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Thomas Childers

CONTEMPLATING with dread the slide toward war between Japan and the United States in the autumn of 1941, Joseph Grew, the American ambassador to Tokyo, noted gloomily in his diary: "*Facilis descensus averni est*"—the descent into Hell is easy.[1] Events in Europe and China had already given eloquent testimony to that grim axiom, confirming all too clearly that among the first casualties of war are peacetime notions of morality. Grew's foreboding was more than justified. Before the Second World War would come to a close in the summer of 1945, it had become the most destructive conflict in human history, with fifty-five million dead, millions more broken, either physically or psychologically, thirty million refugees, and still millions more who had simply vanished. Continents had been ravaged, great cities laid waste, and a tidal wave of destruction left behind a landscape of unparalleled human suffering. A war that began with the major powers pledging to refrain from "the bombardment from the air of civilian populations or unfortified cities"—Hitler piously committed Germany to conduct the war "in a chivalrous and humane manner"[2]—ended with a mushroom cloud over Nagasaki.

In the Second World War's bleak catalogue of calamity and crime, the plight of the German population has, until recently, merited only a small entry. Almost eight million Germans perished in Hitler's war, among them approximately five hundred thousand civilians killed in the Anglo-American bombing that by war's end had turned Germany's largest cities and many smaller towns into a charred wasteland. Over the years, numerous memoirs, books, and some high-

1. Quoted in David M. Kennedy, *The American People and World War II* (Oxford: Oxford University Press, 1998), 8.

2. Roosevelt's 1939 appeal to refrain from bombing civilians was largely a political ploy, assuming that Britain and France would agree and that Hitler would not. Hitler, not for the first time, surprised him by accepting. See Tami Davis Biddle, *Rhetoric and Reality in Air Warfare. The Evolution of British and American Ideas About Strategic Bombing, 1914–1945* (Princeton: Princeton University Press, 2002), 182–83.

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visibility films have dealt with the experience of German soldiers and sailors, but the bombing of Germany and the agony of its citizens have attracted little public interest. The Germans, W. G. Sebald observed in a celebrated 1997 Zurich lecture, seemed to have suffered a case of "individual and collective amnesia." It was as if "there was a tacit agreement . . . that the true state of material and moral ruin in which the country found itself was not to be described. The darkest aspects of the final act of destruction, as experienced by the great majority of the German population, remained under a kind of taboo like a shameful family secret." This silence was extraordinary, Sebald argued, since the Allied air offensive amounted, in his words, to "a battle of annihilation" and had produced destruction "on a scale without historical precedent."[3]

Local chroniclers and "amateur war historians," Sebald acknowledged, had written about the destruction of Germany's cities, but their works were published by "more or less obscure firms" and "served primarily to sanitize or eliminate a kind of knowledge incompatible with any sense of normality." More to the point, "their studies did not alter the fact that the images of this horrifying chapter of our history have never really crossed the threshold of the national consciousness."[4]

Sebald's lecture and his 1999 book *Luftkrieg und Literatur* offered terrifying, haunting images of that destruction, especially the 1943 firebombing of Hamburg that unleashed a tornado of flame and killed forty thousand people. The book created a stir, especially in intellectual and scholarly circles, and much was made of ending the silence about German suffering. Amid the ensuing public discussion of "Germans as victims," several critics sounded a dissenting note, suggesting that the notion of a "taboo" against acknowledging German "victim-hood" was exaggerated. Indeed, Robert Moeller argues persuasively that, along with the "economic miracle" of the post-war era, "one of the most powerful integrative myths of the 1950s emphasized not German well-being but German suffering." Far from being a taboo theme, German suffering was a powerful leitmotif of post-war German political life, stressing, in Moeller's words, "that Germany was a nation of victims, an imagined community defined by the

3. All quotes are from the English edition, W.G. Sebald, *On the Natural History of Destruction* (New York: Random House, 1999), 10.

4. Ibid., 11. Numerous local histories, some of them quite good, were available before Sebald issued his call, but his larger point that they failed to attract wide public attention is undeniable. See, for example, Irmtraud Permooser, *Der Luftkrieg über München 1942–1945. Bomben auf die Hauptstadt der Bewegung* (Oberhaching: Aviatic Verlag, 1997). Hans-Günter Richardi, *Bomber über München. Der Luftkrieg von 1939 bis 1945, dargestellt am Beispiel der 'Hauptstadt der Bewegung'* (Munich: W. Ludwig, 1992); Dieter Busch, *Der Luftkrieg im Raum Mainz während des Zweiten Weltkriegs 1939–1945* (Mainz: V. Hase & Koehler, 1988); Hans Brunswig, *Feuersturm über Hamburg* (Stuttgart: Motorbuch-Verlag, 1978); Helmut Schnatz, *Der Luftkrieg im Raum Koblenz 1944/5* (Boppard: Boldt, 1981); Georg Wolfgang Schramm, *Bomben auf Nürnberg. Luftangriffe 1940–1945* (Munich: H. Hugendubel, 1988); Fritz Bauer, *Würzburg im Feuerofen. Tagebuchaufzeichnungen und Erinnerungen an die Zerstörung Würzburgs* (Würzburg: Echter, 1995).

experience of loss and displacement during the Second World War. The stories of German victims, particularly expellees and POWs in Soviet hands, were central to shaping membership in the West German polity." The impact of Allied bombing plays only a small role in Moeller's analysis of West Germany, but, not surprisingly, in the east, German suffering from the Anglo-American air offensive rather than from Soviet actions served as a major theme in DDR treatments of the Second World War.[5]

Although several serious scholarly works as well as a number of important local studies and fictional treatments of life under the bombs appeared in the 1990s, it was Jörg Friedrich's incendiary *Der Brand* that triggered the sort of intense national catharsis that Sebald's essay had anticipated. Friedrich's 2002 book took as its theme the Allied air war against Germany, focusing on precisely the sort of experiences Sebald had suggested. Written in unsparing, graphic prose and serialized in the mass circulation *Bild-Zeitung, Der Brand* quickly became a bestseller, inspiring television documentaries on the *Bombenkrieg*, a special issue of *Der Spiegel* ("Als Feuer vom Himmel Fiel"), and provoking widespread public controversy—both in Germany and Britain. The taboo against acknowledging German suffering, especially as a consequence of Allied bombing, had been broken with a vengeance.[6]

It is really not surprising that Friedrich's book should have struck such a responsive chord. Unlike most scholarly treatments of the air war, Friedrich writes with urgency and passion about the frightful human consequences of Allied bombing, offering up descriptions of the devastation and carnage so vivid, so achingly painful, they are almost unbearable to read. The book delivers one visceral emotional shock after another: The reader finds no antiseptic military language here—units deployed, enemy forces encountered, objectives destroyed, casualties suffered, etc.—to numb the senses and rob the experience of its barbaric reality.

The strength of Sebald and Friedrich's approach, Peter Schneider wrote in the *New York Times*, "is that it concentrates entirely on the progress and consummation of the catastrophe—on the direct experience of those whom it killed and those who survived it. By narrowing the perspective to that of many individual pairs of eyes, that catastrophe acquires the force of a horror in the face of which all questions regarding the causes and military results of 'area

5. See Robert G. Moeller, *War Stories. The Search for a Usable Past in the Federal Republic of Germany* (Berkeley: University of California Press, 2001), 6. For a treatment of the air war from a DDR historian, see Olaf Groehler, *Geschichte des Luftkriegs* (Berlin: Militärverlag der Deutschen Demokratischen Republik, 1975). See also his *Bombenkrieg gegen Deutschland* (Berlin: Akadamie-Verlag, 1990).

6. Jörg Friedrich, *Der Brand. Deutschland im Bombenkrieg 1940–1945* (Munich: Propyläen, 2002). See "Als Feuer vom Himmel fiel. Der Bombenkrieg gegen die Deutschen," *Der Spiegel* (March, 2003). ZDF's "Der Bombenkrieg" aired a month earlier.

bombing' are silenced."[7] There is much to be said for revealing war in all its grotesque cruelty, and to do so in a way that engages the emotions. The grief, misery, and sheer waste left in the wake of Allied bombing deserve to be seen—and not just by the Germans—, revealing yet another perspective on the hideous visage of war.[8]

Yet, while the "narrowing of perspective" praised by Schneider may be necessary to capture the enormous human tragedy of the bombing, it can also lead to significant distortions. After all, Sebald and Friedrich claim to do a good deal more than expose German suffering: They offer, Friedrich in far greater detail, interpretations of the air war in Europe—how it came about, how it was conducted, its objectives, and its results—and it is here that serious problems arise. Those problems do not flow from breaking the decades-long silence about German misery under Allied bombs, but from a well-intentioned but ultimately myopic absorption with German suffering that decouples the air assault on Hitler's Germany from its proper historical framework.[9] In the process, it leads to a species of historical shorthand, particularly evident in media coverage, that ignores or glides over the brutal context of total war in which the bombing occurred, and, in Friedrich's self-consciously provocative language, has the effect of relativizing Nazi crimes.

The perils of treating the bombing and the vast devastation it brought in isolation become apparent if, instead of narrowing the perspective, one broadens it. Appalling as it was, the bombing of Germany did not constitute, as Sebald would have it, "destruction on a scale without historical precedent." It was, sadly, not the most destructive *in the Second World War.* The losses suffered in Germany's cities amounted to one and one-half percent of the population. Twenty percent of the Polish population perished during the war, victims of the Germans and the Russians—more than two hundred thousand civilians were killed in the Warsaw uprising of August and September 1944, when the Germans massacred civilians and burned the city to the ground. One in five Yugoslavs died in the war, and twenty-two million Soviets were killed, the

7. Peter Schneider, "The Germans Are Breaking An Old Taboo," *New York Times* (January 18, 2003).

8. As Siegfried Sassoon writes in his memoir of the First World War, "All squalid, abject, and inglorious elements in war should be remembered." *The Complete Memoirs of George Sherston* (London: Faber, 1937), 239. So, too, should the overwhelming sense of loss and heartbreak, something of which I tried to capture by examining the lives of a doomed Eighth Air Force crew and the impact of their loss on their families. See Thomas Childers, *Wings of Morning. The Story of the Last American Bomber Shot Down Over Germany in World War II* (Reading, MA: Addison-Wesley Publishing Co., 1995).

9. The lack of historical context forms one of the most persistent and pointed criticisms of Friedrich. See, for example, the contributions of Hans Mommsen, Hans-Ulrich Wehler, Horst Boog, and Ralph Bollmann in Lothar Kettenacker, ed., *Ein Volk von Opfern? Die neue Debatte um den Bombenkrieg 1940–45* (Berlin: Rowohlt, 2004).

majority of them civilians, while vast tracts of the country were laid waste. Finally, in the long list of *German* casualties, more than four million soldiers, sailors, and airmen fell during the war, and millions more were herded off to the gulag at the end of hostilities. These numbers do not in the least diminish the anguish of the German population or render less macabre the horrors of Hamburg or Dresden or Darmstadt, but they should serve to establish some sense of perspective.

In the public discussion following Sebald and Friedrich, three basic arguments have gained widespread acceptance, even among many of Friedrich's critics. First, Allied air strategy in Europe is reduced to two central objectives: breaking German morale, a policy associated chiefly with the area bombing of British Bomber Command, and destroying Germany's war-making industrial capacity, an objective primarily attributed to the United States Army Air Forces (USAAF) and its policy of daylight "precision bombing." Friedrich asserts—joined by many of his critics—that both undertakings were abysmal failures, rendering the horrors of the bombing—including, he is careful to point out, the stunningly high casualty rates among Allied bomber crews—even more intolerable. Choosing his dates carefully, Sebald reports that "even in the spring of 1944, it was emerging that despite incessant air raids, the morale of the German population was obviously unbroken, while industrial production was impaired only marginally at best, and the end of the war had not come a day closer."[10]

Second, the Allied high commands, Friedrich suggests, clearly understood that these stated policies were failures and yet continued their murderous campaign in "a mad Vandalic rage." Shorn of any genuine claim to military effectiveness, Allied bombing was *Vergeltung*, retribution, pure and simple.[11] Hitler and Goebbels ranted about *Vergeltung*, but it was Churchill and Roosevelt who translated a desire for revenge into policy. "From January to May 1945," *Der Spiegel* writes in a characteristic passage, "the Allied bombers killed more than a thousand civilians a day in purely revenge and reprisal actions."[12] Charles Maier, commenting critically on the Friedrich book, nonetheless maintains that "Allied bombing was fed as much by *Vergeltung* as by military strategy."[13]

Related to the second argument is the assumption that the war was essentially over by the summer of 1944. The outcome was determined: Germany was

10. W.G. Sebald, *On the Natural History of Destruction*, 17.

11. Friedrich, *Der Brand*, 321, "vandalischer Tobsucht," and 138, "warf die deutsche Städte in einen mongolischen Luftvernichtungsorkan über alles bisher erlittene hinaus . . ." On this point, see Joerg Arnold's perceptive review of Friedrich on H-German, November 3, 2003.

12. "Als Feuer vom Himmel fiel," 14.

13. See Charles S. Maier's comments in H-German, Forum: WWII Bombing. November 12, 2003, http://h-net.msu.edu/cgi-bin/logbrowse.pl?trx=vx&list=H-German&month=0311&week=b&msg=QjgRJtFFmWFNkLcIg29cyg&user=&pw=.

defeated, the Allies were everywhere victorious. Continued heavy bombing in the last year of the war was unnecessary, contributing little of military value to the final defeat of Nazi Germany. The Luftwaffe had been severely depleted by the summer of 1944, and the cities and towns of Germany were "virtually defenseless." Over and over again, one reads that Allied missions in late 1944 to 1945 were "*kostenlos*," "unopposed," and "virtually without danger," the bombers "immune."[14]

Why did the Allies continue to bomb, indeed, even intensify, their raids when victory was so obvious, so certain? Friedrich maintains that Allied policy, whatever the official claims from London and Washington, amounted to *Vernichtungspolitik*, a policy of annihilation, not so different from that implemented by the Nazis. This position he makes not so much by direct argument but by insinuation, self-consciously employing terminology commonly associated with the Holocaust. Thus, he refers to Bomber Command's 5 Group as an "*Einsatzgruppe*" and to the cellars and bomb shelters where so many German civilians died as "crematoria." Although he devotes approximately one-third of the book to Allied air strategy, he is not really interested in determining how those policies developed, under what circumstances, and with what operational considerations. After all, he states, "for *Vernichtungspolitik*, there are always other explanations."[15]

The Allies did not begin the war with a plan to destroy German cities but with a doctrine of strategic bombing that had evolved gradually through the 1920s and 1930s. During the First World War, air power was still in its infancy, and the dirigibles and fabric and wood biplanes of the period had been used primarily as tactical weapons, in reconnaissance or in close support of ground operations. In 1915, however, German Zeppelins bombed London and a number of other British towns. Those attacks had little immediate military value, but by 1917, the Germans had developed a sturdy long-range aircraft, the Gotha, and a four-engine giant, the Riese, and launched a series of raids on Britain from airfields in Belgium. Begun as daylight strikes against military targets, these raids rapidly degenerated into indiscriminate nighttime bombing aimed at breaking British morale. By war's end, some fifty air attacks on British towns and cities had resulted in roughly two thousand casualties—most of them civilians. The Entente powers, of course, retaliated, attacking a number of German and Austrian cities from the air. These bombing raids far from the front lines had little impact on the war's outcome, but they did offer a portentous glimpse

14. Friedrich, *Der Brand*, 107–108. Also Volker Ulrich, ". . . in 1945 the bomber fleets flew 'almost unhindered,'" "Weltuntergang kann nicht schlimmer sein," in Kettenacker, ed., *Ein Volk von Opfern?*, 112.

15. Friedrich, *Der Brand*, 93. Friedrich denies a connection between the Holocaust and the bombing (342), and yet makes the case by imagery and linguistic suggestion throughout. "Keller arbeiteten wie Krematorien," 110.

of the potential of strategic air power—and the inevitable civilian casualties that would follow in its wake.[16]

In the following decade, the idea of strategic bombing to smash an enemy's capacity to wage war, to demolish its industrial base, its energy sources, its communications network, its system of transportation, and ultimately the will of its people to resist, gradually emerged, becoming a topic of serious discussion in military circles around the globe. Frightful scenarios of enemy bombers raining death and devastation down on defenseless urban areas were played out in military literature and in the mass media. Raids on an enemy's major cities would be the hallmark of the next war, they prophesied, producing widespread shock and pandemonium. In Britain, Sir Hugh Trenchard, the RAF's first commander, was convinced that a fleet of bombers could penetrate enemy territory, bypassing frontline defenses, and deliver a devastating blow to the enemy's war economy. This, he believed, could be done without first winning air superiority, meaning that it was not necessary first to destroy the enemy's air force. Trenchard also doggedly, and apparently without the benefit of any empirical evidence, advanced the thesis that the impact of bombing on enemy morale would be "twenty times" greater than any destruction of its economic or military assets. Faced with mass chaos and civilian demoralization, governments would quickly sue for peace. Such a war would thus be quick and clean, avoiding the stalemate and mass slaughter of the Great War, and it would be cheap, since the air campaign would be over in short order, and no mass armies would need be mobilized and deployed.[17]

Typical of prevailing opinion was Stanley Baldwin's chilling pronouncement to Parliament in 1932 that whatever the defenses, "no power on earth can protect that man in the street from being bombed. Whatever people may tell him, the bomber will always get through." Britain, therefore, needed a powerful bomber force to act as a deterrent to such attacks. These concerns only intensified when Hitler, in a flagrant breach of the armaments clauses of the Versailles Treaty, announced in 1935 that Germany was building an air force. In that same year, he boasted to Sir John Simon and Anthony Eden that Germany had, in fact, already reached parity with the Royal Air Force. It was not true, but its effect was to heighten British concerns about German intentions and British security.[18]

16. Biddle, *Rhetoric and Reality in Air Warfare*, 11–68. See also John H. Morrow, Jr., *The Great War in the Air* (Washington, DC: Smithsonian Institution Press, 1993). See also Michael Sherry, *The Rise of American Air Power. The Creation of Armageddon* (New Haven: Yale University Press, 1987), 12–21.

17. See Biddle, *Rhetoric and Reality in Air Warfare*, 69–97, and Max Hastings, *Bomber Command*, (New York: Dial Press/J. Wede, 1979; American Edition, New York: Simon & Schuster, 1987), 37–58. See also Stephen A. Garrett, *Ethics and Airpower in World War II. The British Bombing of German Cities* (New York: St. Martin's Press, 1993), 4–9.

18. Charles Messenger, *"Bomber" Harris and the Strategic Bombing Offensive, 1939–1945* (New

By the late 1930s, advances in fighter aircraft and the advent of radar made defense against bomber attack more credible, but the RAF continued to expand Bomber Command both as a deterrent force and as an offensive weapon. Bombing doctrine also evolved. Planners came to believe that it would be possible to launch attacks on specific economic targets—oil refineries, electrical power stations, the chemical and metal industries, the transportation system, and, of course, armaments plants—that would cripple an enemy's war-making capacity and break enemy morale without the sort of indiscriminate terror attacks implied in the Trenchardian approach.[19]

When war came in 1939, Britain was thus armed with an air doctrine of strategic bombing but with little sense of how to translate that doctrine into operational reality. For all the talk about a strategic bombing campaign, Bomber Command found itself equipped with a modest fleet of small, two-engine aircraft, severely limited in range and capable of carrying only light bomb loads. Navigational and bomb-aiming technology was crude to nonexistent. Moreover, Prime Minister Neville Chamberlain was opposed to unleashing an air assault on Germany for fear that Hitler would retaliate, turning the nightmare scenarios of the interwar years into grisly reality.[20]

Winston Churchill, who became prime minister on May 10, 1940, had been a champion of Bomber Command for years and did not share his predecessor's qualms. The Germans had bombed Warsaw in fall 1939, confirming Churchill's already low view of the Nazi regime, and when the Luftwaffe bombed Rotterdam on May 15, 1940, Churchill immediately ordered air attacks on industrial targets in the Ruhr. The damage to German industry was minimal, but Bomber Command had struck a blow at a time when the Allies were very much on the defensive.[21]

After the fall of France in June, Hermann Göring sent waves of Luftwaffe aircraft against RAF installations and related targets in preparation for a German invasion of Britain (Operation Sealion). Throughout July, the RAF battled large formations of German bombers and their fighter escorts in the "Battle of Britain," denying the Luftwaffe the air superiority essential for a cross-Channel assault. Then in late August, a series of desultory British raids on Berlin provoked Hitler into exactly the sort of full-fledged aerial onslaught many had

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York: St. Martin's Press, 1984), 13–26. The Baldwin speech, made when he was Lord President of the Council, is cited in Messenger, *"Bomber" Harris*, 20. For a comparative analysis of pre-war approaches to air power among the major powers, see R.J. Overy, *The Air War 1939–1945* (Chelsea, MI: Scarborough House, 1980 and 1991), 5–25, and Williamson Murray, "Der Einfluss der anglo-amerikanischen Vorkriegsdoktrin auf die Luftoperationen des Zweiten Weltkriegs," in Horst Boog, ed., *Luftkriegführung im Zweiten Weltkrieg. Ein internationaler Vergleich* (Herford: E.S. Mittler, 1993), 277–301.

19. Overy, *The Air War 1939–1945*, 12–14, and Hastings, *Bomber Command*, 46–47.

20. Biddle, *Rhetoric and Reality in Air Warfare*, 178–83.

21. Richard Overy, *Why the Allies Won* (New York: W.W. Norton, 1995), 107–8.

feared. Promising to "obliterate their [British] cities," he unleashed the first genuine bomber campaign of the war. For the next six months, the Luftwaffe relentlessly pounded more than a dozen major urban centers across Britain, killing more than twenty thousand people, and setting the terms of engagement for the air war in Europe. As Richard Overy has observed, "if there remained any moral scruples or strategic second thoughts on the British side about whether they should continue bombing, they were instantly dispelled by the Blitz."[22]

The Blitz, as the German air offensive of 1940–41 came to be called, marked an ominous new station on the path to total war. In one of his notorious monologues over dinner at the Reich Chancellery in 1940, Hitler exclaimed: "Göring wants to use innumerable incendiary bombs of an altogether new type to create sources of fire in all parts of London. Fires everywhere. Thousands of them. Then they'll unite in one gigantic area conflagration. Göring has the right idea. Explosive bombs don't work, but it can be done with incendiary bombs—total destruction of London. What use will their fire department be once that really starts?" Yet, as events in 1940 to 1941 would demonstrate, the Luftwaffe was neither equipped nor trained for this sort of strategic mission. It was essentially a tactical air force, tethered to land operations and dominated by the army. This arrangement served the Wehrmacht well in the early Blitzkrieg stage of the war, but it failed miserably during the Battle of Britain and the Blitz.[23]

The RAF, despite its pre-war emphasis on strategic operations, did not fare much better. During 1940 and 1941, Bomber Command conducted sporadic raids on the Ruhr and other industrial centers in western Germany. These were not intended as urban area raids but were directed against factories and other specific industrial objectives, which were, of course, located in heavily populated areas. There were occasional "reprisal raids," the first being the December attack on Mannheim, intended as payback for the Luftwaffe bombing of Coventry and other British cities during the Blitz, but these were exceptional.[24]

The primary target for Bomber Command operations during the winter and

22. Ibid., 109.

23. Albert Speer, *Inside the Third Reich* (New York: MacMillan, 1970), 370. On the Battle of Britain and the Blitz, see Overy, *The Air War*, 31–36 and Williamson Murray, *Luftwaffe* (Baltimore: Nautical & Aviation Publishing Company of America, 1985), 1–27. See also Michel Forget, "Die Zusammenarbeit zwischen Luftwaffe und Heer bei den französischen und deutschen Luftstreitkräften im Zweiten Weltkrieg" in Boog, ed., *Luftkriegführung im Zweiten Weltkrieg*, 479–525.

24. Messenger, *"Bomber" Harris*, 33–41. See also Mark Connelly, *Reaching for the Stars. A New History of Bomber Command in World War II* (London and New York: I.B. Tauris, 2001), 16–36. While Britain was being heavily bombed and Bomber Command struggled with precision bombing, there was, as Connelly points out, a growing desire on the part of the public to "dish it out" to the Germans. "Gone," he writes, "was the squeamishness about attacking Germany, gone was any sense of a negotiated peace or phony war," 36.

spring of 1940 to 1941 was oil. The Ministry of Economic Warfare believed, mistakenly as it turned out, that German oil supplies were running low, and if synthetic oil plants in the Reich could be destroyed before supplies from the Rumanian fields began arriving, a decisive blow might be struck against the Nazi war economy. Between November and March, the offensive lurched forward in fits and starts, causing paltry damage to Gemany's oil supply, and by spring 1941, targeting priorities were shifted from oil to what Churchill called "the Battle of the Atlantic." German U-boats were inflicting dreadful losses on British shipping, losses that could not be sustained if Britain were to survive, and as a consequence, naval targets—submarine pens at Bordeaux, Lorient, and St.-Nazaiere in France, as well as German ports—Kiel, Hamburg, Bremen, among others—became the new priorities. By summer, however, a new target system—transportation—moved to the top of the list. Intended to help the reeling Soviets by cutting or slowing supply shipments to the east, a new directive on July 9, 1941, ordered Bomber Command to focus its energies on "dislocating the German transportation system and . . . destroying the morale of the civil population as a whole and the industrial worker in particular." These repeated shifts in priorities played havoc with any notion of a sustained, systematic bomber offensive and would be symptomatic of the British, indeed the Allied air campaign against Germany until late in the war.[25]

In 1940, bombing operations, both German and British, were initially conducted by day, but before the year was out, such raids were the exception. Daylight missions made for more accurate bombing, but it became murderously obvious that the bombers were largely incapable of defending themselves against enemy flak and fighters. One solution was to fly under the cover of darkness, but nighttime raids, though safer for the crews, brought with them a host of problems. Although Downing Street touted Bomber Command's successes in hammering German industry, aerial photographs of the targeted areas revealed a different story to the high command.

The true state of affairs was driven home in August 1941 when a committee headed by D. M. Butt issued a distressing report on the performance of Bomber Command against objectives in France and Germany during the preceding two months. The Committee's findings came as a shock to the Prime Minister. Commissioned by Lord Cherwell, Churchill's science advisor, the independent report found that on any given night, one-third of all attacking aircraft failed to

25. These shifts in priorities are dealt with in Connelly, *A New History of Bomber Command*, 37–45. See also Denis Richards, *The Hardest Victory* (New York: W.W. Norton, 1995), 69–102. Richards argues rather generously that "though critics in recent years have tended to regard 'destroying morale' as a euphemism for 'killing,' it was no part of this policy deliberately to slaughter civilians. Heavy civilian casualties would inevitably be involved, but the intention was to make it difficult or impossible for civilians, many of whom were an essential part of the war machine, to remain at their industrial and administrative jobs." The quote is from 85.

bomb the primary target. Of the remaining two-thirds, only one in three had come within five miles of the aiming point; on moonlit nights, two of five aircraft bombed within five miles of the aiming point, but on the far more frequent moonless or cloudy nights, the ratio fell to one in fifteen. The problem was not one of aiming but of navigation. Flying in the dark, cloud-laden skies over Europe, the crews simply could not find the target. Moreover, losses remained extremely high—one aircraft lost for every ten tons of bombs dropped. The entire front line of Bomber Command had been wiped out statistically in the preceding four months. Clearly, this could not continue.[26]

By the end of 1941, the bomber offensive, if it can be called that, was very much in doubt, and British morale was at a low ebb. True, the Red Army had held before Moscow in December, saving the Soviet Union for at least another season, but in the following spring, the Germans launched another gigantic offensive that drove deeper into the Soviet Union, inflicting massive casualties and gobbling up real estate at a clip reminiscent of Barbarossa a year earlier. It was not at all clear that the Soviet Union would survive, and Churchill was under enormous pressure from Stalin to open a second front.

Similarly, the Japanese attack on Pearl Harbor and Hitler's declaration of war on the United States four days later brought America's vast military and economic potential into the alliance against the Axis, but in the winter and spring of 1941–42, potential was exactly what it was. The American military in early 1942 was tiny, inexperienced, and poorly equipped, and it appeared utterly overmatched against the battle-hardened forces of Imperial Japan. After their triumph at Pearl Harbor, the Japanese drove the Americans from the Philippines, threatened Australia, and New Zealand, and overran virtually all of southeast Asia.

For the British, the situation was especially bleak. Hong Kong and Singapore, "the Gibraltar of the Pacific," fell in February with 80,000 British military personnel taken prisoner, and India seemed suddenly vulnerable. German U-boats continued their successful campaign against Allied shipping in the North Atlantic, and in June, Rommel occupied Tobruk, threatening the British position in North Africa. After the Japanese sent a naval task force into the Indian Ocean, an Axis linkup in the Middle East or central Asia seemed possible, and Roosevelt and Churchill realized they could do little to prevent it. The Allies were forced onto the defensive everywhere, and while a glimmer of hope creased the far horizon, the European continent was still dominated by a monstrous regime backed by an apparently invincible military machine.

In early 1942, Bomber Command, for all its shortcomings, offered the only real means of attacking that machine directly. A new radar navigational aid—Gee—was expected to be widely available by spring, as were the new giant

26. Hastings, *Bomber Command*, 107–8, 123–26. See also Messenger, *"Bomber" Harris*, 45–52.

four-engine bombers, the Lancasters, capable of delivering a bomb load of 14,000 pounds. With the advent of Gee, it became possible to send the entire bomber force along the same route, concentrated in both time and space. The resulting bomber stream would be much better for delivering bombs to the target, though it was not the sort of tight formation the Americans would later employ in their attempts at precision raids.[27]

These innovations in technology and equipment were accompanied by a significant shift in targeting. An Air Directive of February 14 indicated that the targets of future operations were to be Germany's large industrial cities. While attempts to strike specific precision targets had hardly made a dent in Germany's war economy, the "incidental" damage—the precursor of today's euphemism, "collateral damage"—caused by the raids had been significant. So no group commander could miss the point, Chief of Air Staff Sir Charles Portal explained to them in a memo that "Ref the new bombing directive: I suppose it is clear that the aiming points are to be the built-up areas, not, for instance, the dockyards or aircraft factories . . . This must be made clear if it is not already understood." The RAF, in short, had decided to embark on a strategy of area bombing.[28]

Just a month later in March 1942, Lord Cherwell's report elaborated that strategic decision and provided a means of measuring Bomber Command's effectiveness. First, Cherwell called for the systematic destruction of German industrial cities by fire. Cherwell, who was predisposed to advocate incendiary attacks on Germany, had examined the preliminary findings of the Birmingham-Hull study, undertaken by Solly Zuckerman and others, and came to the conclusion that one could develop a formula, that for every x square miles of urban landscape laid waste, y number of Germans would be left homeless. "De-housed" was the term preferred by Bomber Command. By concentrating on cities of more than 100,000 in population (large targets, easy to find and hit), more than one-third of the German population could be left homeless and demoralized. Henceforth, Bomber Command would measure its success by acres of built-up area destroyed and a calculation of acres of concentrated urban devastation and industrial man hours lost.[29]

The man who would execute this policy was the new commanding officer of Bomber Command, Arthur Harris. Although the plan did not originate with him, Harris, a taciturn man given to chilling statements of homicidal bluntness, would become the most tenacious champion of area bombing. He had little patience for what he considered "panacea targets"—oil, transportation, etc.—

27. For the technological innovations, see Robin Neillands, *The Bomber War. Arthur Harris and the Allied Bomber Offensive 1939–1945* (London: John Murray, 2001), 66–78.

28. Portal's memo is quoted in Hastings, *Bomber Command*, 133–34.

29. Hastings, *Bomber Command*, 12–33. See also Biddle, *Rhetoric and Reality in Air Warfare*, 200–1.

and was particularly intolerant of the shifting priorities that had hampered Bomber Command's operations. He was absolutely—and, to many in the Allied command structure, maddeningly—convinced that the way to defeat Nazi Germany was to destroy its cities, devastating the Reich's war-making capabilities and, in the process, breaking the morale of its citizens. This meant smashing the civic infrastructure of Germany's cities—housing, electricity, water, sanitation—to such an extent that their inhabitants simply could not function. It also meant large-scale killing.[30]

This conviction was not an expression of "rage" or a desire for revenge or a naïve belief in breaking German morale ("Morale," he would later say, "was a luxury the Germans [under National Socialism] could not afford") but a deeply held, implacable belief in the military efficacy of his policies, a belief to which he stubbornly held in the face of mounting, if ineffectual, reservations from Portal and his American counterparts.[31]

During the spring and summer of 1942, Harris provided a terrifying hint of what was to come. Mustering every available aircraft and all combat crews—including raw trainees and their instructors—Bomber Command launched three monster raids on German cities. On May 30, one thousand British planes attacked Cologne; in early June, nine hundred raided Essen, and one thousand appeared in the night skies over Bremen. Harris could not sustain these sorts of numbers, and the subsequent raids would be lighter, but he had made his point—not only to the Germans but the English public and the other military services, who were unhappy about the high percentage of the war budget (approximately one-third) apportioned to Bomber Command.[32]

Enormous problems persisted. Gee was a reasonably good navigational aid but was not a reliable aiming device for bombing. Moreover, by summer, the Germans had developed jamming devices to frustrate Gee, and advances in the

30. Harris biographies abound. The authorized volume is Dudley Saward, *Bomber Harris. The Story of Sir Arthur Harris* (London: Cassell, Buchen & Enright, 1984). Robin Neilland's *Arthur Harris and the Allied Bomber Offensive* and Charles Messenger's *"Bomber" Harris* are broader histories of Bomber Command. The most recent is Henry Probert, *Bomber Harris. His Life and Times*, (London: Greenhill, 2001).

31. Overy argues that Harris had not "the slightest doubt that 'morale' was a hopelessly ill-thought-out objective, a 'counsel of despair'" and that he had "no confidence that German morale was as brittle as his colleagues hoped." Overy, *Why the Allies Won*, 113. Harris, according to Hastings, "believed that there were no short cuts to defeating Germany from the air. It was necessary to concentrate all available forces for the progressive, systematic destruction of the urban areas of the Reich, city by city, block by block, factory by factory, until the enemy became a nation of troglodytes, scratching in the ruins," *Bomber Command*, 138–39.

32. Connelly, *Reaching for the Stars*, 71–76. If Harris was not driven by revenge, the boulevard press in Britain certainly did take up the cry of "retribution." The headline of the *Daily Express* after the Cologne raid proclaimed: "The Vengeance Begins!" Cited in Connelly, 73. Similar, if more muted, sentiments were conveyed directly to Harris by the Prime Minister: "The proof of the growing power of the British Bomber Force is also the herald of what Germany will receive, city by city, from now on." Quoted in Messenger, *"Bomber" Harris*, 78.

Luftwaffe's night fighter defense also raised Bomber Command losses to above the four-percent rate considered acceptable. Still, at a meeting in Moscow in July and August, in which Stalin upbraided the British for failing to open a second front, Churchill indicated that an Anglo-American landing would be made in North Africa (Operation Torch) later in the year and expounded on his intention to intensify the bombing of the Reich. Stalin was delighted with the idea of a bomber offensive against German urban targets, suggesting that residential neighborhoods as well as industrial areas should be targeted. An invasion of northwestern Europe would have to wait, but in the meantime, bombing would constitute a second front.[33]

While the RAF embarked on its campaign of area bombing in the summer of 1942, the Americans, with their own approach to strategic bombing, arrived in the European Theater of Operations (ETO). In the United States, the concept of daylight precision bombing emerged from the Army Air Corps Tactical School (ACTS) in Montgomery, Alabama, during the 1930s and would guide its conduct of air operations during the Second World War. Influenced by Giulio Douhet, General Billy Mitchell, and other air theorists of the inter-war period, American strategists at the ACTS developed their own doctrine of daylight precision bombing, an approach based on the premise that even a relatively small force of heavy bombers equipped with technologically advanced aiming devices and flying at altitudes above effective enemy fire could identify and destroy carefully selected military and industrial targets.[34]

Working on the assumption that terror bombing of civilians would provoke public outrage and that for the foreseeable future, the Army Air Corps would remain a relatively small force, strategists in the Department of Air Tactics and Strategy produced a detailed analysis of American power grids, industrial plants, and transportation systems that suggested that the number of critical targets was surprisingly small and vulnerable to aerial attack. They also examined major urban centers and discovered, in their study of New York City, that the destruction of just seventeen targets in its transportation network and public utilities would render the city unlivable. "With very precise bombing," they argued, "this could be done without vast destruction or mass casualties."[35]

The planners at the ACTS also drew important lessons from Japan's indiscriminate bombing of Chinese cities. "Japanese air bombing of crowded cities destroyed millions of dollars worth of property and took an enormous toll of

33. Overy, *Why the Allies Won*, 101–4.

34. The literature on the evolution of American air doctrine is extensive and contentious. See Sherry, *The Rise of American Air Power. The Creation of Armageddon* and Ronald Shaffer, *Wings of Judgment. American Bombing World War II* (Oxford and New York: Oxford University Press, 1985). For a different interpretation, see Conrad Crane's excellent, *Bombs, Cities, and Civilians. American Airpower Strategy in World War II* (Lawrence, KS: University Press of Kansas, 1993) and most recently, the analysis of Biddle, *Rhetoric and Reality in Air Warfare*.

35. Crane, *Bombs, Cities, and Civilians*, 20.

civilian lives," one study noted, "but gained little or no military advantage thereby. In most cases, the reaction was exactly the opposite of the desired and anticipated effect of breaking the nation's will to fight and undermine support of the Nationalist Government." A similar set of conclusions was drawn from bombing in the Spanish Civil War, where, as one ACTS paper stated, "far from demoralizing the populace, it seemed to stiffen their determination to resist . . ." Finally, a 1940 staff paper at the War College found that there was "no historical evidence that aerial bombardment of cities, towns, and villages has ever been productive." Such targets should be bombed only "where they contain definite objectives, military or political, the destruction of which will be productive of decisive military results."[36]

By 1940–41, these ideas had crystallized into a commitment to daylight precision bombing of key industrial choke points that, once destroyed, would cripple an enemy's ability to make war. Although Air Corps leaders were acutely conscious of public opinion, the adoption of this strategy was not a cynical public relations ploy to dupe the American home front or salve the consciences of the airmen. The commitment to precision bombing was genuine; it pervaded Air Corps training and equipment (the development of the sophisticated Norden bombsight) and it was the basis for the conduct of air operations in Europe and in the initial phase of the bombing of Japan. The problem, as the Americans would discover in the skies over Europe and the Home Islands of Japan, was not the theory but their ability, given the technology of the period, to execute it.[37]

36. Ibid., 23–24.

37. The search for accuracy, for a "tight bomb pattern," was never ending. Given the relatively crude technology of the period and the operational realities of bad weather and enemy action, however, "precision" was an elusive goal. See Stephen L. McFarland, *America's Pursuit of Precision Bombing, 1910–1945* (Washington, DC: Smithsonian Institution Press, 1995), 170–90. Even under the best of conditions, the Eighth Air Force estimated that by the last quarter of 1943, only twenty-seven percent of all bombs dropped fell within one thousand feet of the aiming point, forty-eight percent within two thousand feet. The numbers crept upward in 1944 but were still less than fifty percent within one thousand feet. See *Statistical Summary of Eighth Air Force Operations. European Theater 17 August 1942–8 May 1945* (N.p.: 8th Air Force, 1945), 31. In summer and fall 1944, the AAFs began using plane-based radar (H2X) to bomb through the overcast, with predictably lower rates of accuracy. Even with radar missions, Conrad Crane argues that "the contention that American non-visual bombing was the equivalent of area bombing is not supported by the record of European air operations." The key difference between the RAF and the Americans, he states, was the targeting: "RAF area attacks aimed at the center of residential districts, American H2X attacks . . . usually targeted docks or marshaling yards that operators could detect on radar scopes. There was a large difference between the RAF and the AAF both in intent and effort as to the number of civilians killed," in *Bombs, Cities, and Civilians*, 75–76. In my examination of operational records of Eighth Air Force Bomb Groups, the stress on precision bombing was relentless. Each bomb group, each squadron, and each lead crew, on whose signal the squadrons dropped their bombs, was graded on each mission for their ability to put "bombs on the target." Those records are found in the National Archives, Record Group 20. Other mission folders and group and squadron evaluations are located at the Office of Air Force History, Bolling Air Force Base,

These ideas found expression in the Air War Plans Department 1 (AWPD–1) statement of American air power at the very outset of the war. The plan called for not only a general air strategy that would "provide for the close and direct air support of the surface forces in the invasion of the continent and for major land campaigns thereafter," but would also unleash "a sustained and unremitting air offensive against Germany and Italy to destroy their will and their capability to continue the war." Indeed, air planners actually held out the prospect that this air offensive might "make an invasion [of the European continent] unnecessary." After Pearl Harbor, AWPD–42 replaced the pre-war plan, with renewed emphasis on "establishing complete air ascendancy over the enemy as a prelude to close support operations," but the United States, like Great Britain, entered the conflict with a commitment to the concept of strategic bombing.[38]

The unit initially charged with executing American strategic bombing was the Eighth Air Force, commanded by General Carl Spaatz, and Eighth Bomber Command, led by General Ira Eaker. Both men, especially Spaatz, were committed to the concept of daylight precision bombing, and they were eager to put it into practice. They were confident that American four-engine bombers, B–17s and B–24s, flying in tight formations at twenty thousand feet and bristling with fifty-caliber machine guns, could defend themselves against German flak and fighters. They also believed that their bombardiers could identify key industrial and military bottlenecks, and using the Norden bombsight, destroy them. Although they were skeptical of Harris's commitment to nighttime area raids which killed civilians without, they believed, delivering a decisive blow to German industrial targets, they were reluctant to voice those views publicly. Though tinged with moral concerns, American criticism of British area bombing was more operational than ethical in nature. Spaatz and other American air commanders viewed area bombing as an inefficient use of military assets (why endanger crews and aircraft to scatter bombs over a wide area if the target was a specific armaments factory?), and, from their pre-war studies, they were not at all convinced of bombing's impact on morale. They were, however, newcomers to the air war, junior partners, and they were not about to create tensions within the alliance.[39]

The creation of an American strategic presence in England was slow. During its first year of operations in Europe, the Eighth Air Force was under-equipped and understaffed. Few trained crews and few heavy bombers were available.

Washington, DC. Those intentions, however, as the records indicate, confronted bitter operational realities.

38. James C. Gaston, *Planning the American Air War* (Washington, DC: National Defense University Press, 1982), and Hawood S. Hansel, Jr., *The Air Plan That Defeated Hitler* (Atlanta: Higgens-McArthur, Longino & Parter, 1972).

39. Crane, *Bombs, Cities, and Civilians*, 28–47. See also Richard G. Davis, *Carl A. Spaatz and the Air War in Europe* (Washington, DC: Center for Air Force History, 1993).

Three months after Harris sent one thousand planes to Cologne, the Americans were able to dispatch fewer than twenty aircraft on a mission to Rouen, the first Eighth Air Force raid to German-occupied Europe. The American buildup in England also suffered from chronic shifts in Allied priorities. Just as the Eighth was beginning to develop a reasonable compliment of forces, its best crews were siphoned off to Operation Torch in North Africa. General Henry Arnold, Commander of all U.S. Army air forces, was also under continuous pressure to shift aircraft priorities to the Pacific and the Navy. The Americans had flown their first mission on August 17, 1942, but by January 1943, Eaker still had fewer than one hundred operational heavy bombers at his disposal.[40]

Harris and Eaker made common cause to press for the strategic bombing offensive, both to rebuff the other services and to prevent the diversion of air power to other theaters of war, but Harris remained dubious about American ideas. He thought the doctrine of daylight precision bombing of industrial choke points on which the Americans insisted was nothing more than "panacea bombing," which the RAF had already tried and abandoned. Like Spaatz and Eaker, he was willing to paper over these differences, but by the end of 1942, he believed that the Americans should scrap their daytime raids—which depended on good visibility over the target and hence limited the number of missions flown—and join the RAF in its nighttime area attacks. Churchill shared these reservations. He was distinctly unimpressed by the first few months of the American contribution to the air war, and he let his allies know it.[41]

These differences came to a head at the Casablanca Conference in January 1943. The Americans found themselves under considerable pressure to abandon daylight bombing altogether. Such a shift would mean retraining crews and significant modifications to the aircraft, an overhaul, Eaker feared, that would require three to six months of downtime. In an effort to save American operational doctrine—and independence from the RAF—Eaker, in a personal pitch to Churchill, formulated the term "Round the Clock Bombing," implying a joint plan of attack: The Americans would hit key targets during the day, the RAF would go over at night, "and the devil will get no rest."[42]

Churchill was particularly taken with the term, and the Casablanca Directive from the Anglo-American Combined Chiefs of Staff to Air Marshal Harris and General Eaker ordered them to embark on the demolition of a range of

40. Wesley Frank Craven and James Lea Cate, *The Army Air Forces in World War II*, 7 vols. (Chicago: University of Chicago Press, 1948–58), 1:131–38.

41. For British views of the American effort, see Messenger, *"Bomber" Harris*, 101–106.

42. Eaker had a degree in journalism and had taken law courses at Columbia. "Among AAF leaders," Conrad Crane has put it, "Eaker came closest to being a true public-relations expert." See Crane, *Bombs, Cities, and Civilians*, 40–41. See also Charles K. Webster and Noble Frankland, *The Strategic Air Offensive Against Germany 1939–1945*, 4 vols. (London: H.M. Stationery Office, 1961), 2:10–21.

German target systems as essential preliminaries to an invasion of Europe: submarine yards and bases, the German aircraft industry, ball bearings, oil, synthetic rubber, and military transportation. "Your primary aim," the Directive stated, "will be the progressive destruction and displacement of the German military, industrial and economic system, and the undermining of the morale of the German people to a point where their capacity for armed resistance is fatally weakened. . . ."[43]

Following the conference, Eaker drafted a detailed plan, and an Operational Committee worked out what seemed to be clear orders to both Bomber Command and the Eighth Air Force. The Combined Bomber Offensive (CBO) was to be a coordinated assault on German industry and was nominally placed under the direction of Sir Charles Portal. Thus, the Allies appeared to have entered 1943 with a clear set of priorities and a unified command. Yet, despite the apparent agreement on air operations between the United States and Great Britain, there was no genuine coordination or "Combined Bomber Offensive" but two distinct, parallel efforts. Harris routinely and infuriatingly ignored all pressure to send his planes against the priority targets ostensibly agreed upon and instead continued to press them against large urban centers that might occasionally overlap with the American effort, but were rarely coordinated with them. Between March 1943 and March 1944, Harris continued his massive area raids on German cities as if the CBO priorities simply did not exist.[44]

Beginning in March 1943 and continuing into June, the RAF relentlessly hammered the Ruhr, and in July, Bomber Command laid waste the city of Hamburg. Twenty-two square kilometers of the city were incinerated, and an estimated forty-two thousand people perished in the massive firestorm. For Harris, Hamburg represented the model for what Bomber Command hoped to accomplish. It was a grim harbinger of things to come, as Darmstadt, Berlin, and, of course, Dresden were to discover. The Hamburg attack provoked widespread fear in Germany (spread mostly by rumor) and sent shock waves through the National Socialist leadership. Reporting to Hitler in the aftermath of the raid, Albert Speer, Minister of Armaments and Munitions, warned that similar attacks on another six German cities would bring German armaments production "to a halt."[45]

In November 1943, Harris claimed that nineteen German cities had been totally destroyed by Bomber Command. Then he asserted, "We can wreck Berlin from end to end if the [Americans] will come in on it. It will cost

43. The CBO plan is treated in Craven and Cate, *The Army Air Forces in World War II*, 2:348–76 and 665–706.

44. For tensions between the British and American approaches, see Sherry, *The Rise of American Air Power*, 147–52. See also Craven and Cate, *The Army Air Forces in World War II*, 2:707–730.

45. "Hamburg," Speer wrote, "had suffered the fate that Göring and Hitler had conceived for London in 1940." Speer, *Inside the Third Reich*, 370.

between 400 and 500 aircraft. It will cost Germany the war." But Harris's four-month long assault on Berlin (November 1943 to March 1944) was a failure by his own standards. He bombed the city relentlessly, but the factories continued to produce, and Bomber Command lost one thousand aircraft. By spring 1944, Harris had failed in his repeated promises to break Germany through saturation bombing, and his losses in the Battle of Berlin and in the calamitous Nuremberg raid of March 1944, when Bomber Command lost over one hundred planes in a single night, had cost a great deal of his credibility with both Churchill and Allied military planners who were preparing for the invasion of northwestern Europe.[46]

For their part, the Americans were in no position to embark on a sustained bombing offensive in Europe until mid–1943. Men and planes sent to North Africa weakened Eaker's forces in 1942, and only by summer 1943 were aircraft and crews present in sufficient numbers to attempt a strategic bombing campaign as U.S. Army Air Corps planners had conceived it. The first major American raid deep inside Germany came on August 17, 1943, an ambitious two-pronged attack on the ball bearings factories in Schweinfurt, a key choke point in the German armaments industry, and the Messerschmitt aircraft factory in Regensburg. Flying without fighter escort, two formations of B–17s fought their way through waves of German fighters to unload their bombs on the targets. The factories suffered some significant damage, but sixty bombers—six hundred men—were lost in one grisly afternoon. After a lull to regroup, the Americans resumed their daylight raids into Germany, absorbing terrible punishment in the process. On October 14, the bombers returned to Schweinfurt, and another sixty planes were shot down. "Black Thursday," the crews dubbed it. During a single week in mid-October, the Eighth lost 148 heavy bombers in raids on targets in Germany. It was the nadir of American air operations in Europe.[47]

Losses during the first year of the American air war were staggering. A tour of duty had been set at twenty-five missions, but between August 1942 and August 1943, only thirty percent of Eighth Air Force bomber personnel actually survived twenty-five trips to the continent. Thirty-seven percent were lost before they had completed five missions. In spring 1944, when American air

46. Martin Middlebrook, *The Berlin Raids. RAF Bomber Command Winter 1943–44*, (London: Viking, 1988), 324–25. While arguing that the Battle of Berlin "obviously reduced Germany's war effort and made a contribution to victory," Middlebrook concludes that "the extent of the achievements at Berlin was not sufficient either to satisfy the aims set for the battle—breakdown of civil morale and destruction so great that the normal life of Berlin would cease—or to justify the bomber casualties. The cost was too high in relation to the results."

47. Craven and Cate, *The Army Air Forces in World War II*, 2:308–47. See also Martin Middlebrook, *The Schweinfurt-Regensburg Mission. American Raids on 17 August 1943* (London: Lane, 1983) and Martin Caidin, *Black Thursday*, (New York: Dutton, 1960).

casualties peaked, the average life expectancy of an Eighth Air Force bomber and its crew was fifteen missions. Although the mathematical odds of survival improved during 1944, the absolute number of losses remained depressingly high. In fact, the casualty rate for bomber crews exceeded that of any other branch of the American military in the Second World War, comparable only to losses by Bomber Command and German U-boat crews.[48]

These setbacks in the summer and fall of 1943 threw into doubt the entire American project of daylight precision bombing. It was painfully obvious that the bombers, as the British had warned, were simply too vulnerable, the loss rates unsustainable. Yet, despite the appalling casualties, American leaders believed that improvements in formation flying, an increase in aircraft and crews, and, perhaps most important, the development of long-range fighter escorts would ultimately prove the feasibility of their doctrine.

By January 1944, aircraft and crews were pouring into the European commands, not only to the Eighth Air Force in England, but also to the newly formed U.S. Fifteenth Air Force stationed near Foggia in Italy. The Fifteenth expanded the range of the bomber offensive, reaching targets in eastern Germany and the Balkans as well. Among the aircraft arriving at American bases in late 1943 was the P–51 Mustang. An American fighter refitted with a British Merlin Rolls Royce engine, the Mustang proved to be exactly the high-performance, long-range fighter the bomber formations so desperately needed. By January 1944, the Mustangs were available in significant numbers, ready to escort the bombers when they resumed their offensive in the new year.[49]

The priority target for the new offensive was the German aircraft industry. During the last week of February 1944, the Americans mounted monster raids against aircraft production facilities at Braunschweig, Halberstadt, Gotha, Regensburg, and Steyr. Losses for what came to be called "Big Week"—276 heavy bombers—were extraordinarily high, but the raids dealt a devastating blow to German air power. Perhaps more important than the direct damage done to German aircraft production was the Luftwaffe's loss of more than six hundred fighters. In the following month, American bombers attacked Berlin for the first time, escorted by P–51s all the way to the target. Throughout the spring, swarms of Mustangs accompanied ever-larger bomber formations into Germany, devastating the Luftwaffe, both in the air and on the ground.[50]

By March 1944, Spaatz, now in charge of all American air forces in Europe,

48. The losses, by aircraft type, are found in *Statistical Digest* (Washington, DC: Headquarters USAF, 1947), 152–53. See the Eighth Air Force's rates of loss in "Survival of Combat Crew Men," Office of Air Force History, Bolling Air Force Base, 527 245. See also Gerald Astor, *The Mighty Eighth*, (New York: Dell, 1997), 486.

49. Overy, *Why the Allies Won*, 122–24.

50. Arthur B. Ferguson, "Big Week," in Craven and Cate, *The Army Air Forces in World War* II, 3:30–66. See also Overy, *Why the Allies Won*, 124.

believed that he had isolated the great bottleneck of the German war industry—the one strategic industrial sector that, if destroyed by bombing, would cripple the German war machine and deliver victory to the Allies, perhaps without an invasion of Europe. That target, once again, was oil. Intense preparations for the cross-Channel invasion (Operation Overlord) were now underway, and the Anglo-American air forces were put under the command of General Eisenhower and his air deputy, Sir Arthur Tedder. Supported now by Harris, Spaatz made an appeal to Eisenhower to marshal all Allied power against German oil production in one massive, unrelenting campaign. Both Harris and Spaatz believed that their forces could defeat Germany before any land campaign was launched in 1944, if only they were given the resources to do so.

Eisenhower was not persuaded. He chose instead to direct his air commanders to focus their efforts on two crucial objectives: establishing air superiority for the coming invasion and destroying key transportation centers in France, Belgium, and western Germany to prevent the Wehrmacht from rushing reinforcements to the invasion beaches. Between March and June 1944, the Allied air forces accomplished both critical missions, continuing their assault on the Luftwaffe's fighter arm and relentlessly bombing railways, marshalling yards, roads, bridges, river ports, canals, and other approaches to the planned Normandy beachhead. They had provided crucial support for the Allied invasion and had helped shorten the war in Europe, but Harris and Spaatz were convinced that a terrible error had been made.[51]

The objective of strategic bombing—destroying the capacity of the enemy to make war—implied a relentless, systematic attack against key priority targets, returning to hit them again and again. Until 1944, the Allies had been unable to sustain such an assault, and the independent U.S. Strategic Bombing Survey, conducted at war's end, concluded that before the summer of 1944, the impact of bombing on the German war economy was surprisingly modest. It also noted an apparent paradox: As the tonnage of bombs dropped by the Allies increased during 1943 and into 1944, so, too, did German production in virtually every category identified as a priority target by the CBO.[52]

That paradox was in part because of the repeated shifts in Allied targeting priorities and to the slow buildup of its forces. It was also related to the management of the German war economy. In the early years of the war, a variety of different state, party, and military agencies were charged with economic mobilization. It was only in 1942, with Albert Speer in charge of the Ministry of Armaments and Munitions, that the Germans were gradually able to set industrial priorities and pursue them with some degree of order. These efforts began

51. Hastings, *Bomber Command*, 274–78.

52. The United States Strategic Bombing Survey (USSBS), *The Effects of Strategic Bombing on the German War Economy* (Washington, DC: USSBS, Overall Economic Effects Division, 1945), 15–25.

to bear fruit in late 1942, just as the Allied air offensive intensified, and reached their apex just as the Allies succeeded in establishing air superiority over the continent in 1944.[53]

Following the invasion of France in June 1944, however, the Allies were at last able to execute an unremitting assault against German industry, especially oil and transportation, staging raids of five, six, seven hundred planes against synthetic fuel complexes, rail yards, and other related targets. More than half the bomb tonnage dropped by the Allies on Germany fell between D-Day and the end of the war, and German industrial output plunged precipitously in every important category—aircraft production by 62 percent, armor by 54 percent, motor vehicles by 72 percent, ammunition by 62 percent, and weapons by 42 percent. From its peak in 1944 to March 1945, total munitions production fell by 55 percent.[54] So dire was the shortage of ammunition that as Wehrmacht units prepared to meet the final Russian assault on Berlin in April 1945, company commanders were required to report exact figures each morning.[55]

The main thrust of the Allied air campaign between May and September 1944 was directed against Germany's synthetic oil installations, which produced ninety percent of the Reich's aviation fuel and thirty percent of its motor gasoline. As a result of the bombing, synthetic oil production slid from an average of 359,000 tons in the four months preceding the onset of the raids to 24,000 tons in September. The output of aviation fuel from these plants tumbled from 175,000 tons in April to 5,000 tons in the same period, while oil and aviation fuel stocks also fell by two-thirds. By the end of the year, the German military machine was literally running out of gas.[56]

After September, the focus of the air offensive shifted to Germany's transportation and communication system. Raids on rail, road, and water transport were, in many respects, more effective than the assault on oil, reducing traffic by fifty percent during the last year of the war. Since 1943, much of German production had been parceled out to different dispersal sites to prevent a single blow from destroying a key industrial choke point. By the end of 1944, however, even if crucial parts or weapons were produced, they could not reach assembly areas or soldiers at the front.[57] With the transportation system in tat-

53. Overy, *The Air War*, 123. These views are elaborated in Overy's *War and Economy in the Third Reich* (Oxford and New York: Clarendon Press, 1994).

54. USSBS, *The Effects of Strategic Bombing on the German War Economy*, 143.

55. Anthony Beevor, *The Fall of Berlin 1945*, (New York: Viking, 2002), 162.

56. USSBS, *The Effects of Strategic Bombing on the German War Economy*, 12. For a narrative summary of developments in the war's final phase, see 26–28. See also Sebastian Cox's introduction to Britain's counterpart to the USSBS, British Bombing Survey Unit, *The Strategic Air War Against Germany 1939–1945. Report of the British Bombing Survey Unit* (London: Portland, 1998), xvii–xli.

57. On the critical breakdown of the German transportation system, and especially the impact of destroying railroad marshalling yards, see Alfred C. Mierzejewski, *The Collapse of the German War Economy, 1944–1945. Allied Air Power and the German National Railway*, (Chapel Hill: University of

ters, the national economy dissolved into a handful of relatively isolated regional economic zones. The Ruhr was largely severed from the remainder of Germany, which more than halved total coal shipments, on which so much of German industry depended, from 75,000 carloads in June 1944 to 39,000 in January 1945, to 28,000 in March 1945.[58] "Our entire military trouble can be traced back to the enemy's air superiority," Goebbels noted forlornly in his diary in March 1945. "In practice, a coordinated conduct [of the war] is no longer possible in the Reich. We no longer have control over transportation and communication links. Not only our cities, but also our industries are for the most part destroyed. The result is a deep break in Germany's war morale."[59]

The bombing had important indirect consequences as well. In the last year of the war, the German government was compelled to divert twenty percent of the non-agrarian labor force to deal with the massive physical devastation caused by the bombing. Two and a half million workers were engaged in clearing rubble, laying track, repairing or rebuilding damaged structures, and other activities related to factory dispersal. Another million labored in anti-aircraft and related civil defense duties.[60] Almost seventy percent of Germany's heavy anti-aircraft artillery had been stationed inside the Reich in 1942, and although that figure dropped to fifty-five percent in 1943, defense against the bombers meant that these forces and their dreaded 88s were not being used in anti-tank operations on the Eastern Front.[61]

The intensified bombing in 1943 had compelled the Germans to deploy the bulk of their fighter forces to defend the Reich, seriously weakening German air power on the Eastern and Mediterranean fronts. It also led to a significant shift in German aircraft production priorities, away from bombers, which had contributed so much to the Wehrmacht's successful offensive operations early in the war, to fighter aircraft for defense of the Reich. In 1942, at the height of the German offensive in the east, bombers comprised more than half of all Luftwaffe aircraft, by 1944 only eighteen percent. Moreover, during the critical months of 1943–44, more than two-thirds of Germany's fighters were drawn into the battle raging over Germany.[62]

As the Allied air forces, brimming with aircraft and crews, mounted their air

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North Carolina Press, 1988), 124–76. See also Horst Boog, "Invasion to Surrender: The Defense of Germany," in Charles F. Brower, ed., *World War II in Europe. The Final Year* (New York: St. Martin's, 1998), 150–51.

58. USSBS, *The Effects of Strategic Bombing on the German War Economy*, 127.

59. Because of the constant bombing, "people in the western provinces can no longer get any sleep at all and as a result are becoming nervous, hysterical, and irritated." Diary entry, March 22, 1945, in Elke Fröhlich, ed., *Die Tagebücher von Joseph Goebbels*, 24 vols. in 26, (Munich and New York: K.G. Saur, 1987–2004), 15, II: 569.

60. USSBS, *The Effects of Strategic Bombing on the German War Economy*, 13.

61. Sebastian Cox, Introduction to *The Strategic Air War Against Germany. Report of the British Bombing Survey Unit*, xxxiv.

62. Overy, *Why the Allies Won*, 128–29.

offensive in the last year of the war, German defenses were simply overwhelmed. The drastic attrition of the Luftwaffe, begun in early 1944, accelerated, and neither the appearance of the Me–262 jet fighters nor the *Vergeltungswaffen* (vengeance weapons), the *Wunderwaffen* much ballyhooed by Nazi propaganda and eagerly awaited by the German public, could reverse the tide. With the Allied armies closing the vise on Germany, some flak batteries were shifted to the fronts to reinforce artillery forces, and a number of cities were stripped of their air defenses, others seriously weakened. Fighter units were also transferred to the east, reversing the trend of the previous two years. From this, Friedrich concludes that German cities in the last months of the war were largely undefended, and the Allies "operated virtually without losses (*sogut wie verlustfrei*)." The Allied air assault on Germany in these months was a "waltz of destruction . . . liberated," he maintains, "from virtually any military purposes and free from any risk of combat."[63]

That would have come as news to British and American aircrews. Allied losses in 1945 were certainly lower than at their pinnacle in the spring of 1944, but Bomber Command lost 133 aircraft in January, 169 in February, 215 in March, and 73 in April, for a total of 590 aircraft. Since Bomber Command's front line strength was roughly 1,600, approximately one-third of its planes had gone down since January. Losses for the Americans also remained high in 1945: The Eighth Air Force lost 379 heavy bombers between January and May, and losses from the Fifteenth brought the total to more than 500. In the final eleven months of the air war, 1,096 Eighth Air Force heavy bombers had been shot down, the majority by flak.[64]

In these last months of the war, Dresden, Pforzheim, Würzburg, and other German towns and cities suffered ghastly fates, as Allied bombers devastated one city after another, and low flying aircraft (*Tiefflieger*) strafed even small towns and rural areas. No place in Germany was safe. Harris continued his relentless campaign against cities in spite of a commitment to devote his resources to the oil offensive, and the Americans, relying during bad weather on radar to bomb through the clouds, flew missions that were area raids in effect, if not intent.[65]

63. Friedrich, *Der Brand*, 107–8. "Eine von militärischen Zwecken fast entbundene, von jedem Gefechtsrisiko befreite Vernichtungswalz bearbeitete von Januar bis Mai 1945 noch einmal das Land."

64. For RAF losses, see Neillands, *The Bomber War*, 396. The American figures are found in the USAAF's *Statistical Summary of Eighth Air Force Operations. European Theater. 17 August 1942-May 8 1945*, n.d., 61. See also Edward B. Westermann, *Flak. German Anti-aircraft Defenses 1914–1945* (Lawrence, KS: University Press of Kansas, 2001). For a discussion of the impact of those casualty rates on Allied aircrews and their attitudes toward the air war over Germany, see Mark K. Wells, *Courage and Air Warfare. The Allied Aircrew Experience in the Second World War* (London: F. Cass, 1995), and John C. McManus, *Deadly Sky. The American Combat Airman in World War II* (Novato, CA: Presidio, 2000).

65. John F. Fagg, "The Climax of Strategic Operations," in Craven and Cate, *The Army Air Forces in World War II*, vol. III, 715–55. See also Crane, *Bombs, Cities, and Civilians*, 98–104.

For the Germans hiding beneath the bombs, it was the effect, not the intent that mattered.

German morale did not crack under this onslaught (given the oppressive nature of the National Socialist state, serious unrest was unlikely, an uprising hardly possible), but the bombing, as internal Nazi reports on "*Stimmung in der Bevölkerung*" reveal and the USSBS confirms, had a corrosive, demoralizing effect on civilian attitudes. Early in the war, the bombing may have actually increased support for the regime, which exerted itself in a variety of ways to provide aid to victims.[66] Life "*unter den Bomben*" also fostered a sense of community, of shared hardship, as people found themselves increasingly thrown back on one another, on family, on neighbors. "The feeling of belonging to each other rather increased after the aerial attacks," recalled one Heidelberg man who had lost both his home and his business in a raid. Another, a young engineer from Darmstadt agreed: "There was a high degree of mutual helpfulness. People were . . . drawn together by their common misfortune. We were all very close to each other after a raid and helped each other as best we could."[67]

As the raids intensified in 1943 and 1944, the regime sought to boost civilian morale by promising retaliation with new, secret weapons. Indeed, the USSBS found that "faith in the eventual application of new weapons was the main sustaining hope of many Germans." The V-1 rockets, the first of the *Vergeltungswaffen* began landing in England in June 1944, and their use was closely followed by the German public. Within weeks, however, it had become obvious that the V-1 had no deterrent effect on the Anglo-American air forces and could not impede the Allied advance in the West.[68] "The hope that the V-1, called in a popular joke the *Versagen-1* (Failure-1), would have a major impact has greatly diminished," one regional report on morale noted. Since the air raids had continued unabated, "many *Volksgenossen* are now hoping that new, secret weapons will have a greater effect and will bring a fundamental change in the current situation. A disappointment in this area could have disastrous

66. The United States Strategic Bombing Survey (USSBS), *The Effects of Strategic Bombing on the German Morale*, 2 vols., (Washington, DC: USSBS Morale Division, 1947, vol. 1). For the summary results, see 1:1–3. The USSBS's study of German morale was compiled by the Morale Division to determine "the direct and indirect effects of the bombing upon the attitudes, behavior, and health of the civilian population, with particular reference to its effect upon the willingness and capacity of the bombed population to give effective and continued support to the war effort." The USSBS based its conclusions on captured Gestapo reports (*Stimmungsberichte*), civilian letters, and interviews with 3,711 German civilians. These interviews were conducted in German in 1945, and although the questions ultimately related to the effects of bombing, the interviews offer a rich—and virtually untapped—source for analyzing social life in wartime Germany. They are not multiple-choice or short answer but far-ranging, even rambling interviews, and although one obviously must consider the circumstances (German citizens being interviewed by occupation forces), they strike me as remarkably frank and useful.

67. The quotes are from pre-test interviews, not numbered, USSBS, National Archives, College Park, Maryland. Record Group 243, File 64 (b)f.

68. USSBS, *The Effects of Strategic Bombing on German Morale*, vol. I, 44–45.

consequences for the people's morale."[69] The much heralded introduction of the V-2 rocket in the fall was again met with great anticipation, but by December, regional officials had to report that "it has had as yet no real effect on morale. The people have also grown skeptical about the introduction of more weapons." The general feeling was that it was simply too late.[70]

With the regime increasingly unable to protect the populace, uneasiness, fatigue, and resentment against the Nazis mounted. German civilians found the British nighttime raids more disruptive and unnerving than the American daylight attacks,[71] but the sight of large formations of enemy bombers sweeping over in broad daylight, apparently unmolested by the Luftwaffe, was particularly demoralizing. A *Sicherheitsdienst* (SD) report of July 14, 1944, sounded what would become a characteristic refrain: "The fact that the *Terrorflieger* could make their way in broad daylight to their targets in important war industries without being hindered by German fighters . . . has had quite a negative impact on morale and strengthened the feeling that we are delivered over to the whims of the enemy."[72]

By the end of 1944, reports from Bavarian regional districts were laced with worries about the debilitating effects of the bombing in cities and *Tiefflieger* in the countryside. "Signs of war weariness and apathy concerning the course of the war can be detected," the authorities commented in December 1944, "especially in the rural population." There was widespread fear that "the small towns and villages will soon be sought out by terror flyers." By spring, that fear had become a grim reality. In their report for March, authorities from the Regensburg area noted glumly that "the frequent terror attacks on cities and villages as well as the virtually unhindered terrorizing of town and country by strafing (*Tiefflieger*), together with the stories of refugees from the east about their flight, weighed most heavily on the entire population."[73] Commenting on the mood of the people in early 1945, a similar report concluded that "an upswing in general morale will only come about if success can be attained in

69. These monthly reports of the *Regierungspräsidenten* followed a prescribed form, beginning with a discussion of the political situation and an evaluation of morale. See the report for München Oberbayern, August 7, 1944, Bayerisches Hauptstaatsarchiv (BHStA), Munich, MA 106–695.

70. District report from Regensburg, December 11, 1944, BHStA, MA 106 696.

71. Eighty-two percent of those interviewed indicated that night raids were worse. USSBS, *The Effects of Strategic Bombing on German Morale*, vol. I, 28–29.

72. SD report, July 14, 1944, in Heinz Boberach, ed., *Meldungen aus dem Reich. Die geheimen Lageberichte des Sicherheitsdienstes der SS 1938–1945*, 17 vols., (Herrsching: Pawlak, 1984) 17:6,650–51. The monthly situation report in October 1944 for München-Oberbayern echoed that sentiment: "Concerns are heightened by the new terror attacks on Munich, the increasing harassing attacks by single aircraft on trains, farms, and individuals. The population is also very impressed by the orderly parade-like flights of the enemy air force over our area, which are taken as a sign of the weakness of our air forces." Report of October 7, 1944. BHStA, MA 106–695.

73. District report for München-Oberbayern, December 7, 1944, and Regensburg, March 10, 1945, in BHStA, MA 106 695 and MA 106 696.

breaking the enemy's air superiority, thus . . . protecting the homeland from the actions of the enemy air forces."[74]

"The people are beginning to suffer from what is called bunker fever and inability to work," the Wuppertal SD reported in January 1945. "The faith in our leading men, including the Führer, is rapidly disappearing. They are thoroughly fed up with Goebbels' articles and speeches and say that he too often has lied to the German people and talked too big. The attitude toward National Socialism is characterized by the following saying: 'If we have not yet collapsed, it is not *because* of National Socialism but *in spite* of National Socialism.'"[75] An elderly Hamburg woman who worked with her husband as a hotel manager remembered that "the most remarkable thing one noticed when one sat in the air raid shelter was how the people cursed the Nazis more and more as time went on, without inhibitions or reservations . . . never was the cursing about England or America. Always it was about the Nazis. And it got worse and worse." Watching his city consumed in flames, a Lübeck man and his neighbors "were all of the opinion that we had Hitler to thank for all this misery."[76] Typical of those final desperate months of the war was a sign hanging from a water pipe in a small train station between Mainz and Koblenz: "Whilst at this tap you stand and queue, Admire what Adolf's done for you."[77]

These complaints certainly did not translate into active opposition to the regime. Repeated heavy bombardment did not engender feelings of rebellion but a mood of sullen apathy and a devouring absorption with the basic task of survival. The USSBS concluded that while the bombing had a demoralizing effect on civilian attitudes (*Stimmung*), its impact on behavior (*Haltung*) was less pronounced. Deeply engrained work habits, Nazi propaganda, and fear of the regime all played a role to keep weary Germans at their jobs.[78] "During the last

74. A March report from Regenburg noted that "reasons for the military defeats are everywhere attributed to Russian tank superiority as well as enemy air superiority. Especially the air superiority of the enemy leads again and again to the sharpest condemnation of the German Luftwaffe, in which the person of the supreme commander of the Luftwaffe himself is increasingly drawn into this criticism." District report for Regensburg, March 10, 1945, BHStA, MA 106 696. See also the report for München-Oberbayern, November 8, 1944, BHStA, MA 106 695.

75. USSBS, *The Effects of Strategic Bombing on German Morale*, vol. I, 51.

76. USSBS, Schedule B Interviews, Numbers 61294 and 61154, NARA, RG 243. Only one-third of those interviewed admitted to blaming the Allies for the bombing; almost half did not. USSBS, *The Effects of Strategic Bombing on German Morale*, 20. A common complaint was that the Nazis never gave accurate accounts of casualties from the raids: "The press never gave the correct number of casualties, and never pictured the true state of mind here. Rather they sought to veil the truth, which was the people had broken down completely and believed that the war could never be brought to a successful end." Resentment also mounted that Goebbels tended to emphasize the destruction of Germany's cultural heritage, rather than casualties. "He could afford to talk that way, for he was sitting quite safely in his bunker and did not have to suffer and worry for his life."

77. Heidi Prüfer's recollections in Colin and Eileen Townsend, *War Wives. A Second World War Anthology* (London: Grafton Books, 1989), 158–62.

78. USSBS, *The Effects of Strategic Bombing on German Morale*, vol. I, 14–15.

months of the war," a woman from Wetzlar explained, "my only thought was to keep alive, to keep safe in the cellar, and to get a little food cooked."[79] Survival was the order of the day—a sentiment reflected in the common Berlin farewell of 1945: "*Bleib übrig!*"[80]

Gripped by desperation, the Nazis issued fanatical appeals to fight "to the last bullet." In February, Fritz Wächter, the Gauleiter of Bayreuth, warned his beleaguered population that "if coal, gas, and electricity are in short supply now, what is all that compared to our enemies' sadistic Jewish plans for our destruction? And even if our food rations were cut still further, we would look back at these reduced living conditions as a paradise if the Bolshevik and his plutocratic helpers become masters of the Reich. . . . All our men will be taken to Siberia. Our women will be violated, our children dragged away." There was only one answer: "*Kampf, Kampf und weiter Kampf.*" Defeatism would not be tolerated. "Cowards, troublemakers and traitors," the Gauleiter warned, would be ruthlessly "exterminated."[81]

It has become fashionable to speak of the "liberation" of Germany from the Nazis in 1945, but one should not lose sight of the fact that the Germans resisted their liberation with great tenacity, fighting until Allied armies had overrun all of the Reich, and Russian boots were standing atop Hitler's bunker. Friedrich treats the air campaign in those last brutal months of the war in Europe as unnecessary, contributing little to the military course of events, an act of destructive rage directed against defenseless civilians over Germany's failure to surrender. "Germany was devastated like no civilization before by Bomber Command and two American air forces, though it took them a year longer than anticipated. The capitulation occurred only after two ground offensives from the west and the east had conquered the country." The bombing may have eased the occupation, Friedrich goes on, but "given the prevailing power relationships, Germany could have been conquered without the devastation. That, however, would have cost the conquerors additional casualties."[82] Indeed, Speer estimated that had the bombing ended in the late summer of 1944, Germany could have resisted until early 1946. What, one wonders, would the body count on the battlefields, in the camps, in the towns and cities have been after another eight months to a year of the Third Reich?[83]

Allied bombing continued because the war in Europe, which had been grinding mercilessly on since 1939, was not over in June 1944; nor was it over

79. USSBS, Schedule B, Interview Number 61890, NARA, RG 243.

80. Anthony Beevor, *The Fall of Berlin*, 2.

81. "Für Freiheit und Ehre," Fritz Wächter, Gauleiter, in *Regensburger Kurier. Amtliche Tageszeitung des Gaues Bayreuth der NSDAP*, February 6, 1945.

82. Friedrich, *Der Brand*, 120.

83. Albert Speer quoted in Alfred C. Mierzejewski, *The Collapse of the German War Economy*, 184.

in January or February or March 1945. Whether out of fear of the Nazi authorities or of the approaching Red Army or out of lingering commitment to the National Socialist state, the Germans fought "*bis zum bitteren Ende*," killing hundreds of thousands of Allied troops—and civilians in the occupied countries in the process. British and American soldiers fell by the thousands in their push into Germany—the Americans suffered more than ten thousand casualties in the Hürtgen Forest near Aachen between September and December, 1944, and the surprise German offensive in the Ardennes that began on December 16, 1944, and carried over into mid-January 1945 was the deadliest battle in American history. Between D-Day and the end of April, the U.S. lost 135,576 in Western Europe, while other Western Allies suffered another sixty thousand killed in action. Soviet losses were even greater. The Red Army absorbed more than three hundred thousand combat fatalities in the final drive on Berlin in April, and with the Anglo-American armies only miles away, SS fanatics continued murdering prisoners at Buchenwald, Dachau, Bergen-Belsen, and Sachsenhausen.[84]

Far from being defeated by the winter of 1944 to 1945, the Wehrmacht seemed to have regrouped, while the Western Allies, to their chagrin, discovered that they were short of troops. In early 1945, ground personnel from the Army Air Forces were transferred to the infantry, and unseasoned units from the U.S. were rushed into battle without adequate training. Until the final days of the war, Eisenhower was convinced, mistakenly, that Hitler was funneling troops and materiel into the so-called "Alpine redoubt" in preparation for a bloody *Götterdämmerung* that might drag on for months. Ground commanders pressed the air forces to do all they could to bring pressure on the enemy. Harris, despite tepid efforts by his technical superior Portal to reign him in, clung to his conviction that city busting would win the war, and the Americans succumbed to the temptation to try and deal a knockout blow to the Third Reich. And so the onslaught continued.[85]

The distinguished literary critic Paul Fussell, a combat infantry officer in the American Seventh Army, badly wounded in Germany in March 1945, spoke for many when, in his memoirs, he wrote of those last months:

> We knew the Germans had lost the war, and they knew it too. . . . It was the terrible necessity of the Germans' pedantically, literally *enacting* their defeat

84. For casualty in the last months of fighting, see Gerhard Weinberg, *A World at Arms. A Global History of World War II* (Cambridge: Cambridge University Press, 1994), 894–97; Williamson Murray and Allan R. Millet, *A War to be Won. Fighting the Second World War* (Cambridge, MA, and London: Belknap Press of Harvard University Press, 2000), 374–482; and Martin K. Sorge, *The Other Price of Hitler's War. German Military and Civilian Losses Resulting from World War II*, (New York and West Port, CT: Greenwood Press, 1986).

85. See Crane, *Bombs, Cities, and Civilians*, 93–119; Hastings, *Bomber Command*, 326–45; and Biddle, *Rhetoric and Reality*, 245.

that we found so disheartening. Since it was clear that we were going to win, why did we have to enact the victory physically and kill them and ourselves in the process?[86]

Neither Britain nor the U.S. pursued a policy of annihilation against the Germans, as Friedrich's overheated terminology suggests, nor was Allied policy "fed as much by *Vergeltung* as strategy."[87] The war in the air, but especially strategic bombing, was an utterly new experience for everyone involved, from the British and American military men who formulated air doctrine in the late 1930s, to the young crews who executed it, to those hiding beneath the bombs. There were no historical precedents, no guidelines for the planners or the crews, and no preparation for those in the target cities. No one, either on the ground or in the planes overhead, was prepared for what the air war meant. A plan of strategic bombing involved attacking obvious military targets, but those targets were now defined more broadly and tended to be located in heavily populated areas. Civilians lived in these target towns and cities, and civilians, both planners and crews understood, would now inevitably be casualties. Thus, more than any other form of combat, strategic bombing captures in all its horror and complexity the moral ambiguity of modern war.

The strategic bombing of Germany certainly did not win the war, and the claims of the Allied air commanders, not to mention inter-war theorists, were often wildly exaggerated. The gap between rhetoric and reality, between strategic thought and operational capabilities, as Tami Davis Biddle has demonstrated, was considerable, and as a result, "both air forces moved toward much less discriminate forms of bombing than they had used in the opening phases of the war."[88] Germany in particular, and modern industrial society in general, proved more flexible and its citizens more resilient than advocates of strategic bombing had expected.

But strategic bombing did make a major contribution to the Allied victory over the Third Reich. It depleted Germany's economic might, depressed the morale of its subjects, weakened the Wehrmacht on all fronts, shortened the war, and saved Allied—particularly British and American—lives. In the brutal

86. Paul Fussell, *Doing Battle. The Making of a Skeptic* (Boston: Little, Brown and Co., 1996), 125.

87. The objective of Allied bombing was not annihilation. On this point, see Omer Bartov, *Germany's War and the Holocaust. Disputed Histories* (Ithaca, NY: Cornell University Press, 2003), 3–32, especially 12–13. See also Michael Burleigh, *The Third Reich. A New History*, (New York: Hill and Wang, 2000), 743–747. Virtually all the works cited in this paper deal in one way or another with the moral issues raised by bombing in the Second World War. For additional reading, see Stephen A. Garrett, *Ethics and Airpower in World War II. The British Bombing of German Cities*, (New York: St. Martin's, 1993; London and New York: I.B. Tauris, 2001); Connelly, *Reaching for the Stars*, especially 137–158; and W. Hays Parks, "Luftkrieg und Kriegsvölkerrecht," and Manfred Messerschmidt, "Strategischer Luftkrieg und Völkerrecht," both in Boog, ed., *Luftkriegführung im Zweiten Weltkrieg*, 351–434.

88. Biddle, *Rhetoric and Reality in Air Warfare*, 286–89.

moral calculus of total war, that is exactly what it was intended to do. Although Germany, after a slow start, was able to coax considerable production out of its war industries between 1942 and 1944, the Anglo-American air offensive, as Richard Overy has observed, placed a ceiling on that production, "which was well below what Germany, with skillful and more urgent management of its resources, was capable of producing after 1943." Without the bombing, Speer and his colleagues would have had "the same freedom as that enjoyed in the United States to plan, build, and operate the war economy without interruption and as near to the economic optimum as possible."[89] I would also suggest that more than any other single wartime experience, the bombing and its awful devastation brought home to Germans that the war had been lost, that Germany had been defeated. There would be no *Dolchstoss* legend after 1945 to haunt Germany's new post-war democracy.

That said, the human costs were staggeringly high. Five hundred thousand Germans perished in the Anglo-American air campaign, and roughly 140,000 Allied airmen died in the skies over Europe. The bombing of Germany was one among many grisly chapters in a war that consumed a generation around the globe and whose reverberations, sixty years after the killing stopped, resound with us still. Peter Schneider concluded his *New York Times* review of Friedrich by remarking that "it is probably only possible now, after the realization of the terrible things the Germans did to other nations, to remember the extent to which they themselves became victims of the war they unleashed." For Germans, remembering those horrific scenes in Hamburg and Dresden and Pforzheim, drawn so starkly by Friedrich and Sebald, should open "their eyes to and enhance their understanding of the destruction that the Nazi Germans brought upon other nations."[90] The bombing of Germany and the lives it devastated, both on the ground and in the air, should also serve as a daunting reminder to all that in war, as Ambassador Grew grimly prophesied, the descent into hell is easy.

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89. Overy, *The Air War*, 122–23.
90. Peter Schneider, *New York Times*, January 18, 2003.