlaw the bombing of civilian populations from the air. Article 22 of the Washington Naval Agreement of 1922 prohibited any aerial attack aimed at terrorizing civilian populations or destroying non-military property.[9] Ten years later, the Geneva Disarmament Conference declared any air attack against unarmed civilians to be an unlawful act of war.[10]

As the clouds of war began to gather over Europe in the late 1930's, there were several attempts to strengthen these accords.

In 1936 Nazi Germany proposed that the aerial attack of undefended civilian population centers be unilaterally forbidden, but nothing came of this proposal. Despite this fact, there appears to have been an almost universal consensus among European leaders that unrestricted aerial warfare should be avoided. In a speech in the House of Commons on June 21, 1938, British Prime Minister Neville Chamberlain said, "We can all strongly condemn any declaration... of a deliberate policy to try to win a war by the demoralization of a civilian population through the process of bombing from the air."[11] Other national leaders quickly voiced their approval. Finally, when war did break out on September 1, 1939, President Roosevelt sent a message to the heads of all the combatant nations, asking them to make public declarations that they would not engage in any bombing attacks on undefended towns or cities.[12] That very same day all voiced their agreement. During the course of the war all these agreements and declarations of good intent went by the wayside, but their very existence indicates that despite the experiences of the First World War, many still looked upon aerial bombardment as the most potentially devastating weapon ever invented.

While the politicians discussed limitations on bombing from the air, military leaders refined the doctrine of strategic bombardment. In 1921, General Giulio Douhet of Italy published a book entitled Command of the Air, in which he argued that aerial attacks should give priority to industrial rather than military targets. In addition, Douhet called for a merciless pounding of enemy cities. According to Douhet, such urban bombardments would cause civilians to rise up and demand an end to hostilities.[13] Douhet's work caught the attention of military leaders in other nations; between the

publication of Command of the Air and the start of the Second World War, Germany, England, and the United States all developed air forces capable of executing aerial attacks against their enemies.

In Germany, the Treaty of Versailles prohibited the development of an air force. Nevertheless, in the summer of 1922 Hans von Seeckt, the architect of the resurgent German war machine, concluded a secret pact with the Soviet Union which permitted German airmen to train in that country.[14] At Vivupal, 250 miles southeast of Moscow, the foundation of the Luftwaffe was built, outside the purview of the Inter-Allied Commission of Control, the body charged with monitoring Germany's military establishment.

When Hitler came to power in 1933, much progress towards the formation of a German air force had been made. Hermann Goering, a fighter ace in the First World War, headed the Air Ministty. Erhard Milch, the head of the German civil airline Lufthansa, was his deputy. The leaders of the resurgent air force believed that Germany lacked the supply of raw materials needed to build a sufficient number of heavy bombers. They therefore decided to build large numbers of twin-engine medium-range bombers. In addition, they felt that large numbers of medium bombers could do the work of the more costly heavy bombers. Beginning in 1934, Milch oversaw the production of the two bombers that became the backbone of the Luftwaffe's bombing force in World War II. The Heinkel III and the Dornier 17 were both twin-engine medium range planes with maximum bomb loads of 5,500 lbs. and 2,200 lbs., respectively. The Junkers 88, a plane with similar specifications, was introduced at a later date.

The Luftwaffe tested these aircraft in the Spanish Civil War.

They were very successful in attacking small undefended towns such as Guernica, and also inflicted heavy damage on larger cities like Madrid. In addition, at the start of World War II these planes proved to be outstanding tactical aircraft. However, in a strategic role they lacked adequate defensive systems to stand up to modern fighter opposition, and their bomb loads were too light to knock out large cities and industrial targets. The only proponent of the long-range heavy bomber in Germany, Walther Wever, died in an airplane crash in 1936, and with him died the development of an adequate strategic bomber. Thus, when Germany tried to bomb England out of the war following the fall of France, she was doomed to fail.

While Germany honed its air force for a tactical role, England developed both the aircraft and the strategy requisite for successful strategic bombardment. In part, effort in this regard stemmed from England's experiences during the First World War. In the course of that conflict Germany dropped more than 400 tons of bombs on London and other cities, killing upwards of 1400 people.[15] As stated previously, this did not change the outcome of the war, but the memory of the damage inflicted lingered on. In the inter-war years, the Royal Air Force fought to remain independent from the other armed forces, and its leader, Air Marshall Sir Hugh Trenchard, was a firm believer in the doctrine of strategic bombardment. Trenchard himself had been a bomber pilot in the First World War, and recognized the necessity of developing a bomber force capable of delivering heavy bomb loads deep into enemy territory. In the Strategic Air Offensive Against Germany 1939-1945, V. I, Sir Charles Webster and Noble Frankland state that, "Trenchard insisted that everything must be done to insure that the heaviest possible bomb

load could be dropped on the enemy country, so that the morale of its inhabitants could be destroyed."[16]

Although Trenchard held this view in the 1920's, it was not until 1936 that the Air Ministry began to develop long-range twin and four engined heavy bombers. These were the prototypes of the Stirling, Halifax, and Lancaster heavy bombers which carried the fight to the heart of Germany in World War II. All of these planes possessed heavier payloads than their German counterparts; the Lancaster carried a maximum of 14,000 lbs. of bombs while the Halifax had a maximum bombload of 13,000 lbs. The Royal Air Force believed that these aircraft, with their power-operated gun turrets and heavy defensive armor, would be able to carry out daylight raids without the benefit of fighter plane escort. Stanley Baldwin, England's Prime Minister in the mid-1930's, expressed this sentiment when he said, "The bomber will always get through." Once the war got under way it quickly became apparent that this type of confidence was not justified, and a change to area bombing by night was made. These developments will be discussed in greater detail in the chapter dealing with the combined Anglo-American air offensive against Germany.

In sharp contrast to the British, American advocates of strategic air power had to fight long and hard to have their views on aerial warfare accepted. The leaders of the Army and Navy both opposed the formation of an air force coequal in status; during the inter-war years and continuing on through the Second World War the air force remained under the jurisdiction of the Army. Nevertheless the United States Army Air Force was able to prepare itself for a campaign of strategic bombardment. In large part

America's preparedness was due to the efforts of one man, General William "Billy" Mitchell. In tests off the Atlantic Coast in 1921 and 1923, Mitchell demonstrated the viability of air power by bombing and sinking target battleships confiscated from Germany at the close of World War I. Although his outspoken advocacy of air power eventually earned him a court martial, his efforts laid the foundation for the development of strategic air power in the United States.

After Mitchell's court martial in 1925, it was up to his younger disciples, men such as Hap Arnold, Ira Eaker, and Carl Spaatz, to carry on the fight. Despite the protests of the top brass of the Army and Navy, in 1936 the Army Air Corps placed its first order for a long-range heavy bomber, the Boeing B-17 "Flying Fortress".[17] This aircraft, along with the Consolidated B-24 "Liberator", became the mainstay of America's air arm in World War II. Like the English, the Americans believed that heavy bombers could fly over enemy territory by day without fighter escort, but unlike the English, the Americans were never deterred from this strategy by the heavy losses experienced by daylight raiders at the start of the war. The Americans felt that the British did not send out large enough formations of bombers, which prevented the planes from bringing massed machine gun fire to bear on attacking fighters. The Americans believed that large formations of heavily armed bombers could ward off enemy attacks and keep losses to a minimum. Because the Americans insisted on bombing by day, while the English had switched to bombing at night, the Allies were able to engage in around-the-clock bombing attacks. As we shall see, these tactics had a disastrous impact on Germany.

Despite the efforts of several politicians to outlaw aerial bombardment of civilian populations in the years between World War I and World War II, military leaders had developed the strategy and equipment to carry it out. In Germany, however, the Luftwaffe was equipped mainly for tactical bombing and was thus greatly limited in its ability to damage civilian morale. In England and America, though, the doctrine of strategic bombardment had been developed to its full potential.

D. A Note on Sources and on Trends in Historiography

Because morale is an abstract concept, measuring the impact strategic bombardment had on civilian morale presents certain difficulties. The best way to measure morale is to interview those civilians who were exposed to aerial bombardment and to analyze their responses. The United States Strategic Bombing Survey did just that. Secretary of War Henry L. Stimson established the USSBS on November 3, 1944, pursuant to a directive previously issued by President Roosevelt.[18] During and after the war, the USSBS conducted a close examination of several hundred German cities, towns, and areas, amassing volumes of statistical and documentary evidence on all aspects of the air war directed against the enemy. In all, some 200 reports were written on such topics as physical damage, economic effects and the impact of strategic bombardment on civilian morale.

Investigating the effect on morale caused by the Luftwaffe's attacks on England is a bit more difficult, since no comprehensive survey of the damage inflicted by German air raids was undertaken. The British Ministry of Information made studies of English morale

during the war, but so far these have proved unobtainable. However, several references to these reports regarding the attacks on England are recorded in Ian McLaine's Ministry of Morale, and thus this secondary source has been quite helpful.

Between 1945 and the present, much has been written about the strategic bombing campaigns of the Second World War. The examination of this body of information reveals certain historiographical trends. Books written during the course of World War II tend grossly to overestimate the effect strategic bombing had on an enemy's war effort. The first sentence of Allan Michie's The Air Offensive Against Germany, written in 1943, states, "We can win this war quickly by bombing Germany."[19] Later on, Michie claims the bombardment of Germany had by 1943 already done "serious, if not fatal, damage" to the German war effort. History, however, tells us that the German war effort rolled on for two more years.

This type of overestimation was common in books written during the war. Examinations of the impact of the strategic bombing offensives written after the cessation of hostilities tended to make more realistic appraisals. Sir Charles Webster and Noble Frankland, in The Strategic Air Offensive Against Germany 1939-1945, state that the air offensive against the Third Reich did have an impact on that nation's ability to wage war, but that the effects were mitigated by the nature of German industry.[20] According to Webster and Frankland, resources normally used for production in the civil economy were continually being diverted to war production, but that critical shortages in consumer goods did not occur until very late in the war.

A slightly different view was presented in Bidinian's The

Combined Allied Bombing Against the German Civilian 1942-1943. Bidinian claims the flexible nature of German industry resulted in a shortage in the availability of consumer goods as early as 1943.[21] Although this did effect morale to a slight degree, the nature of the Nazi police state prevented any protest. Bidinian's work, written in 1976, draws heavily on information provided by the USSBS, and gives less credit to aerial bombardment as a cause for Allied victory in World War II than the other studies mentioned. Bidinian states that the cumulative effect of the strategic bombing campaign on both German war production and civilian morale was significant, but that it had been overestimated by previous historians.[22]

Thus, during the war years strategic bombardment was seen as a way of winning the war almost singlehandedly, while after the end of the war the significance of aerial bombing as a cause for the defeat of the enemy has been continually put into question. History tells us that the Luftwaffe's air raids on Great Britain were not strong enough to knock England out of the war. The trends in historiography outlined above, however, indicate that history does not speak quite as clearly regarding the effectiveness of the Anglo-American air offensive against Germany.

The German Air Offensive Against Great Britain

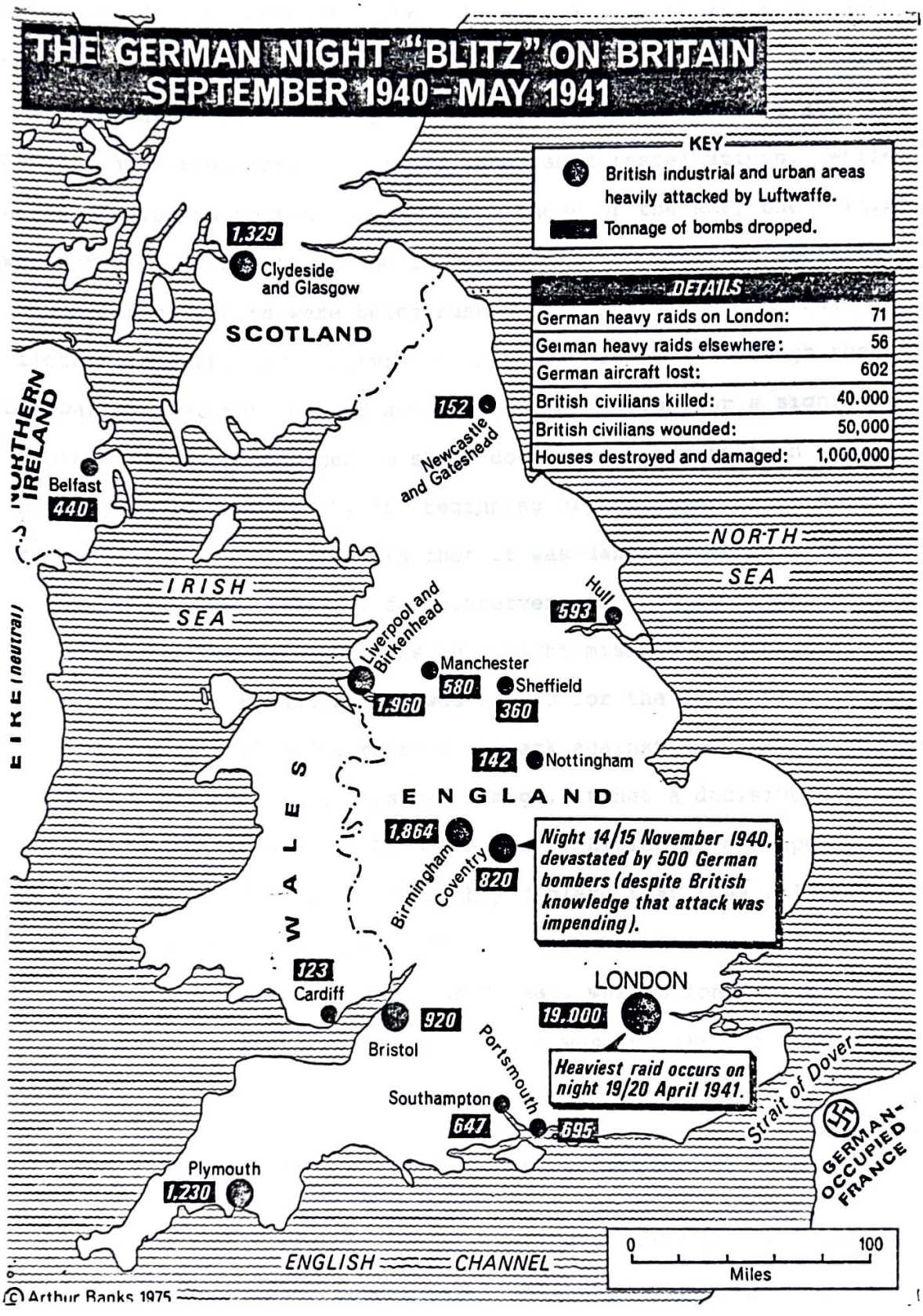
Chapter II

A. From the Battle of Britain to the Blitz

The Luftwaffe air offensive against Great Britain, which began in earnest after the fall of France in June of 1940, can be divided into three distinct phases. The first phase started with the Battle of Britain in August 1940 and ended with the final major aerial assault against London on the night of May 10-11, 1941. After this attack, which marked the end of the "Blitz" against English cities, Hitler withdrew the major part of the Luftwaffe's fighters and bombers from Western Europe, since they were needed for the impending invasion of the Soviet Union.

During the second phase of the Luftwaffe's offensive against Britain, which lasted from May of 1941 until the Allied invasion of Europe in June of 1944, most of the Luftwaffe's planes and pilots were committed to the Eastern Front. Throughout this period, the aerial assault against England consisted primarily of small-scale terror raids on London and other cities, since the main objective of the German Air Force in the west became the protection of the Reich against the combined Anglo-American bombing offensive. The third and final phase consisted of the guided missile campaign against British population centers, dating from June of 1944 until the end of the War.

After France capitulated in June of 1940, England stood alone against Nazi Germany. Flushed with victory, Hitler planned for the invasion of the British Isles. Before he could begin a cross-channel invasion, however, it was necessary that the Luftwaffe


THE GERMAN NIGHT "BLITZ" ON BRITAIN
SEPTEMBER 1940 – MAY 1941
KEY
British industrial and urban areas heavily attacked by Luftwaffe.
Tonnage of bombs dropped.
DETAILS
German heavy raids on London: 71
German heavy raids elsewhere: 56
German aircraft lost: 602
British civilians killed: 40,000
British civilians wounded: 50,000
Houses destroyed and damaged: 1,000,000
1,329
Clydeside and Glasgow
SCOTLAND
152
Newcastle and Gateshead
Belfast
440
NORTHERN IRELAND
EIRE (neutral)
IRISH SEA
NORTH SEA
Hull
593
Liverpool and Birkenhead
1,960
Manchester
580
Sheffield
360
142
Nottingham
ENGLAND
WALES
1,864
Birmingham
Coventry
820
Night 14/15 November 1940, devastated by 500 German bombers (despite British knowledge that attack was impending).
123
Cardiff
LONDON
19,000
920
Bristol
Portsmouth
Heaviest raid occurs on night 19/20 April 1941.
Strait of Dover
Southampton
647
695
GERMAN-OCCUPIED FRANCE
Plymouth
1,230
ENGLISH CHANNEL
0
100
Miles
© Arthur Banks 1975

destroy the Royal Air Force, so that Germany could control the skies above the English Channel. The Luftwaffe's attempt and subsequent failure to accomplish this task constitutes the Battle of Britain.

The battle got underway in August, when the Luftwaffe attacked RAF flying formations, air fields, and radar installations. While Luftwaffe losses continually exceeded those of the RAF, the British were critically short of experienced pilots. By the end of August, inexperienced pilots were being rushed into combat, and bomber pilots were forced into service in fighter planes. Although the Luftwaffe never put any RAF airbases out of action for a significant length of time, or managed to shoot down more aircraft than British industry could produce, by the beginning of September RAF Fighter Command was so short of pilots that it was dangerously near collapse.

At this time, however, fate intervened on behalf of the British. On August 24, Luftwaffe bombers on a night mission to Rochester made a navigation error, and London was bombed for the first time of the war. Churchill ordered a reprisal attack against Berlin, and though the attack caused little physical damage, it had a decisive impact on the course of the war. On Septemebr 4, Hitler gave a speech in Berlin in which he stated, "When they declare that they will increase their attacks on our cities, then we will raze their cities to the ground."[1] The RAF, which was near defeat, was no longer the Luftwaffe's main target. The new target was the city of London itself.

B. The Blitz: Septembr 7, 1940 to May 11, 1941

Beginning on September 7, and continuing through the night of November 2, the city of London experienced 57 consecutive days and

or nights of aerial bombardment. In the middle of November, smaller, less sprawling industrial cities were subjected to the Luftwaffe onslaught, but London was not neglected. On December 29, London was hit with a particularly heavy attack. Between January and May of 1941, London and other English cities were raided with decreasing frequency, and on the night of May 10-11, the capital was hit with its last really heavy air raid of the war. This attack marked the end of the Blitz, and although England was to be bombarded periodically until the end of hostilities, the worst was over.

Even if the English had known this on Septemebr 7, 1940, in all probability it would have provided them with little comfort. For on that day, over 300 German bombers took part in a daylight attack on the nation's capital, and the resulting fires were still burning when approximately 250 bombers returned that night. As a result of these attacks, more than 400 Londoners were killed, and more than 1,600 seriously wounded.[2] On September 15 the raiders returned, in force. Again, over 300 enemy bombers headed towards London, but the RAF, regaining strength since September 7, was waiting. In the history of World War II, September 15 is regarded as the RAF's "greatest day." Fully one-quarter of the Luftwaffe attack forces was shot down or damaged beyond repair. On September 17, realizing that the RAF still controlled the skies above England, Hitler postponed the invasion of England indefinitely.[3]

From the middle of Septemebr until the end of the month, daylight raids decreased in frequency, giving way to attacks by night. The reason for this change in strategy was that the Luftwaffe was simply losing too many bombers in its daylight operations.[4] In October, daylight raids practically came to a close, and Goering

decided to concentrate on night bombing. This change in tactics presented special problems for air defense. The RAF at that time had no fighter planes equipped for nightime operations, and had too few anti-aircraft guns to make a dent in the Luftwaffe's bomber formations.[5] Therefore, the Luftwaffe could attack London with impunity by night. Although bomb-aiming by night is much more difficult than it is by day, the Thames River, flowing through the heart of London, was an unmistakable landmark even by night. In addition, the city itself was so sprawling that it presented a target which could hardly be missed.

Therefore, when the Luftwaffe switched to night operations in October, there was little Britain could do in the way of defense. During this month, London bore the brunt of the Luftwaffe's onslaught, but Liverpool, Manchester, Bristol and other cities were also targets of smaller attacks. In all, the Luftwaffe dropped 8,700 tons of high explosives and 323 tons of incendiaries on English cities throughout October.[6] Most of the heavy raids occurred in the middle of the month, when a period of full moon aided the attackers' navigation and bomb-aiming.[7] Particulary heavy raids were directed against London on the nights of August 9th and 15th. On the 9th, 487 bombers dropped 386 tons of high explosives and over 70,000 1 kg. incendiaries.[8] On the 15th, 410 bombers dropped an almost equal bomb load, killing 400, and seriously wounding more than 900.

By the end of October, transportation, communications, and civil defense networks within London were severly strained. Nevertheless, the city had not been bombed into submission. This failure resulted in yet another change in objectives for the Luftwaffe. If the bombing of a large, sprawling city like London

failed to bring about the collapse of the British, then perhaps smaller, more concentrated targets would be easier to destroy. In accordance with this theory, Goering launched a new plan for strategic bombing in November. London remained a priority target, but smaller, industrial cities such as Coventry, Birmingham, and Liverpool were also marked for destruction.[9] In addition, since the high explosive bombs employed had not done the required damage, a higher proportion of the bomb loads would be made up of incendiaries.

The midland city of Coventry was the first target to suffer from the new strategy. On the night of November 14-15, 469 bombers, aided by a cloudless, moonlit night and a new electronic navigation device called X-Gerät,[10] dropped 450 tons of explosives and incendiaries into the heart of the city. Almost one-third of Coventry's housing units were rendered uninhabitable; its medieval center and famous cathedral were gutted, and more than 600 people were killed, while over 800 were seriously injured.[11] Many war-related industries were damaged, and German propagandists claimed the city had been "coventrated." However, recovery was quick, within two weeks all factories were meeting pre-raid production quotas.[12] If Coventry had been attacked on the following nights, it is probable that greater damage could have been done. Instead, the Luftwaffe turned its attention back to London and to other mid-size industrial centers such as Portsmouth and Manchester. Thus, for all the propaganda and publicity devoted to the Coventry raid, it in fact represented a wasted opportunity for the Luftwaffe.

As stated previously, Coventry was not the only city besides London to be attacked. Between November of 1940 and May of 1941, the cities of Birmingham, Bristol, Avonmouth, and Manchester were

attacked on numerous occasions, and in each city more than 1,000 civilians were killed as a result of aerial bombardment.[13] This roster of cities is by no means complete; throughout the Blitz numerous English cities came under attack at one point or another.

Despite Goering's change in strategy in November, London continued to be the main target of the Luftwaffe. On December 29, London endured its most damaging raid of the war up to that date. Over 250 planes dropping mostly incendiary bombs started 1500 separate fires within the city; the city center itself was almost razed to the ground. Because the city center was not a residential area, casualties were lighter than usual, with only about 160 people killed. On April 16 and 19, 1941, however, heavy raids in London claimed over 2,000 lives. Finally, on the night of May 10-11, London experienced its worst raid of the entire war. More than 500 bombers took part in the raid; over 700 tons of high explosives and incendiaries were dropped, and more than 1,100 people were killed, with 1,800 seriously wounded.[14]

Although the English did not realize it at the time, this raid marked the end of the Blitz. The raids had been diminishing in frequency since March, when Hitler began diverting aircraft to the Balkans for his spring offensive in that region. By the end of May he was transferring the majority of his forces to the east for his upcoming invasion of Russia. In the period from September of 1940 through May of 1941, however, he had severely tested the fortitude of the British people. A total of 54,420 tons of high explosives and incendiaries were dropped on Great Britain, killing more than 40,000 civilians, with 86,000 seriously injured. In addition, over two million houses had been destroyed or damaged, 60% of them in London.[15]

C. The Decline of the Air Offensive Against England

Between May of 1941 and June of 1944, the Luftwaffe air offensive against Great Britain consisted mostly of terror raids against the English populace as a means of reprisal against the growing Anglo-American air offensive against Germany.[16] During this period, most of the Luftwaffe's aircraft and aircrew was committed to the Eastern Front, and the forces remaining in the West were primarily fighter planes devoted to the defense of the Reich. From the end of the Blitz until March of 1942, the greatly reduced Luftwaffe bomber force in the West was engaged for the most part in a campaign against British shipping in the Atlantic. Early in 1942, however, the growing British night raids against Germany caused a change in tactics for the Luftwaffe.

On March 28-29, the German city of Luebeck was hit by a heavy RAF raid, and German public opinion called for heavy reprisals.[17] Hitler claimed he would destroy all British cities one by one, and then strike them out of the Baedecker Travel Guide. Consequently, these reprisal raids were called "Baedecker Attacks." The first attack was against Exeter on April 25, and in the next seven months, 38 similar attacks against Bath, Norwich, Canterbury, and other scenic British towns took place. An average of 76 tons of bombs was dropped on each raid, but only 26% of this figure landed near the target.[18] Another form of terror attack instituted in 1942 was fighter-bomber attacks. These consisted of fighter planes armed with small external bombs, which would make surprise attacks on channel ports and inland towns. In 1942, between the Baedecker and fighter-bomber attacks, only 6,500 tons on bombs were dropped

on Great Britain. This was the equivalent of one month's bombing during the Blitz, and thus the impact of these raids was negligible.[19] Throughout 1943 sporadic nightime raids and frequent fighter-bomber attacks again constituted the Luftwaffe's air offensive against Britain, with the same lack of impact as the 1942 campaign.

D. The Guided Missile Campaign Against England

By the middle of 1944, the Luftwaffe bomber forces in the West were so depleted that the strategic bombing offensive against Great Britain all but came to a close. However, Nazi Germany by that date had developed guided missiles capable of hitting London and other cities. Thus, until the end of the war a guided missile campaign was waged against England. The first guided missile to become operational was the V. 1, essentially a small, pilotless aircraft guided to its target by an internal gyroscopic system. It had a top speed of 400 mph, and could carry 1800 lbs. of high explosives. The first V. 1 attack occurred on June 12-13, 1944, when ten were fired at London, four reaching their target. Between this date and the end of the war, 11,000 bombs were launched, the vast majority against London. 2,500 reached their target. In all, 6,184 civilians were killed as a result of V. 1 attacks, with 17,981 seriously wounded.[20]

The failure of the V. 1 to cause major damage was due to two factors. The machine's navigation system was prone to failure, thus most of the rockets missed their target. Also, by 1944, most Allied fighter planes could fly faster than the V. 1, and more than 3,900 of these missiles were shot out of the sky. The successor to the V. 1, the V. 2, did not possess these same limitations.

The V. 2 was in reality the first guided missile. It had a more advanced gyroscope navigation system, a top speed of 3,600 m.p.h., and was thus invulnerable to fighter interception.[21] The only defense against the V. 2 was bombardment of its launching sites, and many V. 2's were destroyed in this manner. Nevertheless, between September of 1944 and March of 1945, over 1,000 V. 2's fell on Britain, with half hitting London; 2,754 people were killed due to V. 2's and 6,523 injured.[22]

When the final V. weapon fell on Britain in March of 1945, the air offensive against Great Britain came to a close. In five years of war, the Luftwaffe dropped 72,168 tons of bombs on Great Britain.[23] As a result, more than 63,000 citizens were killed, 83,000 seriously injured, and a million made homeless.[24]

E. The Impact of the German Air Offensive on British Civilian Morale

In the preceeding pages it has been demonstrated that the citizens of Great Britain were subjected to aerial attack throughout the Second World War. Between 1939-1945, many tons of high explosives, incendiaries, and guided missiles fell on English soil. Thousands were killed, hundreds of thousands were injured, and millions were made homeless as a result of Germany's aerial onslaught. The Luftwaffe, however, never succeeded in bombing England out of the war. Despite the damage that resulted from aerial attack, war industries continued to produce materials essential to the war effort. More importantly, the will of the general populace to continue the struggle against Germany never seriously wavered.

After the end of the war, the ideal of the British civilian's

staunch and stoic response to the German air offensive became almost mythical in nature. Wartime propaganda was partially responsible for this development. Winston Churchill's eloquent wartime speeches were another important factor. On April 12, 1941, in a speech praising the courage exhibited by the English populace, Churchill stated:

> I see the damage done by the enemy air attacks; but I also see, side by side with the devastation and amid the ruins, quiet, confident, bright, and smiling eyes, beaming with a consciousness of being associated with a cause far higher and wider than any human or personal issue. I see the spirit of an unconquerable people.[25]

In reality, however, English civilian morale was not a monolith in which never a crack appeared. Although most of the English civil population stood up to aerial assault in a cool and courageous manner, there was a smaller segment whose morale was adversely affected.

As stated previously, most of those subjected to aerial bombardment did not crack under the pressure. The majority of the population maintained a positive attitude towards the war effort, despite the ordeal to which it was subjected. On September 19, 1940, a Ministry of Home Security report confirmed that in London, the public was determined to see the war through, and go on to ultimate victory.[26] An individual example of this attitude can be found in a letter written to American by the English author Constance Spry. In 1940, Spry wrote, "I cannot put my finger on one single expression of defeatism or jitters, underlying everything is a spirit of determination such as I have never seen before." In regards to the war effort, she stated, "We are living inside a highly fortified fortress and our minds work along a single track,

how to conserve our minds and bodies individually for the winning of the war."[27]

Although this letter is merely one example of the positive nature of morale, the overall impression of many who witnessed civilian behavior in England throughout the war reinforce this view. In 50 reports of London city constables during the Blitz, not one mentions any faltering in public courage.[28] Winston Churchill, who made frequent trips to the hard-hit areas of London during the Blitz, tells of several instances of positive attitudinal morale in Their Finest Hour, his account of the first two years of the war. In one such incident, he was inspecting a recently bombed borough in South London, and noted that, "pathetic little Union Jacks" had been raised by the residents among the ruins. As a crowd gathered around his car, they cried, "Give it 'em back," and "Let them have it, too," obviously demanding revenge against the Germans. Based on his observations of civilian reaction to aerial bombardment, Churchill concluded that "London could take it," and that the city could have in fact taken more than what was given out by the Luftwaffe.[29]

Another war-time observer of civilian morale was the English pacifist Vera Brittain. In England's Hour, written during the course of the Blitz, Brittain states:

> Never has the sum total of civilian courage in this country proved so great as it is today in response to the intense and perpetual strain placed upon it. This courage is not even confined to the civilian defense forces....Men and women working in offices, in factories, or in their own homes, fight their human fears with a brave show of cheerful indifference....The People of Britain are learning to confront fate with a heroism which is none the less magnificent because it is universal....The conquest of fear, and today it is conquered or concealed by hundreds of thousands of decent citizens, is only the greater tribute to that unquenchable vigour of the human spirit which a whole nation displays.[30]

Angus Calder, in his chronicle of the effect of war on civilian life in Britain, The People's War, lauded the "faceless civilians," factory workers, shop stewards and air-raid wardens, for keeping morale from collapsing through their efforts; Calder claims that without their support for the war, it might have been lost.[31] In addition the correspondence of some well known Englishmen reveals the fortitude of the British populace. Stage Director Anthony Guthrie, writing to actress Vivien Leigh and actor Lawrence Olivier on Septemebr 23, 1940, told how St. Paul's Cathedral became a symbol of English resistance to Luftwaffe attacks. Guthrie said, "I can't tell you how relieved I was when a bomb was removed from old P's foundations... St. Paul's seems to have become a symbol of the London they will never subdue."[32]

While the examples above all refer to the state of morale in London, the residents of the nation's capital were not the only Britons to show calm resolve in the face of their ordeal. After the heavy raid on Coventry, resident E. H. Carter wrote the London Times to praise the courage of his fellow residents. Carter stated, "It is impossible to exaggerate the courage displayed... In spite of all the sorrow... I hear from the families 'He's not going to get us down.' The Blitzkrieg is welding our people together as never before."[33] Another resident wrote in and called the raid "dastardly", but was thankful that the cathedral spire still stood.[34]

In a letter written on October 5, a resident of Birkenhead wrote a letter which revealed the light attitude some took in regards to the air raids. In describing the manner in which shopkeepers dealt with their blown out windows, the author commented on some of the signs which adorned the windowless shops. One store

proclaimed, "Gone with the wind, but business as usual. Another stated, "Don't lean on the window, there isn't one." A more telling sign proclaimed, "Our window is broken, but not our spirit."[35] On a more serious note, the Archbishop of Canterbury wrote a letter to Murray Butler, the President of Columbia University, on October 10, 1940. After describing the physical effects of the many air raids he had witnessed, the Archbishop wrote:

> In spite of all... the spirit of the people here remains undaunted and determined with a deeper conviction that there is no chance for justice, liberty, or peace until the menance of the monstrous ambition of Hitler has been finally dispelled from the world.[36]

Although the excerpts, letters, and observations recorded above are substantive examples of the high level of attitudinal morale maintained by British civilians during the Second World War, they merely reinforce the point that the majority of the country's civil population never regarded the war as lost, or victory as not worth fighting for. However, the important thing during wartime is not so much what a man thinks, but what he does. Even if psychological morale is lowered, as long as the majority of the people continue to perform their alloted tasks to the best of their ability, then the war effort will not be adversely affected. Therefore, in measuring the impact of strategic bombardment, behavioral morale is a more important factor than attitudinal morale.

As was pointed out in the introductory chapter, pre-war estimates of the impact of aerial bombardment indicated that mass hysteria would occur. While incidents of post-bombardment hysteria did occur, these cases were more the exception than the rule. P. E. Vernon, in the article 'Psychological Effects of Air Raids',

published in the Journal of Abnormal Social Psychology in October of 1941, polled 50 psychologists, and concluded that they had incorrectly anticipated how civilians would react to aerial bombardment.[37] Dr. Felix Brown, of Guy's Hospital in London, stated: "The incidence of psychiatric air-raid casualties has been much lower than expected; the average previously healthy citizen has proven remarkably adjustable."[38] While it would be incorrect to state that most people got used to air raids, it does seem most were able to keep their emotions in check. The anticipated mass hysteria never materialized, and as British scientist C. P. Snow said, "It began to seem quite minor if there were bombs in your actual neighborhood, but not on your actual house."[39]

That mass hysteria never seemed a problem does not indicate that civilian mental health was not affected by strategic bombardment. In any case, hysteria itself was anticipated to be a short-term result of aerial attack. A more serious consequence would be long-term neurosis or mental disorders. However, as with hysteria, long-term mental illness did not increase during the war as a result of air raids. As a Ministry of Health study included in a British Home Security report in February of 1941 indicated, neurotic conditions among civilians were infrequent.

The report stated:

> Only 5% of the people incapacitated by air raids were suffering from "nervous shock." Some of these were probably physical in origin, resulting from the blast. The great majority had recovered within a week or two. In December, 1940, the number of civilian neuroses due to air raids requiring admission to special psychiatric hospitals was: London 25, the rest of England 3. In January there were still fewer cases.... At out-patient clinics, the number of new cases seen in 1940 was below that of 1939. Following the Coventry raid, the number of neurotic out-patients was the same as usual.40

Richard Titmus, in the book Problems of Social Policy, stated that there is no evidence that neurotic disorders increased during the war. In fact, they seem to have decreased. Other indications of mental disorder, such as incidents of public drunkeness and suicide rates also substantiated these findings. Incidents of public drunkeness decreased through 1943, and between 1938 and 1944, the suicide rate dropped from 12.9 per hundred thousand to 8.9.[41]

If aerial bombardment did not psychologically unnerve the civil population, then another important question is to what extent it prevented workers from carrying out their jobs. Obviously, during an air raid workers stopped what they were doing and went to air raid shelters. However, experience eventually lessened the time workers lost to air raid warnings. In September of 1940, the Ford's factory in East London lost 380 hours of work, but in October, when air raid spotters were put on rooftops, only 145 hours of labor were lost.[42]

Another way in which air raids could prevent civilians from performing tasks vital to the war effort was by making transportation to and from the workplace impossible, or so difficult that workers simply gave up. An additional factor which could have induced workers to stay away from factories, offices or other work places was fear. Aerial attacks, both by day and by night were invariably aimed not at suburbs, but at city centers. Nevertheless, most people were determined to get to work. Although railroads, trolleys, buses and other transportation networks in London and other cities were heavily damaged, most people were not deterred from riding them during their long and circuitous routes, even if it meant they had to wait in lines hundreds of yards long to make a journey

taking much longer than usual. Mark Benney, an aircraft worker, revealed:

> There was very little absenteeism caused by air raids; in part because we felt the air raids gave added importance to our work, but more because if we didn't turn up our mates would be worrying. You would see men staggering at their work from lack of sleep....and when knocking off time came, going off with a cheerful, 'See yer in the morning, boys! If I don't see, yer, it means they'll be digging me out.'[43]

Londoners were not the only ones who manned their jobs despite the hardships air raids caused. The Morris Motor Engine works had 600,000 square feet of its factory roof destroyed after the November raid on Coventry, but even after this devastating attack 80% of the employees showed up for work within the first week.[44] They performed their jobs despite the gaping hole in the roof, rain, snow, and falling masonry. Within six weeks the factory's production of vital war components was back to pre-raid levels. On November 18, 1940, a Coventry firm of manufacturers wrote to the city's mayor J. A. Moseley and stated:

> We feel that we must put on record the fact that, although we had roofs off almost all our premises and the interior of all works badly damaged, our workers have all turned in to do what they can.
>
> Added to this, on the day following the raid, our office staff showed up complete and helped in the work of salvaging as much as possible. We do not write this letter with any idea of self-glorification, but in order to show the spirit shown by our employees, and their anxiety to get to work and wipe out the effect of the dastardly acts of our enemies.
>
> You will be glad to hear that, owing to the spirit shown by our workers, we are able to commence production on urgent Government work.[45]

This attitude and behavior was exhibited in mid-size cities throughout the country. Dr. C. W. Emmens, of the Research and Experiments Branch of Britain's Home Office, concluded that in York, Canterbury, and Bootle, the average number of days a worker lost

in production due to air raids was between 2.8 and 3 days.[46]

Up until this point, the evidence presented and the conclusions reached tend to support the image of British civilian morale as a monolith which never cracked throughout the entire war. Many would like us to believe that while bombs were dropping on the British Isles, every man, woman, and child raised his or her fist to the sky, and cursed Hitler and every other "Hun."[47] In reality, though, the reaction of the civil population to aerial bombardment was not this simple or uniform. It has been shown that most Britons were able to withstand the pressure of strategic bombardment, but a minority of the population was not. In both attitude and behavior, a significant number of civilians exhibited depressed morale.

Depressed psychological morale manifested itself in many ways. Among these were anti-war sentiments and despair about the future, complaints about the performance of local authorities in delivering post-raid services, and curiously, anti-semitism.

Of all the manifestations of lowered attitudinal morale, despair about the future and defeatism were the most potentially dangerous to the war effort. Especially during the Blitz, people had no way of knowing how much longer the aerial onslaught would last, and this factor caused a decline in morale for some. After a particularly heavy raid, a Portsmouth woman stated, "Sometimes I say if we could stand last Monday, we could stand anything. But sometimes I feel I just can't stand it any more."[48] In London, after the heavy raids of mid-April, 1941, a mass-observation report quoted many people as saying a few more heavy raids and it would be all over for them.[49]

In several instances, despair about the future led many to wish for hostilities to come to an end. In Coventry, after several

raids in October, 1940, but before the heavy November raid, workers were said to be willing to support any plausible peace proposal. On November 21, 1940, six days after the heavy raid in Coventry, T. J. Martin of Liverpool wrote a letter to the Manchester Guardian and said, "We have allowed Hitler to take the initiative in War, why not ourselves take the initiative for peace? Such a move might save us from further disasters such as Coventry."[50] Later that month, the lower class people of Bristol were said to have felt let down by the Government, and were eager for a negotiated peace.[51] The British Ministry of Information, though it felt morale on the whole was strong, was not unaware of these undercurrents. Late in October of 1940 Sir Kenneth Clark, a ministry official expressed the following thoughts:

> If the Germans make a good peace offer after having bombed our cities more and taking Egypt we shall find that the popular press take the offer up and that we shall be in great difficulty. I agree that the spirit of London is excellent, but it would take little to swing this courage to cowardice.[52]

Harold Nicolson, another ministry official, recorded in his diary on September 17, 1940 that he was nervous about morale in London's hard-hit East End. He felt people there were very bitter, and indicated that if morale collapsed there, it might have started a chain reaction.[53]

One reason for bitterness in the East End and other heavily bombed areas was the feeling that the Government was not providing adequate relief to air-raid victims. In particular, the lack of air-raid shelters, and temporary shelters for those whose homes had been destroyed caused the most grumbling. At the onset of the Blitz, many in the East End and elsewhere had nowhere to turn for

shelter. Quickly, the London Subway System, the "Tube", became a favorite place to seek shelter. At first, the Government tried to stop this practice, but popular pressure overrode government policy. It was not long before a good percentage of London's population was spending the night in underground subway stations. At the start, conditions were dreadful, but eventually these shelters were equipped with food services, beds, and other amenities.

A more serious problem was housing for those who were bombed out of their own homes. This was particularly a problem in the East End, a lower class area filled with overcrowded tenements. By the end of the Blitz, one out of every six Londoners had been made homeless for some period of time, and the situation in other cities was not much better. Rest centers, temporary shelters for those made homeless, could only accomodate one out of every seven victims, and the rest had to depend on charity or literally fend for themselves. By the end of the Blitz local governmetns alleviated this problem by repairing damaged houses, and a variety of information networks were set up to channel people to areas where housing could be found.[54] Until then, however, the Government came under severe criticism.

When those who had experienced aerial attacks were not complaining about inefficient government, their tensions and frustrations were often vented on popular scapegoats, most often Jews. Thus, anti-semitism can be regarded as another indicator of lowered morale. In the East End, in Liverpool, and other cities, Jews were rumored to control the black market, to display ostentatious wealth, and to avoid military service. Allegations were made of enormous numbers of Jews evading conscription, and the Bethnal

Green tube disaster of March 3, 1943, in which 173 people died in a stampede out of an air raid shelter, was also widely blamed on "panicking Jews."[55] On the whole, these stories were unfounded, as was indicated in a Home Intelligence report on anti-semitism in the East End. The report stated:

> A certain amount of anti-semitism in the East End still persists, but this is not so much on account of a marked difference in conduct between Jews and Cockneys, but because the latter, seeking a scapegoat as an outlet for emotional disturbances, picked on the traditional and nearest one. Though many Jewish people congregate and sleep in the public shelters, so do many of the Gentiles, nor is there any evidence to show that one or the other predominates among those who have evacuated themselves voluntarily through fear or hysteria.[56]

The above mentioned examples of depressed morale occurred with enough frequency to be recorded in official and unofficial reports, diaries, and chronicles, yet they did not constitute a significant threat to the overall war effort. Again, attitudes only achieve importance when they begin to influence behavior. For the most part, the examples of lowered morale cited above did not cause people to engage in behavior detrimental to the continuance of the war. However, in a few instances, behavioral morale was lowered to the point where various aspects of the war effort were impeded. Scattered incidents of hysteria were reported, mass evacuation from bombed areas affected productivity to a small extent, and in one instance, members of one community demonstrated against the inefficiency of the local government in providing aid for air-raid victims.

It has already been mentioned that before the start of the war many experts feared aerial assaults would precipitate mass hysteria among civilian populations. Although this was not the case,

individual incidents of hysteria following aerial assaults did take place. Hysteria was a short-term reaction to air raids, and thus its potential for interfering with the war effort was limited. Nevertheless, it could impede defense efforts during the course of an attack, and in this way increase the damage incurred.

As Ian McLaine points out in Ministry of Morale, it seems unlikely that hysterical outbursts were widespread enough to cause comment as a significant aspect of the response of citizens to air raids. The one exception to this was in Coventry, following the raid of November 14-15, 1940. While this fact might appear to contradict what has been said earlier regarding the conduct of Coventry's citizens during this raid, such is not the case. The city had a war-time population of some 250,000 people, and was geographically concentrated enough so that almost everyone either heard, saw, or experienced the impact of the torrent of bombs which rained down upon the city. Therefore, it is not contradictory to report that some of these people became hysterical.

A mass-observation report on the Coventry raid stated that there were a number of open signs of hysteria in Coventry during the raid. According to the report, "Women were seen to cry, scream, faint in the street, to attack fireman, and so on... In two cases people were seen fighting to get on cars which they though would take them out to the country, though in fact the drivers insisted they were going just up the road to a garage."[57]

This reference to Coventry is one of the few cases where hysteria was reported; in probability hysterical reactions were not considered important because they tended to dissipate after the end of a raid. The statistics previously quoted regarding the state of

mental health in Britain during the war years support this contention. Obviously then, hysteria, when it did occur, had little impact on the war effort. However, its discussion in the preceeding pages was not intended so much to show how hysteria impeded civilian contributions to the war as to indicate that not all civilians were able to keep control of their emotions while under aerial attack.

One aspect of depressed behavioral morale that did have an impact on the war effort was mass flight from heavily bombed areas. In London, a large portion of the population journeyed to underground shelters. In provincial towns, where "tube systems" did not exist, many fled to outlying areas. This practice was referred to as "trekking", and of itself it does not indicate lowered morale. Many people trekked to shelters or the countryside to increase their chances of survival, and as long as they returned to their jobs in the morning trekking did not have a negative impact on the war effort. The key question, then, is to what extent did those who fled heavily bombed areas miss war-related work as a result?

In London, the amount of work missed due to time spent travelling to and from shelters can be assumed to be minimal, since the shelters were located in the city itself. In Southhampton, however, workers trekked as far as Salisbury for shelter, which was 72 miles away.[58] Strangely, though, a Ministry of Information report concluded that provincial trekkers on the average lost no more time at work than those who remained in town. Angus Calder, in The People's War, explained this phenomenon by suggesting that no matter what the difficulty, no worker could afford the loss of wages that resulted from missed work.

If trekkers, who travelled to and from workplace to shelter, did not lose time from work, the same cannot be said for those who fled and did not return. In Southhampton, many fled after the heavy raid of December 2, 1940, and did not return for a number of weeks, if at all. Ten days after the Blitz, only a fraction of the populace was living in the town, and morale was said to be on the brink of collapse.[59] Portsmouth, which was heavily raided at the same time as Southhampton, lost up to three-fourths of its population. While there are no statistics which indicate how much production was lost as a result of this exodus, it was in all probability significant.[60] While population levels began to return to normal by February, the flight of civilians from Portsmouth and Southhampton is one example of civilian behavioral morale declining to such an extent that the war effort was affected.

A final way in which behavioral morale could be altered for the worse was if aerial bombardment caused civilians to demonstrate against their government. As stated earlier, most Britons supported their government and institutions despite the hardships inflicted upon them, but there was one instance when London's local authorities failed to meet the needs of its hard-hit citizens, and an expression of tensions within the community occurred. This event took place in London's East End at the onset of the Blitz.

London's East End was a working class slum along the "U" bend on the Thames River. Many decks and warehouses were located in this area, and the "U" bend was an unmistakable landmark from the air. Therefore, many of the Luftwaffe's bombers used the East End as an aiming point. Consequently, when the Blitz began in early September, the East End was the most heavily bombed area in London.

Throughout September, casualties in the East End mounted. In one instance, a direct hit on a schoolhouse full of East Enders seeking shelter killed 450 people.

The Cockneys who populated the East End were traditionally seen as the most cheerful people in England, and if the Government had been able to deal with their post-raid needs, morale in all probability would have remained high. The local government, however, was unprepared to provide food, shelter, and information to the large numbers of victims generated by the initial Luftwaffe onslaught. During the raids, only one underground shelter was available in the East End, and provided shelter for only a fraction of the areas residents. After the raid, there was not enough temporary housing to billet those whose homes had been destroyed. In addition, no information was provided to tell the homeless what to do. As a result, many East Enders felt they were bearing the brunt of the burdens of war, and that because they were poor, the Government simply did not care.

Such a situation is ripe for agitation, and in the East End district of Stepney two such agitators saw the opportunity to use the circumstances to their advantage. Phil Piratin, a representative in Stepney's Council, and Tubby Rosen were both ardent Communists, and in mid-September they began addressing the large crowd that milled around the district in the daytime. They stressed that East Enders were being treated like second-class citizens, and the time had come to do something about it. Tubby Rosen stated:

> Our people are dying like rats here in Stepney, and why? Because the Tory Bosses refused us the money to build deep shelters for our protection. So while we crawl into surplus street shelters, which wouldn't even protect a rooster in the rain, up West the Government's rich friends and their girlfriends sleep cosy in double beds... in their own private shelters. Comrades, its about time we took them over.[61]

The nearest possible target was the Savoy Hotel; its basement had been converted into a shelter for hotel guests. Most U.S. newspapers made the hotel their headquarters, and it was also a favorite eating place for members of Parliament and leading socialites alike. More importantly, it was in walking distance of the East End. After the speech, Piratin and Rosen led a group of approximately a hundred demonstrators to the hotel, while an air raid was in progress. They arrived at noon, and demanded entrance to the shelters. The hotel manager, however, ordered the doors barricaded, and called the police. When the police arrived, though, they sided with the demonstrators, and told the manager:

> You're a hotel, sir. You come under the Inkeepers Act. If a traveller comes and asks for a meal or shelter, and these people look like bonafide travellers to me, then they've a right to be served. Now if they're breaking things, or making a row... then we'll escort them off the premises, but otherwise... they're clients of the hotel, and have the right to be treated as such.[62]

However, as the policemen finished his speech, the air raid unexpectedly came to an end. There was no need for the demonstrators to man the shelters, and if they wanted to stay they would have to buy something to eat. The prices, however, were beyond their means, and the demonstration fizzled out. Had the demonstrators marched during a night raid, they could have spent the entire evening in the Savoy's shelter. The sight of over 100 lower class Cockneys

sleeping among the well to do would no doubt have had quite an impact in class conscious England.[63]

Soon after this disturbance, services for air raid victims in the East End and elsewhere improved. The tubes became official underground shelters, and extra toilets, first-aid stations, cooking equipment and food supplies were brought in.[64] To serve people suffering from bomb damage after raids, mobile canteens came into use, and 170 "Londoners' Meal Service Centers" were constructed.[65] Many charitable organizations, such as the Red Cross and various Church groups, maintained community feeding centers. To shelter those whose homes were destroyed or damaged, rest centers were established. The typical rest center was a school building or other public edifice filled with cots, first-aid posts, food supplies, and little else. While far from being comfortable, these rest centers housed many people for a number of weeks, until more permanent shelter could be found.[66] Information networks, which told victims about the various services and agencies available to help them, were also set up. Once cities other than London came under attack, these services were incorporated there as well. The improvement of post-raid relief helped to prevent disturbances such as the one that occurred in the East End from taking place again.

The evidence presented in the preceeding pages strongly suggests that the Luftwaffe air offensive against Great Britain never seriously damaged civilian morale. The Luftwaffe bombed England throughout the entire war, but lost the initiative in the battle against civilian morale when it failed to bring England to her knees during the Blitz. Between September of 1940 and May of 1941 only Britain stood in opposition to the Third Reich, and the Germans

were able to devote all their energy on the destruction of England. Nearly two-thirds of the total bomb tonnage that fell on the British Isles during the Second World War was dropped during this eight month period. In the spring and summer of 1941, however, Hitler turned his attention to the Balkans and Russia. After the invasion of the Soviet Union on June 22, 1941, the forces of the Luftwaffe were diverted to the East, and the air offensive against England declined. The end of the Blitz in May of 1941 marked the end of the heavy air raids against England, and the Luftwaffe was never able to mount a large-scale air offensive against Great Britain again.

Essentially, the Luftwaffe failed to bomb England into submission during the Blitz because it was not suitably equipped for such a task. Above all, it lacked a four-engined heavy bomber capable of delivering a substantial payload against an enemy. The twin-engined medium bombers that the Luftwaffe had at its disposal, the Do 17, He 111, and Ju 88, were incapable of successfully waging a strategic air offensive against an enemy as determined and well equipped as the British. These planes were too light and vulnerable, their defensive armament too meager, their range too limited, and their bomb load too small to cause the defeat of the English by bombing alone. During the Second World War, the Luftwaffe was simply not equipped to deliver a heavy enough bomb tonnage to bring about the collapse of their enemies. When one compares the total bomb tonnage dropped on England by the Luftwaffe with the total bomb tonnage dropped on Germany by the Anglo-American air forces, this point is clearly illustrated. As stated previously, the

Luftwaffe dropped a total of 72,168 tons of bombs on Britain during World War II. In March of 1945 alone the Allies dropped 133,599 tons of bombs on the Third Reich.[67] If in 1940 the Luftwaffe had access to the weaponry used by the Allies in their air offensive against Germany, the Blitz might have had a greater impact on English morale. Winston Churchill suggested as much in Their Finest Hour when he stated:

> Of course, if the bombs of 1943 had been applied to the London of 1940, we should have passed into conditions which might have pulverized all human organization. However, everything happens in its turn and in its relation, and no one has a right to say that London, which was certainly unconquered, was not also unconquerable.[68]

Churchill's statement applies not only to London, but to the rest of England as well. As has been shown, the legend of the English civilians' stoic response to the German air offensive was for the most part accurate. In attitude and behavior, most of the British civil population never faltered, and proved that they could take whatever Hitler and the Luftwaffe dished out. However, it has also been shown that a segment of the English population was negatively affected by exposure to strategic bombardment. Although this segment was by far in the minority, and its depressed attitudinal and behavioral morale did not significantly damage the ability of Great Britain to wage war, the very fact that some Britons buckled under the pressure of aerial attack indicates that human reaction to extreme danger and stress is never as simple or uniform as myth would have us believe.

The Anglo-American Air Offensive Against Germany

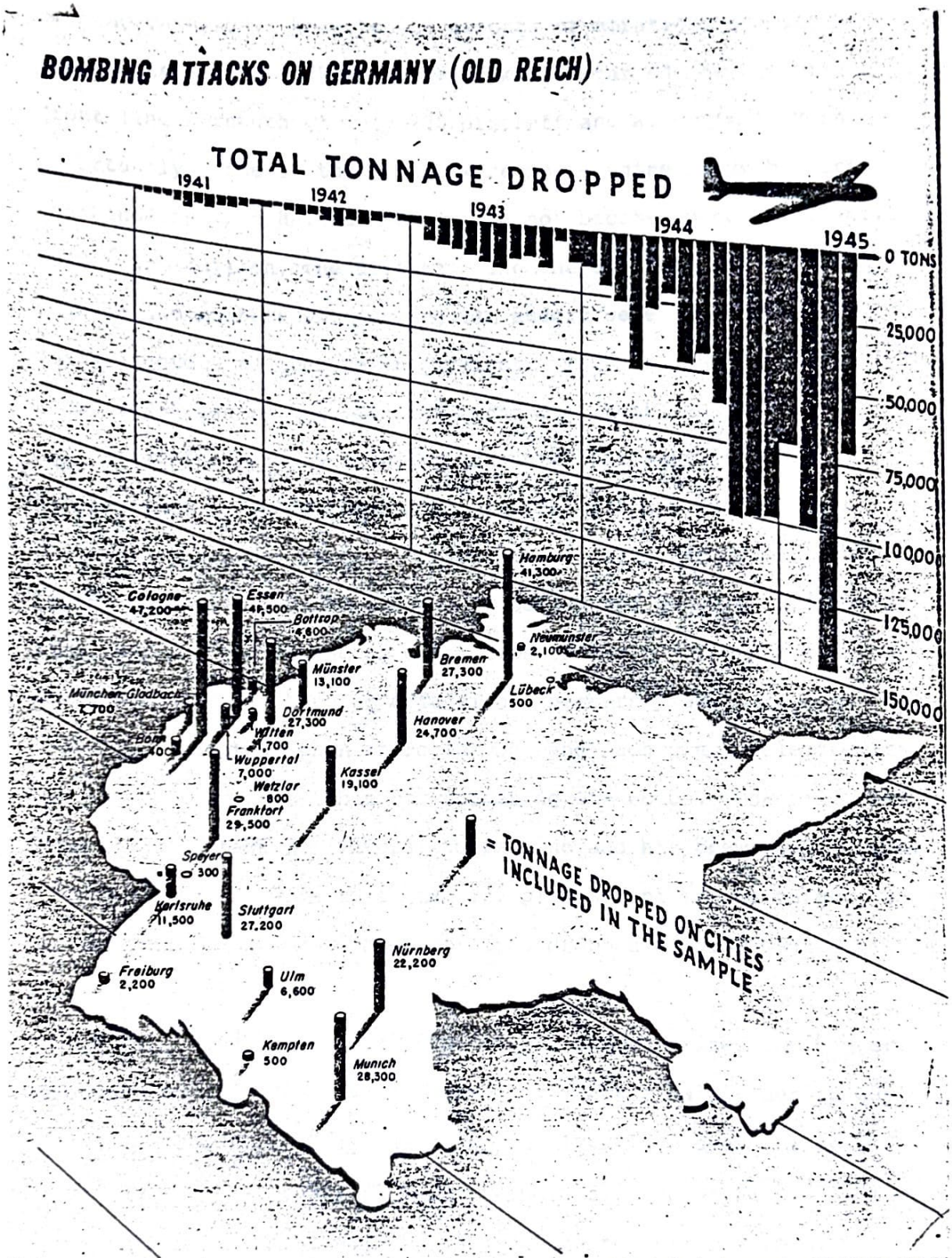
Chapter III

A. The Air Offensive Begins

The aerial offensive against the Third Reich began in mid-1940 when the RAF's ill-equipped and undermanned Bomber Command carried out retaliatory attacks on Berlin. For the first year and a half, however, the strategic bombing campaign waged by the RAF was poorly executed and ineffective. In November of 1941, Churchill therefore restricted Bomber Command's activities. In February of the following year he fired the head of Bomber Command, Air Marshall Richard Pierse, and replaced him with Air Marshall Arthur Harris. Harris utilized new equipment and strategy, and beginning in 1942 unleashed a series of massive raids against Germany. Also, in August, the United States Army Air Force (USAAF) began daylight operations over Europe.

In 1943 the aerial onslaught against Germany gained momentum. The Directive for the Bomber Offensive which came out of the Casablanca Conference in January called for the Americans to bomb Germany by day, and the English to continue to bomb by night. Around-the-clock bombing of the Third Reich became a reality in 1943, and by June of 1944 the Nazi war machine suffered enough damage to enable the Allies to invade Europe. Until the war ended in May of 1945 the tempo of the air offensive increased. German cities and industry came under continuous assault, which resulted in a previously unimagined amount of death and destruction.

When RAF Bomber Command began operations against Germany in the summer of 1940 it was woefully unprepared to wage a strategic



PHYSICAL EFFECTS ON POPULATION

(Old Reich, total: 69,800,000)

Subjected to Attack	Civilians Killed	Civilians Wounded	Evacuated	Homes Destroyed	Deprived of Utilities
22,000,000	500,000	780,000	5,000,000	1,800,000	20,000,000

bombing campaign. Despite the efforts of strategic bombing proponents in the 1930's, Bomber Command started the war with a front line strength of only 280 aircraft and air crew.[1] More importantly, none of the planes were four-engine heavy bombers; the Lancaster and Halifax models did not become operational until 1942. In addition, the British, like the Germans, soon learned that medium bombers without fighter escort were too vulnerable to enemy fighters to operate in daylight. Thus, by the summer of 1940, night raids became the principal method of bombing Germany.

Attacking Germany at night presented the RAF with certain difficulties. Bomber Command had trained its air crew only for daylight operations, so navigation, bomb aiming, and every other aspect of aerial bombardment had to be adapted to work in darkness. Also, Bomber Command had no conception of how to organize and execute a nightime bombing offensive. Bombers flew to targets individually rather than in formation, and each plane selected its own altitude and timetable for releasing its bombs. One pilot even delayed his attack for several hours so he and his crew could attend a movie![2] Rarely were more than 100 planes sent to one target, so the concentration and tonnage of bombs dropped usually caused little damage.

This strategy, or lack of strategy, characterized the bomber offensive against Germany for over a year and a half. Berlin was bombed for the first time on August 25, 1940, and over the next 18 months a total of 34,983 tons of bombs fell on Germany.[3] Oil refineries in the Ruhr Valley, aircraft factories in Bremen, armaments industries in Hamburg, Kiel, and Cologne, among other targets, suffered repeated attacks. Due to Bomber Command's above

mentioned tactics, however, the scale of these attacks was small. Never were more than 4,400 tons of bombs delivered in any one month, and in January of 1941, only 777 tons of bombs were dropped on Germany.[4]

In spite of the small scale of these attacks, their impact on the German war effort was greatly overestimated in England. An intelligence report presented to the Cabinet on December 18, 1940 claimed that oil production in Germany declined by 15% after an expenditure of only 539 tons of bombs dropped on oil refineries.[5] Reports from Bomber Command stated that industrial output in the Ruhr had fallen by 30%, and that bombing had affected 25% of the total productive capacity of Germany.[6] These optimistic claims were based solely on the reports of bomber crews and the notion that the average bombing error was only 300 yards. Reports of this nature continued, but by June of 1941 doubts about their accuracy, as well as the accuracy of the bombers themselves, reached the highest levels of government. Churchill, who had long been suspicious of Bomber Command's performance, ordered an official investigation.

The Butt report, which resulted from the investigation, was a startling indictment of Bomber Command's performance. Based on aerial reconnaissance photographs of bombed targets, the report concluded that only 20% of all bombers claiming to have hit their assigned targets actually flew within five miles of them. This figure was reduced to 10% when the target was in the distant Ruhr Valley. The report went on to say that out of the 6,103 aircraft sent out during the period covered by the report, only about 1,200 bombed within 75 square miles of their target.[7] The report was issued in

August, 1941, and in Septemebr, Churchill stated, "It is disputable whether bombing will be a decisive factor in the war... all that we have learned shows that its effects are greatly exaggerated."[8] On November 11, four days after 37 bombers were shot down by Germany's improving night fighter defenses, Churchill ordered a drastic cutback on Bomber Command's activities.

B. The Air Offensive Gains Momentum

Throughout the winter of 1941-42, Bomber Command's operations were severely restricted. Early in 1942, however, Churchill made two decisions which led to the revitalization of the bombing offensive against Germany. The first decision concerned target selection. Because the RAF proved itself incapable of bombing specific targets, Churchill endorsed the policy of "area bombing." Area bombing concentrated large amounts of incendiary bombs on the flammable built-up areas of cities, and its principal effect was the destruction of housing, transportation networks, and public utilities by fire. Based on observations made during the Blitz, British authorities concluded that this type of damage impeded production more than the bombing of industry itself.[11] To Churchill and the leaders of Bomber Command, these observations indicated that German civilians were a more viable target than war-related industries. Thus, by adapting area bombing, the morale of Germany's civilian population became Bomber Command's primary target.[12]

Churchill's second important decision came on February 23, when he named Air Marshall Arthur Harris as the new head of Bomber Command. Harris, an ardent supporter of area bombing, was committed to the destruction of Germany through strategic bombardment. To

attain this goal, he instituted several changes in strategy. To help his bombers find their target, he sent "pathfinders" ahead of the main bomber force to illuminate the target area with flares. Harris also stressed the importance of concentrating the air raids in space and time. Instead of each aircraft arriving at the target individually, planes were organized into mass formations, and scheduled to fly over the target within a ninety minute period. Concentrated attacks not only overwhelmed night fighting forces, but also started so many fires simultaneously that fire-fighting services could rarely control them. Finally, Harris convinced Churchill of the need for huge numbers of bombers, and was gradually able to build up Bombers Command's strength so that massive air raids could be carried out.

In additon to new strategies, Harris utilized new equipment. Lancaster and Halifax heavy bombers became operational in 1942, and larger, more devastating bombs came into use. Before he took over, 500 lb. bombs were the most common type used. Harris, however, advocated the use of 2,000 lb., 4,000 lb., 8,000 lb., and eventually 12,000 lb. "Blockbuster" bombs. Another innovation came in the field of navigation. "Gee", an electronic navigation device, was introduced in 1942.[13] After some initial problems it proved quite effective.

On March 28, 1942, Harris put the new tactics and equipment to use. 235 aircraft of bomber Command dropped 304 tons of explosives and incendiaries on the city of Luebeck, killing 320 people.[14] 200 acres, 2,000 houses, an electric power station and main rail depot went up in flames.[15] One month later Rostock suffered a similar fate. Four successive attacks between April 24-27

destroyed over 2,000 homes, and more than 60% of the city center was burned to the ground.[16] These attacks were slight in comparison with the May 30 attack on Cologne, though. In the first "1,000 Bomber Raid" of the war, 1,500 tons of bombs, two-thirds of them incendiaries, poured into the heart of Germany's third largest city. 460 people were killed, 45,000 made homeless, and over 600 acres razed.[17] Although the attack on Cologne was the biggest raid of 1942, between June and December many more German cities came under attack. In this period Bomber Command dropped 32,000 tons of bombs on German soil.[18]

C. Bombing Around-the-Clock

In additon to the achievements of Harris, another important development took place in 1942. In the summer the Eighth Air Force of the United States Army Air Force arrived in England and began operations over Europe. The significance of the Eighth Air Force's initial attacks lay not in their scale, which was small, but in their method. Despite the protests of the RAF, the Americans believed that mass formations of B-17's and B-24's could "precision bomb" specific targets in Germany by day. Although the Eighth Air Force dropped only 1,561 tons of bombs in 1942, its leader, General Ira Eaker, held firm to his belief that bombing specific war-related targets was a more effective way of defeating Germany than area bombing.[19] At the end of the year the Americans were still committed to bombing by day, while the British implored them to join in night operations. The dispute was finally resolved early in 1943, with disastrous repercussions for German civilians.

In January of 1943, Churchill and Roosevelt met at Casablanca to plan Allied strategy for the upcoming year. Regarding the air offensive, they permitted the USAAF to continue daylight operations so that Germany could be bombed around-the-clock. Three general targets were marked for destruction: the Ruhr, large cities in Germany's interior, and Berlin. The Casablanca Directive for the Bomber Offensive described the aim of the air offensive as:

> The destruction and dislocation of the German military, industrial, and economic system, and the undermining of the morale of the German people to the point where their capacity for armed resistance is fatally weakened.20

From 1943 on, superior equipment and tactics helped the Allies in their attempt to achieve this goal. Improved navigation aides, aircraft performance, and organization of operations all contributed to the effectiveness of the aerial assault. The Germans, however, also benefitted from improved tactics and equipment. Radar equipped night fighters and conventional fighters by day tenaciously defended the Reich. Until its decline in late 1944, the Luftwaffe exacted a terrible toll on attacking bomber formations.

Shortly after the promulgation of the Casablanca Directive, the Battle of the Ruhr began. Between March and July of 1943 Essen, Duisburg, Dusseldorf, Dortmund, Cologne, and other towns in and around the Ruhr suffered repeated heavy attacks. Although the Battle of the Ruhr theore tically ended in July, the area remained a target for the rest of the war. In twenty-eight major raids, Essen was hit by 39,907 tons of bombs, which destroyed 1,319 acres of the city and killed 7,500 people. In eighteen heavy raids on Duisburg, 29,010 tons of bombs leveled 1424 acres, which comprised about 50% of the city. Dusseldorf suffered ten heavy attacks, and

more than 2,000 acres were destroyed; 5,863 citizens lost their lives in this city. Cologne experienced twenty-two major assaults; 20,000 died and 1,994 acres were bombed out.[22]

At the end of July, the Battle of the Ruhr gave way to the Battle of Hamburg. Between July 24 and August 3, four RAF night raids and three USAAF day raids poured 9,000 tons of bombs into the heart of Hamburg. During the course of these attacks, the many fires which broke out joined together into huge conflagerations, creating the phenomenon of fire-storms. In many sections of the city every combustible object, included buildings, people, and even the asphalt which paved the streets, caught fire. Roughly 6,200 acres suffered complete burn-out, and more than 60,000 people died.[23]

After the destruction of Hamburg and other cities in Germany's interior, the next target of the Allied air offensive was Berlin. The German capital was attacked throughout the war, but the actual Battle of Berlin began on November 18, 1943, and concluded near the end of March of the following year.[24] By March 24, sixteen heavy raids had unleashed 49,400 tons of bombs on the city, and 6,427 acres were destroyed. During the war 49,000 Berliners died as a result of air raids.[25] Like London, Berlin constitued a large sprawling target, and the 6,427 acres destroyed represented only 33% of the city. When the Battle of Berlin ended, the citizens of Germany received a brief respite, while the armed forces of the Allies prepared for the invasion of Europe. The invasion took place on June 6, 1944, and shortly thereafter the air offensive resumed.

The Allied invasion of Europe marked the beginning of the end for Germany. While the ground forces pushed eastward, the aerial

offensive switched into high gear. In August, 109,975 tons of bombs fell on Germany. In March of 1945, 133,599 tons of bombs were delivered.[26] By the war's end, 80% of Germany's towns with populations above 100,000 suffered more than 50% destruction.[27] Although many large-scale raids against German towns occurred during the final phase of the air offensive, perhaps the most famous, or infamous, took place between February 13-15, 1945, when Dresden was assaulted. Until then, Dresden had been attacked infrequently, largely because it contained little industry. Because its pre-war population of 600,000 swelled to over a million due to an influx of refugees, and its buildings were mostly constructed of wood, Dresden was ripe for disaster. When the Allies poured over 3,000 tons of bombs, 75% of them incendiaries, into the city, a firestorm resulted. Sixteen hundred acres burned, and over 35,000 people died.[28] Because Dresden was a beautiful medieval city, and it contained virtually no war industries, its destruction ranks as one of the great tragedies of the war. Less than three months after this raid, the war in Europe came to an end.

The general outline of the Allied air offensive against Germany given in the preceeding pages is by no means a comprehensive account of the air war above Europe. In addition to the main points discussed above, the RAF and the USAAF conducted numerous other attacks and operations, while the Luftwaffe countered with defensive actions of its own. Although the lack of detail may disappoint some readers, the purpose of outlining the air offensive against Germany was not to analyze the air offensive itself, but to give the reader a basic idea of the scale and intensity of the raids directed against the Third Reich. In World War II, approximately

1,350,000 tons of bombs fell on Germany. More than 500,000 people died due to bombing, and as many as 7,500,000 lost their homes.[29] Millions more suffered incalculable hardships. The combined Anglo-American air offensive against Germany not only caused tremendous physical damage, but also constituted the primary means by which the Allies were able to directly attack civilian morale.

D. The Impact of the Anglo-American Air Offensive on German Morale

During the Second World War, undermining German civilian morale was a primary goal of the Anglo-American strategic bombing offensive. A tremendous amount of energy, equipment and manpower was expended to undermine the willingness and capacity of the German people to wage war. For a number of reasons, the willingness of German civilians to wage war was affected to a much greater degree than was their capacity. Simply stated, the attitudes of German civilians towards the war effort were more affected by bombing than were their actions. Depressed morale manifested itself in fear, war weariness, and apathy. Lowered morale led to a loss of confidence in the political leadership, and in the possibility of military victory. However, the depressed morale of the civilian populace resulted in little overt anti-war activity. This limited activity was expressed in an increase in disruptive behavior, and more importantly, increased absenteeism among the work force. In addition, bombing appears to have been a stimulus to the conspirators who attempted to assassinate Hitler on July 20, 1944. Many factors played a part in keeping subversive behavior to a minimum, but preventive measures taken by the Nazi government were the most important. An intense propaganda campaign, the relief and evacuation of air-raid victims, and

punishment of those engaging in activity detrimental to the war effort all helped to prevent the development of depressed morale into subversive behavior.

Before analyzing the impact of strategic bombardment on civilian morale a few points regarding German morale merit discussion. Obviously, any discussion of German morale under bombing must take into account the change in morale throughout the course of the war. The United States Strategic Bombing Survey (USSBS) report on German morale suggests that a drastic decline in morale took place. The report states that approximately 32% of the German population began the war with high morale, while 51% had medium morale and 17% low morale. By the war's end, though, only 6% had high morale, only 16% medium morale, and 78% low morale.[30] In addition to suggesting that morale declined during the course of the war, these figures indicate that the war itself was not initially popular in Germany. William Shirer, an American journalist in Berlin at the outbreak of war, made the following observation in his diary on September 3, 1939:

> I was standing in the Wilhelmplatz when the loud-speakers announced that England had declared war on Germany... They (the people) just stood there. Stunned... In 1914, I believe, the excitement in Berlin on the first day of the World War was tremendous. Today, no excitement, no hurrahs, no cheering, no war fever, no war hysteria.[31]

The initial victories of the Nazi war machine helped to supplant this lack of enthusiasm with increased popular support for the war. However, once the Germans started to lose battles, the war became less popular. As the figures cited above suggest, morale declined significantly by the end of the war.

Another important point worth mentioning is that strategic bombing was not the only factor that affected morale. According to the survey, roughly 44% of the population blamed the decline in morale on military factors other than bombing, 36% on bombing, and the remaining 20% on non-military factors.[32] Of all the individual events of the war, however, only defeats on the Eastern Front had a greater impact on morale than bombing. An analysis of a series of German Intelligence reports covering the period of February 1942-October 1944 supports this contention. The reports indicated that losses on the Eastern Front had the greatest impact on morale, followed by the air war, U-boat warfare, and political, social and economic events inside Germany.[33]

Although the air offensive was only the second most important factor influencing morale, it did constitute the single greatest hardship borne by German civilians during the war. Nine out of ten civilians felt bombing was a greater burden than food shortages, the death of family members in the armed forces, and other wartime privations.[34] Two important conclu sions can be drawn from the facts and figures cited above. One is that strategic bombardment was one of the two most important factors that contributed to the decline of morale. The other is that it consituted the primary means by which the Allies were able to strike directly at the morale of the citizens of the Third Reich.

Strategic bombardment had a continually negative impact on the attitudes of Germans regarding the war effort. Some of the most notable manifestations of lowered morale were fear, war-weariness, and apathy. Because of the intensity of the air raids, it is not surprising that bombing generated widespread fear among its victims.

According to a post-war survey, about 38% of those subjected to bombing experienced extreme and lasting fear, 31% severe though temporary fright, and only 22% little or no fear.[35] The tremendous fear and mental strain caused by bombing is illustrated in the following account of a German air raid victim:

> I saw people killed by falling bricks and heard the screams of others dying in the fire. I dragged my best friend from a burning building and she died in my arms. I saw others who went stark raving mad. The shock to my nerves, as well as to my soul, can never be erased....[36]

An analysis of captured German mail also shows how fear often resulted from air raids. Even before the disastrous raid of February, 1945, a Dresden woman wrote a friend and said, "If only the planes would leave us alone.... Believe me, we are trembling. The fright from the last raid is still in our system. From sheer fright we do not often dare to go to town."[37] Fear of bombing was not restricted to civilians; high ranking government officials also experienced it. Albert Speer, Minister of Armaments and War Production, admitted that the massive raids on Hamburg "Put the fear of God into me."[38] Although Speer did not actually witness the attacks on this city, reports of the disaster convinced him that further destruction awaited Germany's industrial cities. Finally, because the air raids continually increased in both their scale and intensity, German civilians never adapted themselves to bombing.[39] One victim stated, "How could we get accustomed to them? One can't get used to the air raids.... I don't think anybody did. I was always afraid and shaking and nervous."[40]

In addition to causing fear, strategic bombardment also resulted in an increased war weariness within Germany. The main reason for

war weariness among civilians was the Allied air offensive. According to the USSBS report on German morale, almost 60% of the German populace became war weary from bombing.[41] It was not single attacks that induced war weariness but the repetitive nature of the aerial onslaught. As one bombing attack followed another, Germans gradually lost the desire to go on with the war. On February 4, 1944, Ruth Andreas-Friedrich, a wartime resident of Berlin, made the following entrance in her diary:

> Alarm, alarm, and still alarm. You hear nothing else, see nothing else, think nothing else. In the electric trains, on the streets, in the shops and busses, everywhere the same scraps of conversation: Completely bombed out... roof taken off, wall collapsed... windows out... doors out... bomb damage certificate... lost everything.[42]

As stated, the Allied air offensive led to a growing desire for peace within Germany. In fact, one-third of the population decided they no longer wished the war to continue even before the Allied invasion of Europe.[43] By May of 1945 more than seven out of every ten Germans no longer wanted the conflict to go on.[44] However, an important difference exists between not wanting to continue the war and being willing to accept unconditional surrender. A person can reach a point where continuing the war effort is no longer desirable yet be unwilling to agree to an unconditional surrender. For obvious reasons, the latter suggests an even lower state of morale than the former. A cross-sectional survey of the German population carried out by the USSBS after the war indicated that approximately 57% of the people were willing to accept unconditional surrender, while only 9% were unwilling. Of the remaining 34%, slightly less than half said they were indifferent, that they simply

did not care.[45]

The last statistic cited above points to still another psychological effect of bombing, apathy. Although this particular effect is hard to quantify, the USSBS report on German morale claims the air offensive resulted in an increased apathy towards the war among the populace.[46] Comments made to me by Professor Richard Exner, Chairman of the German Language Dept. at UC Santa Barbara support this contention. Dr. Exner grew up in Nazi Germany, and his hometown of Darmstadt suffered many severe air attacks. He felt air raid victims forgot about the course of the war and became preoccupied with their own personal survival. According to Dr. Exner, air raid victims were usually more concerned with finding food or shelter than how the war was progressing on some distant front. In January of 1944 Ruth Andreas-Friedrich made the same observation:

> The English radio is surprised at our readiness to rebuild; they interpret the feverish activity following each raid as an expression of National Socialist enthusiasm. Neither rubble shoveling nor pillow rescuing has anything to do with Nazi enthusiasm or resolution to endure. Nobody thinks of Hitler as he boards up the kitchen window. What everyone does think of is that you can't live in the cold, that before evening falls and the sirens wail you must have a corner where you can lay your head and stretch your legs - the way you choose to do it, and not the way someone else wants you to choose.[47]

While the abovementioned examples of lowered morale are important, a more significant effect of strategic bombardment was to undermine the confidence Germans had in their political leaders. The air raids, which increased in number and severity throughout the war, did much damage to the prestige of the Nazis. Because Nazi ideology was based on the superiority of Aryans, and Germanic

Aryans in particular, anything that contradicted this superiority reflected negatively on the Nazi leaders. Dr. Joseph Goebbels, the Nazi Minister of Propaganda, commented in his diary on March 10, 1943 that the continuous air raids showed "How very inferior we are to the English in the air."[48] Another reason the air raids were so damaging to the Nazis is that party leaders had promised that Germany would never be bombed. On July 22, 1939, in a boast about Luftwaffe superiority, Hermann Goering said, "If an enemy bomber ever reaches the Ruhr, my name is not Hermann Goering: you can call me Meier."[49] The German populace apparently took this boast seriously. When the first bombs fell on Berlin in August of 1940, William Shirer recorded the reactions of Berliners in his diary:

> The Berliners are stunned. They did not think it could ever happen. When the war began, Goering promised them it couldn't... They believed him. Their disillusionment today therefore is all the greater... You have to see their faces to measure it.50

As the war progressed, the reaction of Berliners, and Germans in general, turned from shock to anger. In air raid shelters around the Reich, Germans cursed their leaders. When asked after the war how the air raids influenced people's perception of political leaders, a resident of Detmold, Germany replied, "The people couldn't say much about how they felt, but in the bunkers they cried out against the party leaders."[51] According to the USSBS report on German morale, Germans repeatedly voiced resentment towards their leaders during air raids. Comments such as "I felt we have only the Nazis to thank for this", and "In the bunker, people cursed the Fuehrer", were not uncommon.[52] After a heavy raid in 1944, Andreas-Friedrich noted in her diary how citizens showed their resentment

towards the regime through their lack of cooperation with S.S. Salvage squadrons sent out to help clear rubble.[53]

These grumblings did not go unnoticed by the Nazis. As early as April 11, 1943, Goebbels noted in his diary that the Government was being criticized for the air raids. By May, criticism increased to the point where Goebbels took alarm:

> A lot of criticism is contained in the letters reaching us. Morale among the masses is so low as to be serious.... The man in the street no longer sees any way out.... As a result, there is criticism of the leaders, in some cases even of the Fuehrer himself.[54]

A 1944 German Intelligence report stated that enemy air superiority was a primary cause of criticism and states, "Criticism is becoming more and more sharp and merciless, even against leaders..."[55]

Aside from Goebbels, who constantly mentioned the damaging effect air raids had on morale in his diary, Nazi leaders took little notice of the problem. Hitler simply ignored the effect air raids had on the populace. He avoided discussion of the subject, refused to personally decorate heroic civil defense workers, and drew the blinds in his car shut when driving through bomb-damaged areas. Goering, however, became the chief target of criticism. According to the USSBS report on German morale, most Germans blamed the Luftwaffe leader for their suffering. They referred to him as "The greatest criminal of all", since he was ultimately responsible for air defense.[56] Regardless of who the criticism was actually aimed at, it reflected popular dissatisfaction with the leaders of the Nazi party. A post-war survey of the German population supports this contention. According to the survey, roughly 60% felt that their political leadership during the war was incompetent.[57]

Because the Germans were frightened, tired of suffering, and given to a growing distrust of their political leaders, it is not surprising that they adopted a defeatist attitude towards the war. Bombing was less important than other military factors in producing defeatism, but the severity of the raids and the waves of bombers passing over the Reich helped convince the civilians of Allied supremacy. Approximately 48% of the people interviewed by the USSBS blamed military reverses for causing them to believe the war was lost, while 43% said they lost hope in German victory when the air raids continued unabated.[58] By July of 1944, losses on the Eastern Front, the initial success of the Allied invasion, and the growing air offensive had convinced over three-fourths of the population that the war was lost. By 1945, 92% no longer believed in the possibility of German victory.[59]

As stated, the severity of and the destruction caused by air raids helped to convince the Germans that their country could not win the war. On July 29, 1943, at a Central Planning meeting, Albert Speer stated:

> "If the air raids continue on the present scale, within three months we shall be relieved of a number of questions we are presently discussing. We should simply be coasting downhill, relatively smoothly and swiftly.... We might just as well hold the final meeting of Central Planning."[60]

A series of German Intelligence reports covering the period of February 1942 - October 1944 echo Speer's doubts. Several mentions are made of how destruction resulting from air raids caused morale to falter. One report remarked that faith in final victory was badly shaken, largely because of the circulation of a rumour which claimed that unless Germany surrendered, the Allies would raze forty cities to the ground.[61]

Allied air superiority over Germany was a leading cause of defeatism within the Third Reich. Although German day and night fighters shot down a considerable number of planes, it quickly became apparent that the Luftwaffe could not prevent the Allies from bombing the Reich at will. As the war progressed, German Intelligence reports on morale indicated that enemy air supremacy became a prominent topic of discussion.[62] The damage to morale caused by the Luftwaffe's inability to defend Germany was not lost on Goebbels. His diary repeatedly mentions Allied air supremacy as a cause for worry; by March of 1943 he felt German civilians were completely at the mercy of the Allies.[63] On May 25, 1943 he wrote that an attack on Dortmund had damaged morale, and stated, "People in the west are beginning to lose courage. Hell like that is hard to bear for long... especially since the inhabitants see no chance for improvement."[64]

The evidence cited above strongly suggests that strategic bombing negatively affected the attitudes of Germans regarding the war. This depressed psychological morale, however, led only to a limited amount of activity detrimental to the war effort. Many Germans were dissatisfied with the course the war took, but few of them let their feelings influence their behavior. German Intelligence reports on civilian morale indicate that the Nazis were aware of this phenomenon. One report stated: "In spite of all their worries and many dissatisfactions, the behavior of the people is good - and this is what really matters, not their attitude, which is subject to outside influences."[65] The question of why behavior regarding the war remained satisfactory while attitudes became poorer will be addressed later on in the paper. Nevertheless, strategic bombardment

appears to have stimulated only a limited variety of subversive activity, such as certain types of illegal and disruptive behavior, abseentism among workers, and possibly even the actions of organized opposition to the government. However, this activity had only a minor impact on the war effort and for the most part never seriously threatened the regime.

Captured documents indicate that in many instances bombing gave rise to behavior disruptive to the war effort. In particular, crimes such as looting and black marketeering tended to increase after air raids. The impact of bombing on criminal behavior is described in the following statement of the Prosecuting Attorney for the city of Hamburg:

> The growing number of criminal acts was caused to a very large degree by the air attacks.... Such destruction not only provides ample opportunity for criminal acts, but also lowers the moral code and changes the social position of the victims of attack. One who experiences the loss of all and everything for which he has worked and slaved for many years, perhaps all his life, and sees bursting into flames all his dreams of home and future, becomes indifferent to the law and order of government regulations. This is shown by the increased criminality since 1943.[66]

Looting was one type of crime that seemed to increase as a result of air raids. There can be little doubt that the damage to previously secure homes and stores caused by bombing facilitated looting. An analysis of crime statistics in the cites of Hamburg, Bremen, Luebeck, and Leipzig suggests that looting increased as the air war gained momentum. In 1941, looting and theft constituted 22% of all crimes committed in Hamburg, and 40% of all those committed in Bremen. In 1943, 33% of all crimes in Hamburg and 56% of all crimes in Bremen came under the classification of looting or

theft. In 1945, these figures rose to 35% and 79%, respectively.[67] Luebeck and Leipzig also experienced an increase in the incidence of looting. In and of itself looting did very little to hinder the war effort. However, its occurrence does reflect the demoralization of the populace and breakdown in social order which often accompanied aerial assault.

Another type of criminal activity associated with air raids was black marketeering. Commodities for civilian use became very scarce during the war, and a strict system of rationing and price control was adopted. In general, food was the chief commodity, although clothing, cigarettes, and a variety of luxury goods were also widely traded. Barter as a means of exchange was widespread, and affected the national economy by limiting the circulation of money. A report from a price control agency in Cologne in 1944 describes the scope and impact of black marketeering as follows:

> The situation in the district of Cologne has changed drastically because of aerial attacks.... It must unfortunately be stated that money as a medium of exchange is limited to a smaller and smaller sector of the economy. Goods which can be spared and which previously were sold for money are increasingly used for barter only, particularly for food consumption articles.... In the Cologne district, where the appearance of enemy planes shows the population the way of all flesh almost every night, an exact legal price determination does not play the role it used to.[68]

Black market activity was widespread in Bremen, Dortmund, Kassel, Hamburg and many other heavily bombed cities.[69] Through the destruction of many essential commodities such as food and clothing, bombing reduced their supply and thus fostered black marketeering. Black marketeering took money out of circulation, and caused inflation in the German economy. Therefore, by stimulating black

market activity, strategic bombardment hindered the war effort.

In addition to stimulating looting and black marketeering, the bombing offensive carried out against Germany appears to have affected the rate of absenteeism among German workers. A number of studies of the incidence of worker absence in factories conducted by the USSBS indicates that a 15% rate of absence prior to the start of the bombing offensive was normal.[70] Although this figure seems high, a survey of eleven British war factories before the Blitz placed absenteeism at about 11%.[71] As the war progressed and bombing became more intense, the rate of absenteeism among German workers increased. By the beginning of 1944, heavily bombed factories in German cities experienced as much as 10 to 15% increase in the average number of workers missing work per day.[72] In the last six to eight months of the war, when the bombing crescendo reached its height and the transportation and communication systems within the country collapsed, absenteeism rates rose still higher. The USSBS estimated that by 1945, the rate of absence among workers had risen to as high as 30% of all scheduled hours.[73]

The industrial and morale reports collected by the USSBS strongly suggest that bombing was the most important factor in bringing about the increased rate of absence among German workers. In addition to frightening many, making them war weary and less confident in the possibility of victory, bombing made transportation to and from the workplace more difficult. As bombing created new excuses to take time off from work, an increasingly larger number of citizens took advantage of them.

One fact supporting the contention that bombing was a primary cause of the rise in absenteeism is that rates of absence were

higher in heavily bombed towns than they were in lightly bombed towns or in towns which were not bombed at all. A survey of nine industrial plants in Luebeck, a city which was hit by 500 tons of bombs during the war, indicates that absenteeism increased from 8% in 1940 to 12% in 1944, a gain of only 4%.[74] Freiburg, which was hit by more than 2,200 tons of bombs, experienced a much higher rate of absence. In this town the absence rate went as high as 25%, reaching this peak figure after the heavy raids of November, 1944.[75] An intelligence report published in Berlin in September of 1944 stated that the national average of man hours lost per month for the second quarter of 1944 was 14.7% of all scheduled hours.[76] In such heavily bombed cities as Berlin, Hamburg, Cologne, and Essen, the averages were much higher. In this period Berlin averaged a 22.2% loss of all scheduled man-hours, while Hamburg averaged 19.8%, Cologne 18.2%, and Essen 17.2%.[77] A survey of attendance habits of German workers conducted by the USSBS indicates that absence rates in heavily bombed cities were higher than those in moderately bombed cities, and that the rates in moderately bombed cities exceeded those in lightly bombed cities.[78]

All these facts and figures strongly suggest that bombing caused the rate of absenteeism among German workers to increase dramatically by the end of the war. Another way in which bombing interfered with the Nazi war effort was by negatively affecting worker productivity. Allied air raids contributed to decreased productivity by making fear, nervousness, and fatigue more prevalent among the working population. Many German officials revealed after the war that the shock of aerial bombardment and the fatigue which resulted from continuous air alarms caused a loss

of efficiency of the work force. In the course of interviews conducted by the USSBS, German authorities stated that a gradual decrease in worker efficiency took place, which by the end of the war, amounted to as much as 20% loss in productivity.[79] In Hamburg, Cologne, Bremen, Freiburg and other heavily bombed towns, the effect of bombing on productivity appears to have been significant.[80] The USSBS report on German morale summed up the impact strategic bombing exerted on productivity by stating:

> Increasing losses in man hour productivity were reported in lightly bombed as well as heavily bombed areas. The over-all production loss due to this factor was probably not less than ten percent, the greater part of which is attributed by our informants to morale factors. For this, bombing was largely responsible.[81]

Based on the information available, it appears certain that the air offensive against Germany resulted in an increase in socially disruptive behavior and a decrease in worker productivity within the Third Reich. By themselves, though, these factors did not disrupt the Nazi war effort to a significant degree. On the home front, the main threat to the Nazis was not looting, black marketeering, or absence from work in factories but organized opposition to the regime. The other factors may have affected industrial output, or threatened law and order, but only organized resistance within Germany came close to removing Adolf Hitler from power before the war ended. Throughout the war, a number of resistance groups operated within Germany, but only one group came close to assassinating Hitler and successfully seizing control of the government. On July 20, 1944, a bomb placed next to the Fuehrer in a headquarters conference room exploded, killing several people.

The conspirators responsible for the blast, believing that Hitler was dead, seized the war ministry in Berlin. Somehow, though, Hitler survived the attack, and the coup was quickly crushed. Operation Valkyrie, as the assassination was code named, ended in failure; the conspirators were quickly rounded up and more than 5000 people were executed for complicity in the plot.

The principal leaders of the conspiracy were Carl Goerdeler and Ludwig Beck. Goerdeler was the former mayor of Leipzig and Beck was the Chief of the Army General staff until 1939. Both men resigned their posts in opposition to the Nazis before the war began. As the war progressed and the prospects for German victory grew dimmer, Goerdeler and Beck convinced a growing number of army officers, politicians and bureaucrats that the only way to save the country from complete destruction was to get rid of Hitler. In 1943 the plot to kill the Fuehrer, seize control of the government, and end the war was born. After several aborted assassination attempts, Claus von Stauffenberg, another leading conspirator, succeeded in placing a briefcase containing a bomb next to Hitler during a military conference, but the Fuehrer miraculously survived the explosion.

The conspirators were driven to attempt to depose Hitler for a variety of complex reasons. While the air offensive was not the primary motivating force behind the attempted coup, there is some evidence that suggests that the bombing of Germany did act as a stimulus for some of the conspirators. After visiting some bombed out areas of Western Germany, Goerdeler wrote a letter to Field Marshall Guenther von Kluge in July of 1943. Stating that "The work of 1000 years is nothing but rubble", Goerdeler beseeched the

vacillating general to join the conspiracy.[82] Dr. Carl Stroelin, the Oberbuergermeister of Stuttgart, joined the conspiracy after the destruction of his city by Allied bombers caused him to turn against the Nazis.[83] Stroelin was instrumental in convincing General Irwin Rommel to join the plot to overthrow Hitler.[84] A prominent labor union leader in Germany stated that the heavy Allied bombing of the capital during the Battle of Berlin prompted the conspirators to speed up their planning and execution of the coup.[85] According to General Hans Speidel, one of the few members of the plot to survive the war, a primary goal of the conspirators was to end the war in the west so that an immediate suspension of the bombing of Germany could take place.[86] Unfortunately for the conspirators, and the rest of the country, the plot failed, and Germany was bombed for another nine months.

Although looting, black marketeering, the increased rate of absence among German workers, their lowered productivity, and organized opposition to the regime all constituted behavior detrimental to the war effort, these factors never brought the Nazi war machine to a halt. The loss in worker productivity due to bombing was offset by a variety of measures designed to increase arms production. The forced conscription of millions of foreign laborers for work in German war factories, the increase in the number of hours in the work week, the diversion of resources from the production of consumer goods to the production of war-related materials, and the decentralization of production facilities all helped the Germans to greatly increase their industrial output each year until the last nine months of the war. In fact, German arms production figures increased continually until the middle of

1944, when the over-all war situation brought about the collapse of the economy. And although looting, black marketeering and organized resistance to the Nazis occurred, these practices were limited to a small sector of the population. Throughout the war, most Germans obeyed the laws and regulations dictated to them, carried out their war-related responsibilities, and went along with the decisions made by the country's leaders. According to the USSBS report on German morale, the limited amount of subversive activity within Germany can in part be blamed on the traditionally obedient and industrious nature of the German people. The stern disciplinary standards of the Germans, their subservience to authority, unquestioning acceptance of the commands of their superiors, and intense nationalism were all cited as reasons why the majority of the population never engaged in activity detrimental to the war effort.[86]

In the preceeding pages it has been demonstrated that strategic bombing severely depressed the morale of many Germans regarding the war effort. It has also been demonstrated that this lowered morale resulted in only a limited amount of subversive behavior. The question of why the behavior of the civilian population remained satisfactory while their attitudes did not cannot be explained by the superficial cultural analysis offered in the preceeding paragraph. The limited amount of subversion within Germany during the Second World War was not simply an expression of national culture but was a result of specific steps taken by the Nazi Government. Through propaganda, the relief and evacuation of air raid victims, and police control, the transference of depressed morale into subversive behavior was kept in check.

Propaganda was one important tool used by the Nazis to control the population. Regarding the air war, the initial goal of Nazi propaganda was to downplay the effects of the air raids while at the same time stress the heroic nature of the German people. A Party Chancellory directive on morale given early in the war stated:

> Reports of air raids, particularly of heavy ones, are to stress not the damage and devastation inflicted but the brave demeanor of the people and auxiliary forces employed. Speakers, too, must be instructed that when dealing with the subject in public meetings they must emphasize the positive aspects...[87]

In addition, the twin theme of barbarism and terrorism on the part of the Allies became a Nazi charge. They claimed that the goal of the Anglo-American air offensive was not to damage industry, but to destroy cultural momuments and terrorize civilians. By depicting their enemies as barbarians, the Nazis sought to instill the fear of defeat into the hearts of German citizens.

As the intensity of the air war increased, the focus of Nazi propaganda in regards to it shifted. By the beginning of 1943, Goebbels felt it necessary to prepare the German populace for the struggles ahead. In Berlin on February 18, 1943, the Minister of Propaganda delivered his famous speech on "total war." Goebbels basically told the German people that hard times were ahead, and that they were expected "to shoulder the heavy burdens of war."[88] The propagandists tried to offset this gloomy prediction by promising to retaliate against the Allies. Rumors about "Secret Weapons" were spread during the summer of 1943, and any air attack against England, received much publicity.[89] When the V-weapons became operational in June of 1944, secret weapon propaganda

increased. From June to August almost half of the propaganda regarding the air war centered on the effects of the V-1.[90] When the first V-2 rockets were launched in September, a similar propaganda blitz ensued.[91] The secret weapons propaganda achieved substantial results. A post-war survey revealed that over 70% of the German people believed, at least to some degree in the effectiveness of the V-weapons.[92]

By the beginning of 1945, however, the reality of the war situation stood in stark contrast to the picture painted by Nazi propagandists. On the Eastern Front the Russians were driving on Berlin, while in the west the Allies did the same. In the air, the shattered Luftwaffe no longer offered any resistance to the bomber offensive. The V-weapons had obviously failed to turn the tide. Accordingly, fewer and fewer Germans believed the information given to them by their leaders in the last months of the war.[93] Up until that point, however, propaganda had been an effective tool utilized by the Nazis in their attempt to maintain civilian morale.[94]

Another method used by Germany's leaders to counter the damaging effects of bombing was providing post-raid relief for victims. Extra food supplies, temporary housing and shelter, and financial compensation were made available to those who suffered as a result of aerial attack. When it became impossible to provide temporary shelter for air raid victims, a policy of evacuating certain elements of the population from heavily bombed areas took effect. Goebbels, always sensitive to the mood of the public, realized the importance of air raid relief. After viewing damage in some heavily bombed cities, he wrote in his diary on July 25,

1943 that, "One cannot neglect the people; in the last analysis they are the very kernal of our war effort."[95] One air raid relief measure was the supply of emergency food rations to bombed out areas. In many instances a heavy raid left a substantial portion of a city's population in a position where obtaining food was extremely difficult. Food rationing became more severe as the war progressed, so the average city dweller was not in a position to store away food in case of a dire emergency. This fact increased the importance of quickly delivering food to areas destroyed by bombing. Throughout most of the war food was adequately delivered to areas where it was needed, but the collapse of the transportation network within Germany by early-1945 seriously disrupted the program. Therefore, it was only during the last few weeks of the war that the minimum rations allotted to civilians fell below the subsistance level of 1800 calories a day.[96]

Finding temporary housing for air raid victims proved more difficult than supplying them with food. The problem of sheltering the homeless was initially met by billeting them in air raid shelters and relief stations until damage was repaired. In Essen, Kassel, and other heavily bombed towns many citizens were housed in air raid shelters for extended periods of time.[97] In less heavily bombed areas, relief stations served as temporary shelter until housing could be repaired. By mid-1943, however, temporary measures proved inadequate. From that point on, an average of 250,000 people were being bombed out of their homes a month, and a more permanent solution was required.[98] A policy of evacuating civilians from heavily bombed cities was instituted, and this measure will be discussed shortly.

Financial compensation for damages resulting from bombing constituted another means by which the government attempted to bolster morale. A policy of financial compensation for victims of air raids was introduced in late 1940, and remained in effect throughout the war. During the latter stages of the war it became impossible to compensate the ever increasing number of victims, but earlier on many indemnities were granted. A post-war survey of Germans who suffered damage to property as a result of bombing indicated that 43% of those who filed claims received at least partial compensation.[99] Although the majority of those who received indemnities were granted less than half of what they requested, generous compensation was not uncommon earlier on in the war. In Cologne, for example, a local official admitted to granting what was recognized as an excessive claim because he felt it wiser to pay money than to alienate the applicant.[100]

While the previously mentioned programs were significant, a more important step taken to counter the damage to morale caused by bombing was the evacuation of citizens not essential to the war effort from heavily bombed areas. Unorganized evacuations began as the air war intensified, but the severe housing shortage that developed by 1943 dictated that a more methodical approach be taken. Between April and October of 1943, an attempt was made by a variety of governmental departments to standardize evacuation procedures.[101] To facilitiate a controlled movement of the population, a system of sending and receiving areas was set up. As much as possible, people were evacuated into nearby areas within their own region. An intensive propaganda campaign instructed both hosts and evacuees about the behavior expected of them. In spite of these precautions,

though, various problems arose. In an attempt to make the system more flexible, as well as to relieve the strain on the state, individuals were encouraged to make their own arrangements with friends or relatives, and confusion often resulted. Other problems associated with evacuation were keeping families together, coordinating the transport of civilians from one area to another, and preventing social differences between hosts and evacuees from erupting into conflict. For the most part, the bureaucracies responsible for overseeing the evacuation overcame these problems. By the last months of the war, however, orderly evacuation became impossible. The destruction of the transport system and the growing number of attacks against previously unbombed reception areas turned the organized evaucation of civilians into a chaotic affair. Nevertheless, before this breakdown occurred, more than five million people were successfully evacuated from heavily bombed areas, with more than four-fifths of all evacuations taking place after June of 1943.[102]

Based on the information available, there is no way to quantify exactly how successful the air raid relief measures were in offsetting the decline in morale caused by bombing. However, the degree to which German civilians were satisified with the steps taken by the government to alleviate their suffering offers some indication of the success of the programs themselves. In its report on German morale, the USSBS asked a cross-section of air-raid victims about the effectiveness of the relief services, and whether they thought everything possible was done to alleviate suffering. Approximately 58% expressed clear satisfaction, feeling that everything possible was done; only 17% unequivocally stated

that the services were unsatisfactory; and the remaining 25% fell somewhere in between.[103] These figures indicate that air raid relief was not a panacea for all the privations caused by bombing, but that it did have a positive influence on civilian morale.

Propaganda and air-raid relief were two means by which the Nazis countered declining morale within Germany. A third, and perhaps more effective, method of dissuading a frightened, war weary, or dissatisfied population from engaging in activity detrimental to the war effort was fear and coercion. In the Nazi vocabulary treason possessed an extremely flexible definition, and any action that either directly or indirectly threatened the regime or its goals was severely punished. Labor violations, socially disruptive conduct, and organized opposition all came under the heading of subversion, and were dealt with accordingly. The importance of terror tactics in preventing subversive activity is illustrated in the following excerpt from a German Intelligence report filed in Berlin in March of 1944:

> The behavior of the population can be called unobjectionable, the reasons being partly the comparatively widespread fear of defeat, and partly kind-heartedness, which shows itself in the readiness with which the inhabitants of the western part of the region received evacuees from Augsburg. Principly, however, the outwardly good conduct can be attributed to the authoritative pressure which leaves no room for any negative activity. It is the fear of punishment which precludes expressions against the state leadership.[104]

The man in charge of applying this "authoritative pressure" was Germany's Minister of the Interior, Heinrich Himmler. Described by Goebbels as being "tough, stern, and sadistic", Himmler preserved the security of the state through his control of a wide variety of law enforcement agencies.[105] The Gestapo, the Elite Guards of the S.S., and the traditional police forces within Germany all came

under his jurisdiction. In addition, a large body of informers made up of Nazi Party members and private citizens provided the security services with information on the activities of their fellow countrymen. This elaborate control apparatus produced a climate of fear that discouraged subversive activity. When asked by the USSBS why she did not often miss work during the war, a 21-year-old Bremen woman replied:

> Because such a strict control was exercised. One time I stayed home from work because I was actually ill. The police sent a person to check and they were not satisfied until they forced me to get up and go to the doctor to have my story verified.106

While it was obviously impossible for the police to investigate all individuals this thoroughly, the fear of such an investigation no doubt deterred a good many people from shirking their responsibilities.

Fear was therefore an important tool used by the Nazis in their battle against subversion. When fear failed to keep the population in line, however, the authorities had more direct methods. If a person committed a crime against the state, or was suspected of committing such a crime, arrest and punishment was most often the result. Throughout the war, many Germans were arrested for political crimes and labor violations. As the war progressed, an increasing number of those convicted of these types of offenses paid with their lives. This is not to suggest that the average labor violation carried with it a death sentence, but only that punishment for violations of the law became more severe as the fortunes of war turned against Germany. Although Gestapo arrest statistics are unavailable for the entire war period, an examination of arrest statistics for the first six months of 1944

gives some indication as to the level of police activity within Germany. Between January and June of 1944, 19,000 Germans were arrested for political offenses, and 13,000 more were arrested for labor violations.[107] After Operation Valkyrie, the Gestapo arrested 7000 suspected conspirators.[108] Only through a highly unusual legal provision was Albert Speer able to prevent the arrest of three Armaments Ministry officials by the Gestapo for "defeatist conversations." Upon becoming Minister of Armaments and Production, Speer had established the principle that none of his subordinates could be indicted without his approval. When the Gestapo approached him to obtain his authorization to arrest the officials, he declined, stating that the nature of their work compelled them to speak candidly about the war situation.[109] It was shown earlier that Speer himself was frank in his appraisals of the effects on air raids on the war effort.

Related to the rise in the number of arrests which occurred as the war progressed was a rise in the number of executions. As the Allies pounded Germany from the east, west, and above, the value of human life fell within the Third Reich. The number of death sentences carried out rose accordingly. In 1939, 99 people convicted for crimes against the State were condemned to death; in 1943, 182 people wre executed for looting alone.[110] On August 23, 1944, the Minister of Justice stated in an official announcement, "In accordance with the commission given to me by the Fuehrer to administer justice, to proceed in time of war by the severest means against traitors, saboteurs, and other undesirable elements... the number of death sentences has increased continually since the outbreak of war."[111] In addition, the number of people sentenced

to concentration camps increased, and more and more this sentence meant death as well. Although there is no way of estimating the number of people who were discouraged from committing acts of subversion because of Nazi terror tactics, in all probability the number was significant. The USSBS report on German mroale repeatedly mentions fear of police action and punishment as an explanation for the limited amount of subversive activity that occurred within Germany. Were it not for the actions taken by the leaders of the Third Reich to combat subversion, the effects of strategic bombardment on the behavior of the German people would no doubt have been greater.

During the course of the Second World War, more than a million tons of bombs fell on German soil. Hundreds of thousands of people were killed, millions more were injured, and the damage to property was almost beyond calculation. In additon to killing people and destroying property, the strategic bombing campaign also had a significant impact on civilian morale. Fear, war weariness, and apathy all resulted from the attempt by the Allies to bomb Germany into submission. Bombing also caused the people to lose confidence in their political leadership, as well as in the possibility of a military victory in the war. However, the depressed morale of the German populace did not in and of itself lead to the defeat of Germany. The vast majority of the German population obeyed the laws of the Third Reich, contributed as much as was possible to the war effort, and did not challenge the Nazi government. As previously demonstrated, certain steps taken by the Nazis were largely responsible for limiting the amount of subversive behavior within Germany. Therefore, while the proponents of the Allied

strategic bombing campaign may have been correct in assuming that the pressure of continuous bombing would lead to the collapse of civilian morale and the destruction of the German War machine, they failed to realize that actions taken by the Nazi leaders might constitute an effective deterrent to just such a collapse.

Footnotes to Chapter 1

1. Editors of Time-Life, The Air War in Europe, (New Jersey, 1981), p. 24
2. R. J. Overy, The Air War 1939-1945, (London, 1980, p. 12
3. This was called "Blitzkrieg" meaning "lightning war".
4. Webster's Third New International Dictionary, (Massachusetts, 1976), p. 963
5. USSBS, The Effects of Strategic Bombardment on German Morale, (Washington, D.C., 1947), p. iv
6. Larry Bidinian, The Combined Allied Bombing Offensive Against the German Civilian 1942-1945, (Kansas, 1976), p. 67
7. H.G. Wells, The War in the Air, (London, 1909), p. 143
8. Roger Freemen, U.S. Strategic Bomber, (London, 1973), p. 9
9. Hans Rumpf, The Bombing of Germany, (New York, 1961), p. 17
10. Ibid., p. 18
11. Ibid., pp. 18-19
12. Ibid., p. 19
13. Editors of Time-Life, The Air War in Europe, p. 25
14. Edward Jablonski, Terror From the Sky, (New York, 1971), p. 6
15. Editors of Time-Life, The Air War in Europe, p. 25
16. Sir Charles Webster and Noble Frankland, The Strategic Air Offensive Against Germany 1939-1945, V. I, (London, 1961) p. 55
17. Editors of Time-Life, The Air War in Europe, p. 82
18. USSBS, German Morale, p. iii
19. Allan Michie, The Air War Against Germany, (New York, 1943), p. 1
20. Noble and Frankland, V. I, p. 476
21. Bidinian, p. 105
22. Ibid., p. 129

Footnotes to Chapter II

1. Editors of Time-Life, The Battle of Britain, (New Jersey, 1977), p. 119
2. Angus Calder, The People's War, (New York, 1969), p. 188
3. John Killen, The Luftwaffe, A History, (London, 1967), p. 149
4. The Luftwaffe lost 199 bombers between September 7-15, 1940.
5. Night fighting technology was not improved until later on in the war.
6. Cajus Bekker, Luftwaffe War Diaries, (New York, 1968), p. 181
7. Periods of full moon came to be called Bomber's Moon.
8. E. H. Tantum and W. Hoffschmidt, Rise and Fall of the German Air Force, (Conneticut, 1965), p. 63
9. Ibid., p. 94
10. Ibid., p. 95
11. Matthew Cooper, The German Air Force 1933-1945, (London, 1981), p. 170
12. Ibid.
13. British Information Services, The Front Line, (New York, 1943), p. 87
14. Richard Collier, The City That Would Not Die, (New York, 1959), pp. 257-58
15. Cooper, pp. 173-74
16. The Luftwaffe did conduct an offensive against Atlantic shipping during this period.
17. Tantum and Hoffschmidt, p. 185
18. Cooper, p. 191
19. Ibid., p. 193
20. Ibid., p. 339
21. Basil Collier, The Battle of the V-Weapons, (Yorkshire, 1964) pp. 180-82
22. Cooper, p. 339

Footnotes to Chapter II Cont'd.

23. Dwight D. Eisenhower, The Crusade In Europe, (New York, 1948), pp. 34-35

24. Rumpf, p. 246

25. British Information Services, The Front Line, p. 3

26. Ian McLaine, Ministry of Morale, (London, 1979), p. 109

27. Dana Forbes-Robinson and Roger Strauss, editors, War Letters from London, (New York, 1941), p. 111

28. McLaine, p. 109

29. Winston Churchill, Their Finest Hour, (Boston, 1949), p. 372

30. Vera Brittain, England's Hour, (New York, 1941), pp. 141-43

31. Calder, p. 18

32. Forbes-Robinson and Strauss, p. 175

33. London Times, November 29, 1940, p. 5

34. Ibid., November 20, 1940, p. 7

35. Forbes-Robinson and Strauss, p. 203

36. Ibid., p. 206

37. McLaine, p. 109

38. Ibid., p. 108

39. Leonard Mosley, Backs to the Wall, (London, 1971), p. 170

40. McLaine, p. 120

41. Calder, pp. 223 and 357

42. Ibid., p. 169

43. Ibid., p. 175

44. Ibid., p. 205

45. Frederick Smith, Coventry, Six Hundred Years of Municipal History, (London, 1945), p. 194

46. McLaine, p. 123

Footnotes to Chapter II Cont'd.

47. "Hun" is a derogatory term for a German.

48. Calder, p. 219

49. McLaine, p. 116

50. The Manchester Guardian, November 21, 1940, p. 10

51. McLaine, p. 114

52. Ibid., p. 110

53. Calder, pp. 164-65

54. Ibid., pp. 191-92

55. McLaine, p. 168

56. Ibid., p. 116

57. Ibid., p. 119, Calder, p. 204

58. Calder, p. 220

59. Ibid., p. 218

60. Ibid.

61. Mosely, p. 174

62. Ibid., p. 176

63. Ibid.

64. Editors of Time-Life, Battle of Britain, p. 146

65. Calder, p. 191

66. Ibid., p. 189

67. Noble and Frankland, V. 4, p. 457

68. Churchill, p. 366

Footnotes to Chapter III

1. Noble and Frankland, V. 4, p. 428
2. Editors of Time-Life, The Air War in Europe, p. 31
3. Noble and Frankland, V. 4, p. 455
4. Ibid.
5. Allen Andrews, The Air Marshalls, (New York, 1970), p. 147
6. Noble and Frankland, V. 2, p. 299
7. Ibid., p. 178 and 247
8. Editors of Time-Life, The Air War in Europe, p. 36
9. Ibid., p. 54
10. Ibid.
11. Arthur Harris, Bomber Offensive, (New York, 1947), p. 87
12. Ibid., p. 76
13. "Gee" stood for Grid System Navigation
14. Harris, p. 105
15. Noble and Frankland, V. 1, pp. 392-393
16. Rumpf, p. 52
17. Rumpf, p. 56, Noble and Frankland, V. 1, p. 407
18. Noble and Frankland, V. 4, p. 456
19. Ibid.
20. Rumpf, p. 229
21. Throughout 1943, the RAF carried out most of the operations. It was not until late in that year that the Americans had built up a large enough bombing force to carry their share of the load.
22. Noble and Frankland, V. 4, pp. 484-485, Rumpf, pp. 159-160
23. Rumpf, p. 79
24. Ibid., p. 114

25. Noble and Frankland, V. 4, p. 484
26. Ibid., p. 456
27. Rumpf, p. 146
28. Editors of Time-Life, The Air War in Europe, pp. 190-191
29. Bidinian, pp. 11 and 32
30. USSBS, German Morale, p. 13
31. William Shirer, Berlin Diary, (New York, 1941), pp. 200-201
32. USSBS, German Morale, p. 13
33. Ibid., p. 43
34. Ibid., p. 14
35. Ibid.
36. Ibid.
37. Ibid.
38. Alber Speer, Inside the Third Reich, (New York, 1970), p. 284
39. USSBS, German Morale, p. 20
40. Ibid.
41. Ibid.
42. Ruth Andreas-Friedrich, Berlin Underground, (New York, 1947), P. 115
43. USSBS, German Morale, p. 15
44. Ibid.
45. Ibid., p. 16
46. Ibid., p. 1
47. Andreas-Friedrich, p. 114
48. Louis Lochner, The Goebbels Diaries, (New York, 1948), p. 291
49. William Shirer, The Rise and Fall of the Third Reich, (New York, 1960), p. 517

Footnotes to Chapter III Cont'd.

50. Ibid., p. 778
51. USSBS, German Morale, p. 115
52. Ibid., p. 18
53. Andreas-Friedrich, p. 140
54. Lochner, p. 380
55. USSBS, German Morale, p. 50
56. Ibid., p. 52
57. Ibid., p. 12
58. Ibid., p. 16
59. Ibid.
60. Speer, p. 285
61. USSBS, German Morale, p. 47
62. Ibid., p. 50
63. Lochner, p. 275
64. Ibid., p. 393
65. USSBS, German Morale, p. 43
66. Ibid., p. 91
67. Ibid., p. 88
68. Ibid., p. 90
69. Ibid., p. 92
70. Bidinian, p. 85
71. Ibid., p. 86
72. Ibid., p. 85
73. Ibid., p. 86
74. USSBS, German Morale, p. 58
75. Ibid., p. 57

Footnotes to Chapter III Cont'd.

76. Ibid., p. 59
77. Ibid.
78. Ibid., p. 60
79. USSBS, Area Studies Division Report, (Washington, D.C., 1947), p. 11
80. USSBS, German Morale, p. 61
81. Ibid., p. 62
82. Shirer, Rise and Fall, p. 1013
83. Ibid., p. 1031
84. Ibid.
85. Ibid., p. 1032
86. USSBS, German Morale, p. 7
87. Ibid., p. 74
88. Joachim Remak, The Nazi Years, (New Jersey, 1969), pp. 91-92
89. USSBS, German Morale, p. 76
90. Ibid.
91. Ibid.
92. Ibid.
93. Ibid., p. 77
94. Ibid.
95. Lochner, p. 404
96. Rumpf, p. 190
97. USSBS, German Morale, p. 68
98. Rumpf, p. 180
99. USSBS, German Morale, p. 68
100. Ibid., p. 67
101. Ibid., p. 69

Footnotes to Chapter III Cont'd.

102. Ibid., p. 68

103. Ibid., p. 67

104. Ibid., p. 43

105. Lochner, p. 423

106. USSBS, German Morale, p. 119

107. Ibid., p. 87

108. Shirer, Rise and Fall, p. 1072

109. Speer, p. 212

110. USSBS, German Morale, p. 88

111. Ibid.

Bibliography

Newspapers

The Manchester Guardian.

The London Times.

Government Documents

The United States Strategic Bombing Survey. Area Studies Division Report. Washington, D.C.: U.S. Government Printing Office, 1947.

The United States Strategic Bombing Survey. The Effects of Strategic Bombing on German Morale. V. 1 and II. Washington, D.C.: U.S. Government Printing Office, 1946.

The United States Strategic Bombing Survey. Hamburg Field Report. Washington, D.C.: U.S. Government Printing Office, 1947.

Books

Andreas-Friedrich, Ruth. Berlin Underground. New York: Henry Holt and Company, 1947.

Andrews, Allen. The Air Marshalls. New York: William Morrow & Company, Inc., 1970.

Bekker, Cajus. The Luftwaffe War Diaries. New York: Doubleday & Company, Inc., 1968.

Bidinian, Larry J. The Combined Allied Bombing Offensive Against the German Civilian 1942-1945. Kansas: Coronado Press, 1976.

Bowman, Gerald. War in the Air. London: Evans Brothers Limited, 1956.

British Information Services. Front Line. New York: The MacMillan Company, 1943.

Brittain, Vera. England's Hour. New York: The MacMillan Company, 1941.

Caidin, Martin. The Night Hamburg Died. New York: Ballantine Books, 1960.

Calder, Angus. The People's War. New York: Pantheon Books, 1969.

Churchill, Winston. Their Finest Hour. Boston: Houghton Mifflin Company, 1949.

Collier, Basil. The Battle of the V-Weapons 1944-45. London: Elmfield Press, 1964.

Collier, Richard. The City that Would Not Die. New York: E. P. Dutton and Company, Inc., 1960.

Cooper, Matthew. The German Air Force, 1933-1945. London: Jane's Publishing Company Limited, 1981.

Eisenhower, Dwight D. The Crusade in Europe. New York: Doubleday & Company, Inc., 1948.

Bibliography Cont'd.

Forbes-Robinson, Diana and Strauss, Robert editors. War Letters from Britain. New York: G. P. Putnam's Sons, 1941.

Freeman, Roger. U.S. Strategic Bomber. London: MacDonald & Co. Ltd., 1975.

Harris, Arthur. Bomber Offensive. New York: The MacMillan Company, 1947.

Hart, Liddel. History of the Second World War. London: Cassell & Company LTD, 1970.

Jablonsky, Edward. Terror from the Sky. New York: Doubleday & Company, Inc., 1971.

Killen, John. The Luftwaffe A Short History. London: Frederick Muller Ltd., 1967.

Lochner, Louis ed. The Goebbels Diaries, 1942-1943. New York: Doubleday & Company, Inc., 1948.

MacIsaac, David. Strategic Bombing in World War Two. New York: Grand Publishing, Inc., 1976.

McLaine, Ian. Ministry of Morale. London: George Allen & Unwin, 1979.

Michie, Allan A. The Air Offensive Against Germany. New York: Henry Holt and Company, 1943.

Morrison, Wilbur. Fortress Without A Poof. New York: St. Martin's Press, 1982.

Mosely, Leonard. Backs to the Wall. London: Weidenfeld & Nicolson, 1971.

Musgrove, Gordon. Operation Gomorrah. New York: Jane's Publishing, Incorporated, 1981.

Overy, R. J.. The Air War 1939-1945. London: Europe Publications Limited, 1980.

Remak, Joachim. editor. The Nazi Years. New Jersey: Prentice-Hall, Inc., 1969.

Rumpf, Hans. The Bombing of Germany. New York: Holt, Rinehart and Winston, 1963.

Shirer, William. Berlin Diary. New York: Alfred A. Knopf, 1941.

Shirer, William. The Rise and Fall of the Third Reich. New York: Simon & Schuster, 1960.

Smith, Frederick. Coventry, Six Hundred Years of Municipal History. Coventry: The Corporation of the City of Coventry, 1945.

Speer, Albert. Inside the Third Reich. New York: The MacMillan Company, 1970.

Bibliography Cont'd.

Tantum, W. H., and Hoffschmidt, E. J., editors. The Rise and Fall of the German Air Force 1933-1945. Conneticut: WE Inc., 1969.

Time-Life, Editors. The Battle of Britain. Alexandria: Time-Life Books, 1977.

Time-Life, Editors. The Air War in Europe. Alexandria: Time-Life Books, 1981.

The Webster's Third New International Dictionary. Massachusetts: G. & C. Merriam Company, 1976.

Webster, Sir Charles and Frankland, Noble. The Strategic Air Offensive Against Germany 1939-1945, V. I-IV. London: Her Majesty's Stationary Office, 1961.

Wells, H. G., The War in the Air. London: George Bell and Sons, 1909.