Bomb them into submission. Not a pretty statement but the simple truth. This was the objective of the Western Allies' bombing campaigns in World War II. Attaining this end state was the focus of two of the most successful practitioners of bombing in history, Curtis LeMay and Sir Arthur Harris. Yet the incredible determination of these two individuals to adhere to this critical principle of war appears all but forgotten in 1998. Given the incredible amount of discourse since World War II over the Strategic Bombing Campaign against Germany and Japan, it is not surprising that the objective of that bombing, and that war, has been obscured by other issues:

Scarcely had the fighting ended in the Second World War when a great debate broke out in the Western World over the way the war had been planned, fought and concluded.

These issues, like the ethics or morality of bombing, have also served as the springboard to attack LeMay and Harris, and the hundreds of thousands of airmen they represent. The illogical conclusion of these arguments is the sudden transmogrification of the genocidal Nazis and the Japanese militarists into victims, and the equally unbelievable transformation of the Allied aircrew into murderers. This paper will redress this imbalance, and loss of memory of the "big picture" of World War II, by examining the conduct of bombing by LeMay and Harris through the prism of the principle of war the "objective".

This discussion will include three parts. First, a brief review of the context of World War II must be presented with emphasis on the prewar air power and doctrine theorists. This review will clearly show that LeMay and Harris were "products" of their respective "systems" that provided the foundation of their success. Second, the efforts of LeMay and Harris in World War II will be presented. Key to this discussion will be their use of innovation, in tactics and technology, to maintain the objective. Then the lessons of LeMay and Harris from World War II will be compared to the USAF doctrine of today to show the continued relevance and applicability.

In 1996 John Keegan, arguably the preeminent historian of World War II, wrote a short book entitled The Battle For History Refighting World War Two. In that book, bombing is blamed for not halting the Nazi's genocide of the Jews and hence, "introduces the general question of its utility-and so, of its morality-as a means of waging war." Yet Keegan does "unquestionably" credit bombing with the defeat of Japan. This brief summation is however just another unfair juxtaposition of late 20th century values with mid 20th century reality. There should be no confusion that John Keegan is alone in his conclusions on the air campaign. Many others have came to the same type of conclusions, that air power had a dubious impact on the war and/or was an aberration.
best forgotten. If those conclusions are not reached then the most likely statement to sum up the bombing campaigns in World War II is words to the effect of, "the controversy/debate shall not end soon." Finally there are many who have credited bombing with being one of the decisive elements in victory.

The problem with this long running debate is that very often it is taken completely out of context. Not only out of context of the World of the 1930s and 1940s but out of context of the prevailing views on warfighting that existed at that time. Almost all works on the bombing war begin with at least a brief mention of the theories Giulio Douhet, William "Billy" Mitchell and Sir Hugh Trenchard. Yet important factors such as that British wartime Prime Minister Churchill and President Roosevelt were profoundly affected by the theories of air power, are often not mentioned.

This is important because in the interwar period the British used air power and specifically bombing to "police" parts of the Empire. Bombing fit nicely into the long-standing British tradition of a cheap yet effective method of retaining order in places such as Iraq and Sudan. Not surprising in a nation that always ran it's empire in a most frugal manner. Hence it is also not surprising that Arthur Harris would spend the interwar years flying and commanding air units in the Middle East keeping pax britannia. In a different context yet with the same result America grappled with air power theorists in the interwar period.

Billy Mitchell’s "heresies" and ensuing courts martial ensured public knowledge of air power. Although the Navy worked to keep it out the press, the Army air forces’ "bombing" of the Utah and Rex ensured a frame of reference for later bombing arguments. Not surprisingly Curtis LeMay played a role in both of these demonstrations of air power, as well as the B-17 tour of S. America in 1938. The key difference between the UK and US was in semantics as both nations, at least their "air forces," were committed to the bomber. The British freely admitted the offensive role of the bomber. Bombers would take the battle to the enemy's homelands, ensuring that never again would a British generation be "lost" in the trenches, as happened in World War I. Conversely, the American Airmen spoke of the defensive abilities of bombers, such as that an enemy fleet could be destroyed far off the coast. This evolved into the now infamous theory that the bomber could always get through and then with pinpoint accuracy destroy the enemy by bombing vital industries. Later in World War II these semantics would appear as the "area" versus "precision" debate between the USAAF and Bomber Command. Yet as was shown in the war the line between precision and area bombing eventually blurred to the point of being irrelevant.

Yet through all of these discussions of air power, few mention the effect of the foundation of doctrine, the principles of war, on the conduct of the air war. Both Great Britain and the United States had published principles of war in the 1920s and the discussion of these lists had gone on throughout the interwar period. When one returns to the lists of principles in those texts it becomes clear as to why the war, and the bomber portion, was fought the way it was.
In the 1920 *Field Service Regulations* vol. II *Operations* eight principles of war were articulated to British soldiers. The first principle listed is "Maintenance of the Objective." In 1921 the US War Department published *TR 10-5, Doctrines, Principles, and Methods*. "The Principle of the Objective" is the first one listed. In subsequent reiterations the *Objective* retained primacy and by 1941 had evolved in the US to mean;

The ultimate objective of all military operations is the destruction of the enemy’s armed forces in battle. The ability to select objectives whose attainment contributes most decisively and quickly to the defeat of the hostile armed forces is one attribute of the able commander.

Interesting to note at this point is that General Montgomery in 1945 listed Air power as a principle of war. Also of import is to note that by 1949 the *objective’s* definition had grown to include the words "and his will to fight" in the first sentence noted above.

Air power theorists before and during the war were stating that the *objective* described above could be obtained through bombing. Trenchard and Mitchell enabled their respective countries, whether those countries realized it or wanted it, to be ready for the air war in World War II. They believed that bombing could force an enemy into surrender and win a war without the horrible bloodshed of World War I. Many have argued that it was the failure of bombing to win the war single handedly as "promised" or prophesized in World War II that made it failure. Yet this over simplification ignores the difference between trying to prove a theory correct, and in doing so helping to win a war, and the fact that the theory did not completely ring true. This is certainly not justification to deem something a failure.

What then was the *objective* in World War II? The answer to that question is as deceptively simple as its answer-the defeat of the Axis powers. The critical part of the *objective* is in how it was attained. Herein lies the answer to the question of why bombing played such a prominent role in the war and by extension why Harris and LeMay played such important roles. The development of the *objective* in the democratic tradition is usually decided with the input of many but the final decision is that of the government. In World War II there was no exception to this rule and contrary to what their detractors say LeMay and Harris followed through with their orders whether they had originally agreed with them or not. For example, Curtis LeMay stated, "good soldiering requires further that you get to work and carry out their orders their way (italics in original)." It must be remembered that both Churchill and FDR are in contention for person of the century and they may very likely share that honour. It was these two individuals who, in the public’s interest and with the public’s overwhelming approval, made the decisions of the war. These decisions included those concerning bombing.

There can be no doubt that FDR and Churchill set the policy and probably more importantly the tone of the war effort. Bombing policy was clearly enunciated at Casablanca in the *POINTBLANK* directive of 14 May 1943. A policy that semantically gave both nations what they wanted in theory but that achieved the same result in practice. That is the eventual disruption of Germany’s ability to support its fighting
forces and in conjunction with the ground forces to defeat Germany. Much has been made of Harris’s aversion to panacea targets. Yet LeMay also wrote against panaceas comparing them to the "Fountain of Youth." Whether oil or ball bearings both men knew that only a sustained campaign against all the targets mentioned in POINTBLANK, which in fact meant almost anything in Germany, could victory be won. Many note the tonnage dropped by the 8th AAF on "precision" targets but in fact, the statistics show that Harris' Bomber Command dropped more tonnage and hence did not solely focus on "area" bombing.

Working alone in the air offensive against Japan the US strategy was limited until the fall of Germany. Then the dual affects of naval blockade, in which the USN achieved what the U-boats never could, and fire bombing forcing Japan to capitulation. This American strategy was based on the solitary aim of expediting the end of the war in the Pacific and thus bringing the "boys" home.

The stage is now set to discuss why Curtis LeMay and Arthur Harris clearly demonstrated the principle of war the objective in World War II. Through a look at their characteristics and war record one can see that their tenacious approach to warfighting earned them a place amongst the great warriors of all time. One might ask why this paper is not about the higher ranking heroes of the air war such as "Hap" Arnold, Carl Spaatz, Sir Arthur Tedder, or Sir Charles Portal, all of whom played a critical role in not only the bombing campaigns but in the planning and conduct of the entire war. This role in the grand strategy is precisely why they are not included in this paper.

LeMay was an innovator, "probably the most innovative air commander of World War II." At least one biographer has even gone as far as to state that "his fame and ingenuity as an air commander far exceeded even that of Gen. George Patton as a ground commander." His ability to maintain the objective was clearly demonstrated in his great tactical innovations, formation flying against Germany and low level night bombing against Japan. The story of how as commander of the 305th Bombardment Group Curtis LeMay decided how to improve bombing accuracy is indicative of his ingenuity. In order to bomb accurately he reasoned with the shortest exposure to enemy fire, and hence less chance of becoming a casualty, was to fly in a straight line. Only with accuracy, which could not be attained during evasive maneuvers, would bombing be effective and hence achieve the aim-winning the war. LeMay also addressed the need for better protection from fighters with the creation of the Combat Box formation. The effectiveness of these radical innovations was confirmed as the entire 8th USAAF adopted LeMay's strategies. The result of these discoveries, coupled with long range fighter support, not only meant better results but also fewer casualties. Later external pressure, from above that is, would drive LeMay's thinking in the Pacific Theatre.

LeMay's next tactical innovation was implemented under pressure to get results or be fired. The bombing campaign against Japan was, until his changes, relatively ineffective and the high command was looking for someone to revitalize the effort. LeMay was the obvious choice. Shortly after arriving he, among other changes, decided that low level area bombing of Japanese cities was the answer. The result was the most destructive bombing raid, including the later atomic attacks on Hiroshima and
Nagasaki, in history on Tokyo on March 9-10, 1945. This raid was followed by the most destructive, in terms of lives lost and urban infrastructure destroyed, bombing campaign in history. This campaign resulted in the destruction of much of the urban areas of Japan. Conventional bombing was so effective against Japan that it became one of the factors in the endless postwar debate on the necessity of the atomic bombing of Japan.\textsuperscript{33} LeMay's innovations then demonstrate his tenacious approach to achieving the \textit{objective}. Clearly of importance is that these examples show an ability to fulfil the aim to achieve victory.

Harris was also an innovator in that he maintained a steady pressure to achieve technical superiority in the air offensive against Germany. It is estimated that one thousand British Bombers were saved, a 13\% reduction, in the most extensive electronic war in history.\textsuperscript{34} Much of Harris' book \textit{Bomber Offensive} is devoted to his focus on survivability for his crews through technical and tactical innovation. In order to obtain the necessary equipment for the campaign Harris had to be Bomber Command's chief promoter. Harris spent much of the war lobbying all whom he could of the value of bombing and this was very important to the success of Bomber Command.\textsuperscript{35} He knew that to achieve the \textit{objective} set for him in \textit{Bombing Directive No. 22} and later in \textit{POINTBLANK} he had a vital role. He was of course appointed during the times in World War II when hope was little, replacing what the high command believed to be a less suitable man for the job. Not unusual in war as shown by LeMay's replacement of H.S. Hansell in the Pacific and countless other changes of command in World War II.

Harris's Bomber Command produced much for the Allied public relations, read propaganda, campaign during the war. For example, in Canada the "voice of doom", Lorne Greene of the Canadian Broadcasting Corporation, kept the public informed of the German cities and other installations destroyed by Bomber Command.\textsuperscript{36} It was the results of attacks like the famous Dams Raids or the 1,000 Bomber "millennium raids", and their affects that helped sustain British and Allied morale during the war. In all the years that ground troops could not be committed to the Second Front the bombers continued to meet it out to the enemy, as Churchill stated over and over again to the British people.

Harris must most of all be noted for his support to the prebombing campaign for \textit{OVERLORD}. Despite the fact that to switch subordinate objectives contravenes the intent of the principle of the \textit{objective}, and that Harris' own views on how he should support D-Day were different then how he was ordered, Harris provided incredible assistance to Eisenhower.\textsuperscript{37} The truth of this can be found in the correspondence between the two and most importantly in the citation for the Distinguished Service Medal given to Harris by the United States in September 1945. The last two lines of that citation exemplify Harris' contribution to the \textit{objective}:

\begin{quote}
The Ground Forces will ever remember with thankfulness the skill and effectiveness of his support, both strategically and tactically, to their own operations. He forged in the Royal Air Force Bomber Command one of the most potent weapons of war which brought about the total destruction of the enemy.\textsuperscript{38}
\end{quote}
The greatest demonstration of how Harris and LeMay strictly focused on the objective is
given by the crews. Harris and LeMay were both trained professional military men.
Their crews were primarily citizen soldiers trained in only one specialty, who had little
idea of such ethereal concepts as principles of war. The primary aim of most air crew
was to survive their tour of 25 or 30 missions. Yet those same crews knew why they
could trust Harris and LeMay and the others like them. The crews knew that war would
be over quicker with more chance of their own survival with leaders like LeMay and
Harris.39

This fact cannot be overstated. LeMay personally lead many of the missions he sent his
troops on, including the infamous Schweinfurt/Regensburg shuttle raid in October
1943, until he was grounded. This ensured that the aircrews knew that he was risking
himself to prove his ideas. Harris due to many factors, including the fact the Chief of Air
Staff would never have let him, never was able to fly a mission as commander of Bomber
Command. Yet his airmen still knew that he cared for them and was doing everything
possible for their welfare. This is exemplified by the almost unanimous support Harris
has had from aircrew veterans since the war. It is these men who, if anyone, has the
right to pass negative judgement on Harris and they certainly do not. Of course this is
because they, like their counterparts not only in the USAAF but all those who fought the
war, understand the context of what was happening at the time.

The 1997 version of Air Force Doctrine Document 1 (AFDD-1) rightfully warns of the
doctrinal disease called "dogma".40 Yet one must remember that doctrine is vital to
warfighting as stated by Curtis LeMay:

> At the very heart of war lies doctrine. It represents the central beliefs for
> waging war in order to achieve victory.... It is the building material for
> strategy. It is fundamental to sound judgement.41

Only with the constant review and amendment, when necessary, can doctrine remain
current and valid. Hence given the continued debate and interest in improving US
document, and by definition the ability of American forces to fight, the state of that
doctrine must be relatively healthy. An example of this vitality can be seen in a recent
article entitled "No More Principles of War?" in Parameters, that shows the continued
debate.42

The principles of war are the "enduring bedrock of US military doctrine."43 The objective
remains of paramount importance because it answers the fundamental question of why
there is a war being fought in the first place. Not surprisingly then, the definition of the
objective has not changed much since World War II, "the objective of combat operations
is the destruction of the enemy armed forces' capabilities and will to fight."44 Clearly this
definition was written with the efforts of LeMay and Harris as part of its basis.

The lessons of Harris and LeMay continue to be relevant today. In Joint Pub 1 the
example of OVERLORD "a Classic Joint and Combined Operation" is used for
illustration.45 This is further vindication of Harris's efforts as mentioned above. A
similar example is that of operation ICEBURG, the battle for Okinawa, in which LeMay's
XXI Bomber Command provided bombing support. Moreover, it is certainly not just in joint operations that the lessons of LeMay and Harris are still relevant. For example, in AFDD-1 the reader is reminded in the case of "Strategic Attack" of the importance of striking at the enemy's Centre of Gravity (COGs); "this was the objective during both World War II and DESERT STORM." LeMay and Harris knew this and tried their best to achieve it. The recent words of Gerald Parshall on LeMay, and the words fit just as well for Harris, exemplify his focus on the objective:

His biggest fear was not death but failure. And no one in the Air Force worked harder to avoid it. He trained his crews relentlessly, stretching them, their airships, and himself to the limit.

Therefore just because the times have changed does not mean that the tenacity and courage displayed by Curtis LeMay and Sir Arthur Harris should ever be forgotten. The important point, for example, is not to remember so much the particular tactic that LeMay invented but that he thought it up in the first place. He left the comfort zone of the orthodox tactics of the day and in keeping with trying to achieve the objective greatly assisted the victory. As denoted by the title of Denis Richards' latest book on Bomber Command, the air offensive in World War II certainly was The Hardest Victory. A victory achieved in large part because of the tenacious adherence to the principle of war the objective by two of the greatest practitioners of bombing of all time Curtis LeMay and Sir Arthur Harris.

Notes

1. Whether one believes that this means by "precision" bombing of selected targets to cut critical choke points or "area" bombing of cities, or some combination of the two, is irrelevant because the bottom line in both versions is that bombing could win the war.


3. For a good summation of the controversy see David MacIsaac, "Voices from the Central Blue: The Air Power Theorists," in Makers, 636 to 637.


5. This paper however will not be a biography of LeMay and Harris nor will it address personal issues or post or pre war service except where applicable.


8. Ibid, 27.


11. For example see, Richard Overy *Why the Allies Won* (London: Jonathan Cape, 1995), 133.


13. One of his first innovations in bombing was in Iraq in 1922 when Harris used transport planes for day and night bombing. Dudley Saward, *"Bomber" Harris* (London: Cassell, Buchan & Enright Publishers, 1984), 188.

14. Of course the US did not have a separate Air Force until 1947 and although the British Royal Air Force was separate in World War II it was very much the junior service and treated as such by its Army originators and the Royal Navy.

15. One clear exception to this is Charles Messenger who correctly stated that Harris's main achievement in the war was his "dogged upholding of that principle of war, maintenance of the aim." *"Bomber Harris"and the Strategic Bombing Offensive, 1939-1945* (New York: St. Martin's Press, 1984.), 214.


20. United States Army, *FM 100-5 Field Service Regulations Operations* (22 May 1941), 22.


24. In the Time 100 Special Issue *Leaders and Revolutionaries of the 20th Century* 151, 14, (April 13, 1998), FDR is rated the #1 President of the Century (80) and both of course received a separate article.


27. LeMay, Mission, 289.


31. The story is best told by himself LeMay, Mission, 230-239.

32. For Lemay's version see Ibid 347, for General Arnold's version see Thomas M. Coffey, Hap (New York: Viking Press, 1982), 357.

33. For one of the latest articles in this debate see Dr. Jeffery J. Roberts, "Peering Through Different Bombsights" Airpower Journal (Spring 1998), 66-78.


35. Harris, Bomber, 149-157.


38. Harry Truman, The White House, Citation for Distinguish Service Medal to Air Chief Marshall Sir Arthur Harris, 17 September, 1945.

39. See for example, Victor David Hanson, "The Right Man," Military History Quarterly 8, 3 (Spring 1996), 65, or just ask a veteran.


42. One recent article which clearly demonstrates this is Russell W. Glenn, "No More Principles of War?" Parameters (Spring 1998), 48-66.

43. Joint Pub 1, A-1.

44. Ibid.

45. Ibid, IV-3.

46. AFDD-1, 51.


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This article has undergone security and policy content review and has been approved for public release IAW AFI 35-101.
Every perceptual experience has an objective and a subjective side. We see object size, independent of distance, but we also see that distant | Find, read and cite all the research you need on ResearchGate. Hering brought the objective aspect back into the picture by splitting visual experience into two stages, with sensation representing the subjective side and perception, through cognitive. Subjective and objective complements. A verb phrase may include words or phrases that are complements of other nouns in the sentence rather than complements of the verb, e.g. he looks sick, she became a lawyer, where sick and lawyer are complements of the subjects, and I painted the chair red, we elected Bill president, where red and president are complements to the objects chair and Bill respectively. We use the traditional terms subjective complement for the former and objective complement for the latter. 1. Subjective Complements.