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**DECISION FROM THE SKY: AIRPOWER AS A DECISIVE
INSTRUMENT OF NATIONAL POWER**

BY

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ABSTRACT

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This paper explores airpower as a decisive instrument of national power and examines the key impediments that prevent it from reaching its full potential. The paper begins by examining the use of the term "decisive" within the defense community and offers a definition. Next, three examples of the decisive use of airpower are explored: the Berlin Airlift, Operation Linebacker II, and Operation Deliberate Force. Emphasis is placed on how each operation helped to achieve the stated political objective. Succeeding sections include a look at the evolution of US airpower thinking, current and projected state of airpower capability and role of the decisionmaker in strategy development.

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INTRODUCTION

The United States relies on the Air Force, and the Air Force has never been the decisive factor in a battle in the history of wars.¹

--Saddam Hussein on August 30, 1990

You can either look at history or look at the future...No one is trying to deny the utility of ground forces, but those who assert that only ground forces can be decisive are clearly wrong.²

--General Ronald R. Fogleman on November 21, 1996

Airpower³ as a decisive instrument of national power--myth or reality? Despite what seems incidents of undeniable evidence, airpower advocates continue to defend the instrument's ability to reach decision in a military conflict. It is an emotional issue and one that risks destabilizing the fragile relationship and cooperation among the Army, Navy, Air Force and Marine Corps.

The reasons behind the emotions are many. First, as airpower continues to evolve, some fear the inevitable result will be a significant decline in the value ascribed to land and sea power. They mistake a decisive instrument for the decisive instrument. Second, in times of declining budgets, some skeptics view expenditures on airpower as wasteful. A common refrain heard in the halls of the Pentagon and some war colleges is "[w]ars are won on the ground."⁴ The implication is that all weapon systems best function to support the surface commander. Finally, the employment of airpower as a decisive instrument of national power is largely misunderstood within the military, the American political structure, and among the American public.

The purpose of this paper is to explore airpower as a decisive instrument of national power and examine the key impediments which prevent it from reaching its full potential. The paper's thesis is that for the value of airpower to be fully realized,

expertise in its application must reside in those vested with the authority to select appropriate strategies.

The paper begins by examining the use of the term decisive and offering a definition. Next, three examples of the decisive use of airpower will be explored. Succeeding sections will include a brief look at US airpower thinking and the current and projected state of airpower capability and strategies.

SECTION I

Defining the Term

How many a dispute could have been deflated into a single paragraph if the disputants had just dared to define their terms.⁵

--Aristotle

"Decisive" is the adjective of choice for military historians and the like when portraying critical events in warfare. As the victory that "opened the door to Richmond," the Battle of Gettysburg was described by J. F. C. Fuller as decisive in the American Civil War.⁶ Most would agree with his assessment. Though not always apparent at the time, decisive battles often represent turning points where the momentum forever shifts to the eventual victor. Another example, the Battle of Midway is widely recognized as the decisive naval engagement in the Pacific during World War II. Though still far from defeat, the Japanese never recovered from the losses in personnel and equipment.

Using that concept, one can generally trace a decisive event in any conflict. The difficulty occurs when one attempts to apply the term to a particular instrument of military power. Battles generally have a beginning and an ending. Instruments--air, land and sea power--are typically employed throughout the duration of the conflict. Some may even question if any one element can be decisive. Certainly the current Chairman of the Joint Chiefs of Staff, General John M. Shalikashvili, believes so and codified it in joint doctrine. "Given the appropriate circumstances, any dimension of combat power can be dominant--and even decisive--in certain aspects of an operation or phase of a campaign, and each force can support or be supported by other forces."⁷

While serving as the previous Chairman, General Colin L. Powell placed great emphasis on the decisive use of the military instrument. "Therefore, one of the essential elements of our national military strategy is the ability to rapidly assemble the forces needed to win--the concept of applying decisive force to overwhelm our adversaries and thereby terminate conflicts swiftly with a minimum loss of life."⁸

Powell was by no means alone. The concept of using overwhelming force to achieve decisive results with minimum loss of life reflects the views of both the Reagan and Bush Administrations⁹ and was also adopted by President Clinton in his National Military Strategy document. "First when we send troops abroad, we will send them with a clear mission and, for those operations that are likely to involve combat, the means to achieve their objectives decisively...."¹⁰ In the accompanying military strategy document, General Shalikashvili articulated a number of principles to be followed with respect to the employment of US forces in war. The first is: "...set clear objectives and apply decisive force."¹¹

Webster defines decisive as "having the power to decide, end a controversy or determine a result; conclusive."¹² The term is not defined by the Department of Defense yet it appears in each of the Service's capstone doctrine documents.¹³

- *Army Field Manual 100-5*. The Army must be capable of achieving decisive victory.¹⁴
- *Naval Doctrine Publication 1*. Our naval forces contribute decisively to U.S. global leadership and are vital to shaping an environment that enhances our national security.¹⁵
- *Fleet Marine Field Manual 1*. And when the decisive opportunity arrives, we must exploit it fully and aggressively, committing every ounce of combat power we can muster and pushing ourselves to the limits of exhaustion.¹⁶
- *Air Force Manual 1-1*. Aerospace power's unique flexibility and versatility must be preserved and its decisive usage exploited. Otherwise its potential decisiveness can easily be squandered.¹⁷

Irrelevant Factors

To facilitate an understanding of the concept of a decisive instrument of national power it is prudent first to identify those aspects that are not necessarily relevant factors.

Singular. Particularly since the 1980s, the concept of “jointness” has virtually eliminated the notion of employing only one Service in a conflict. Budget cuts, streamlining, and other organizational initiatives have reduced most unnecessary redundancy in the Armed Forces. Further, the quest for the best technology and high cost of procuring such high leverage systems have forced the Services to become absolutely interdependent.

First or Last. Often the forces that get to the fight first depend on what is available, not necessarily on the optimum capability. As events unfold, proximity, and the ability to deploy quickly are the overriding concerns to national decisionmakers. Once the crisis is stabilized other forces may be called on to provide a more satisfying outcome. Conversely, the last force is generally a function of the environment in which the Service operates, the nature of the settlement, and the location of the conflict. For example, the imposition of a no-fly zone over a defeated enemy to ensure the continuation of sanctions and post-conflict inspections is generally the business of airpower. On the contrary, an occupation force or the rendering of humanitarian assistance is a task uniquely provided by ground forces.

Largest. The relative size of the air, land, or sea forces is more a function of the inherent strengths and limitations of the environment than the ability to be decisive. Less constrained by the friction of ground or water, airpower operates over greater distances

more quickly and is generally less people-intensive. Conversely, surface forces require large numbers of people to get to the point of attack and an even greater number to provide logistics support.

Definition

Given that to be decisive an instrument must not necessarily be singular, first, last, or largest, what makes it decisive? In an editorial in *Airpower Journal*, Lt Col Richard B. Clark, USAF, discussed the decisive use of airpower and used an athletics analogy to describe the term's meaning:

Victory in a sporting event can often be traced to one particular play...or to a certain player's overall performance...or to a particular portion of the team's game...We call that contribution, whatever it was, the decisive factor in the game. It isn't the final or only contribution, just the *key* one...the term decisive simply refers to a factor that was clearly critical to victory. If that factor had not exerted a crucial influence, something else would have been decisive.¹⁸

Major David M. Link, US Army, added further depth to the concept:

The decisive force must be capable of producing, integrating and orchestrating all of the required effects determine to cause decision...Decisive Operations may be defined as actions taken to:

- Cause a condition where the opponent is no longer *willing* (based on action) or capable (inability to use or lack of means) to impose his will upon the situation.
- Cause a predetermined change of state favorable to friendly intentions.
- Cause termination of current activities and prevention of future actions.¹⁹

In their discussions both officers focused on outcome. The decisive act *caused* or was *key* to the decision. Ultimately, the US Armed Forces exist to deter wars and if called upon, to fight and win.²⁰ Victory, measured in terms of achieving the political objectives, is the goal. It follows then, *the decisive instrument is that which most directly contributes to achieving the objective.*

Multiple Objectives

Rarely, however, do political leaders state only one objective. There are often multiple ones and they could have caveats, conditions, or restrictions. For example during the Gulf War President Bush's military objectives were:

- Force Iraq out of Kuwait
- Destroy Iraq's nuclear, biological, and chemical (NBC) capability (5-10 year set-back).
- Minimize loss of life (but do not draw out the war).
- Minimize civilian casualties.²¹

The last two objectives greatly effected how the first two could be accomplished given the military situation. This in turn strengthened the case for an air-oriented strategy. With respect to objective number one, forcing the Iraqis out of Kuwait with a minimum loss of life required a massive air campaign prior to the ground assault. Both air and land campaigns were necessary, but the air campaign was decisive. Two key reports completed immediately after the war emphasized this assertion:

Department of Defense. Indeed, the decisive character of our victory in the Gulf War is attributable in large measure to the extraordinary effectiveness of air power.²²

House Armed Services Committee. The decisive factor in the war with Iraq was the air campaign, but ground forces were necessary to eject the Iraqis from Kuwait.²³

Assigning the label "decisive" to any one instrument of national power remains a subjective decision. In the example of the Gulf War, the DOD and Congress conducted extensive studies in conjunction with their respective reports. In the end, their determination was a judgment call. A few authors or organizations have reached different conclusions, but the vast majority of neutral observers agree with these two.²⁴

SECTION II

Case Studies on Decisive Employment of Airpower

Where the strategist is empowered to seek a military decision, his responsibility is to seek it under the most advantageous circumstances in order to produce the most profitable results. Hence *his true aim is not so much to seek battle, as to seek a strategic situation so advantageous that if it does not of itself produce the decision, its continuation by battle is sure to achieve this.*²⁵

--Captain Sir Basil Liddell Hart, *Thoughts on War*, 1944

The Berlin Airlift, Operation Linebacker II, and Operation Deliberate Force are three examples of airpower as a decisive instrument of national power within the political objectives established. All were immensely important events that triggered critical phases in American world affairs. In each case, airpower most directly contributed to achieving the national objectives.

Berlin Airlift

Shortly after the Allied triumph in Europe during World War II, relationships between the US and USSR began to deteriorate. By 1948, conditions reached a low point when the Soviets imposed a blockade on the western sectors of Berlin. Though all surface transportation between the western zones of Germany and Berlin were cut off, "the right of the Western Allies to reach Berlin by means of three air corridors was established by a quadripartite agreement made by the Allied Control Council and there was no way, short of an act of war, of preventing flights along these corridors."²⁶

President Truman initially conceived the operation as only an emergency airlift of military supplies. But with the support of the British he elected to greatly expand the operation and supply all the German population in the Western Sectors.²⁷ The airlift's

objective was to keep the German people from starving and demonstrate resolve against Soviet expansion.²⁸

The airlift was massive in scope. Lasting from June 26, 1948 until July 28, 1949, American and British flyers logged 263,472 sorties hauling 2,185,247 cargo and passenger tonnage.²⁹ Between aircraft in maintenance, aircrew training, and flights assigned to the airlift, the vast majority of the American heavy air transport fleet was used to carry on the 24-hour-a-day operation.

Far from smooth, the airlift initially suffered from a lack of organization and inadequate facilities. These hurdles were overcome and sortie production steadily improved. By the spring of 1949, "planes were landing every ninety seconds and turning around within six minutes."³⁰ As food and coal reached the inhabitants in greater numbers, morale grew throughout the sector.

On May 12, 1949, the Soviets restored electrical power in the Western Sectors and surface networks into Berlin were finally reopened. America's objectives were accomplished through the decisive employment of airpower, resulting in a victory for the West. Historian David McCullough called the airlift, "one of the most brilliant American achievements of the postwar era and one of Truman's proudest decisions, strongly affecting the morale of Western, non-Communist Europe, and the whole course of the Cold War...."³¹

Operation Linebacker II

For most Americans today, perhaps no other conflict evokes as much emotion or controversy as the Vietnam War. Though fought with great courage and intensity at the tactical level, it was horribly mismanaged by both the military and civilian leadership. As America's involvement dragged on, the objective became not victory, but "peace with honor."³²

During the first two weeks of December 1972, negotiations between the US and North Vietnam were at a stalemate. Because funds for the continuation of the war could not be assured beyond the end of the month, time was of the essence. Thus, President Nixon ordered a massive air campaign aimed at convincing the North to conclude a negotiated settlement.³³

The final air operation, code-named "Linebacker II," was focused and violent. It "stressed a maximum effort in minimum time against the most lucrative and valuable targets in North Vietnam."³⁴ During the eleven-day around-the-clock bombing, "B-52s flew 729 sorties against thirty-four targets north of the 20th parallel and dropped 15,237 tons of bombs. Combining for 1,216 sorties, Air Force and Navy fighters delivered roughly 5,000 tons of ordinance."³⁵ By the eleventh day, damage against key targets in Hanoi was considerable, particularly transportation nodes.³⁶

On December 26, the North Vietnamese proposed the resumption of peace talks. By January 9th, a settlement was reached.³⁷ Airpower as employed in Linebacker II achieved its objective of driving Hanoi to the bargaining table. President Nixon concluded, "[o]ur bombing achieved its purposes. Militarily, we had shattered Hanoi's

war-making capacity. Politically, we had shattered Hanoi's will to continue the war...We had forced Hanoi to come back to the negotiating table to end the war through a fair settlement."³⁸ Henry Kissinger recalled, "Nixon chose the only weapon he had available. His decision speeded the end of the war; even in retrospect I can think of no other measure that would have."³⁹

Operation Deliberate Force

Some 23 years later, US decisionmakers were faced with a similar dilemma. In late summer 1995, the world watched in horror as thousands were dying in the war-torn former-Yugoslavia. Attempts by the UN to compel the Bosnian Serbs to negotiate a cease fire were largely ignored. "Throughout their 41-month long mission in Bosnia, UN officials have frequently had to beg to meet with [General Ratko] Mladic or Radovan Karadzic, head of the self-styled Bosnian republic merely to seek permission for the safe passage of humanitarian aid convoys--requests that were often refused."⁴⁰

The final straw came on August 28 when Bosnian Serb gunners fired on a Sarajevo market killing 37 people.⁴¹ Under the direction of NATO's Allied Forces Southern Europe, planning commenced on a massive air campaign supported by ground-based artillery strikes. The US-led effort's objectives were "to render the Serbian military impotent over the long-term while driving it toward peace talks in the near-term."⁴²

Initiated on August 30, the air strikes represented the largest military action in Europe since World War II.⁴³ Operation Deliberate Force began with an intense effort against air defense targets and was followed by attacks on Serbian military infrastructure and supply depots.⁴⁴ Though challenged by poor weather, the air campaign was, by any

measure, a success.⁴⁵ Lasting until September 14, NATO aircraft flew 3,515 sorties and fired 13 Tomahawk missiles.⁴⁶ Collateral damage was minimized by careful target selection and the use of nearly 70 percent precision weapons.⁴⁷

By September 20, President Clinton concluded the Serbs “have completed the required withdrawal of heavy weapons from the exclusion zone. The Sarajevo airport has been reopened. UN and humanitarian traffic is moving along the main routes into the city.”⁴⁸ The air strikes were discontinued. Within months, the Dayton Peace Accords were completed and the killing ceased. Combined with Rapid Reaction Force artillery fire, NATO airpower altered events in the region. Ambassador Richard Holbrooke summed up airpower’s role: “The United States Air Force and Navy and the precision bombing...its immediate visible effects on the negotiations in Bosnia...was the decisive factor.”⁴⁹

Observations

In these three cases airpower provided the indispensable link to achieving the political objectives. The successful employment of airpower created the necessary condition for subsequent negotiated settlement.

Prior to the airlift, America’s policy in Germany was characterized by “vagueness, indecisiveness, and lack of planning.”⁵⁰ In bringing the West into direct conflict with the Soviet Union, the Berlin Airlift’s humanitarian intent provided “invaluable prestige” to the victors⁵¹ and “helped spur the creation of NATO.”⁵² Linebacker II was the last major military involvement for the US in Vietnam. Although the agreements signed in Paris were not to last long, the return of the prisoners of war gave America the opportunity to

begin the long recovery. Deliberate Force provided a short-term balance of power on the battlefield sufficient to halt the killing and devastation. In addition, it gave renewed credibility to NATO and reinvigorated America's leadership position in the world.⁵³

SECTION III

Development of US Airpower Thinking

As in a building, which, however fair and beautiful the superstructure, is radically marred and imperfect if the foundation be insecure--so, if the strategy be wrong, the skill of the general on the battlefield, the valor of the soldier, the brilliancy of the victory, however otherwise decisive, fail of their effect.⁵⁴

--Rear Admiral Alfred Thayer Mahan, *Naval Administration and Warfare*, 1908

Within a decade of the Wright brothers' first flight, military leaders began investigating the use of aircraft for combat purposes. During the Great War, airpower played a largely supporting role--an adjunct to the bloody, indecisive land campaign. For the early air visionaries, notably Italy's Giulio Douhet and America's Billy Mitchell, airpower offered a better solution to the carnage of trench warfare.

During the interwar years officers at the Air Corps Tactical School searched for a doctrine that could optimize the potential of airpower and reverse the bloody trends established in western Europe. Rapid advancements in aircraft development during the period made the ideas of Douhet and Mitchell seem within reach. By the mid 1930s, pursuit was replaced by strategic bombardment as the most promising mission for the Air Corps. This strategic bombardment mission focused on direct attacks against the enemy's war-making capability and will to fight.⁵⁵

US Airpower is Tested

During World War II, that doctrine was tested in the skies over Germany. The results were mixed. The Combined Bomber Offensive, subordinated to the Allied strategy of a cross-channel invasion, never reached its desired effect. In many ways the

carnage had been transferred to the cockpits of the B-17s and Lancasters as well as the cities of Hamburg, Dresden, and Berlin. Despite this, the larger use of airpower prevailed. Historian Richard Overy concluded:

In the western European theatre the bombing offensive, whether used for tactical purposes or against strategic targets in Germany, created the conditions necessary for the transition for the Allies from defensive to offensive strategy. At the same time it forced the German forces, as it was designed to do, to a defensive position in the west through which it became increasingly difficult to regain the initiative.⁵⁶

In the Pacific, airpower was given a greater role in the defeat of Japan.⁵⁷ The Allies' "Europe-first" strategy and the vast distances within the theater put a premium on airpower. By mid 1945, land and maritime forces had secured sufficient island bases to enable Twentieth Air Force B-29s to conduct sustained strikes on the Japanese islands. Already severely weakened by the submarine blockade, Japan was near defeat when the atomic bombs were dropped.⁵⁸ The planned land invasion was never required. Once again Overy summarized the air effort:

Founded on a decisive technical and industrial superiority, Allied air forces were used in support of army and marine assaults, in general support for the navy, in defending the threatened frontiers with the Japanese empire and in a variety of tactical and strategic bombing roles. Perhaps most important of all, the Allies developed a *strategy for the decisive exploitation of the advantage in the air* without which the combat with Japan would have been far longer and less predictable. [emphasis added]⁵⁹

Painful Lessons

One of the first casualties of the Cold War was this "strategy for the decisive exploitation of the advantage in the air" other than with nuclear weapons. The Air Force was particularly guilty of this myopic focus on the two extremes of air strategy--strategic nuclear attack and conventional support of the close battle "either directly in the form of close air support or indirectly in the form of interdiction."⁶⁰ Although credit must be

given to all the Armed Forces for successfully deterring a nuclear exchange during the Cold War, Korea and Vietnam were painful reminders of the danger of being intellectually ill-prepared for the full range of conflict.

Unfortunately, for the two decades that followed the Vietnam War, the Air Force continued to default on its doctrine development.⁶¹ The void was filled by AirLand Battle doctrine that relegated the Service's increasingly capable fighter force to tactical air support.⁶² As a result, except in those cases where it was the only option, airpower continued to be "...used to support the inevitable ground invasion rather than *applied* as a strategy to resolve conflict."⁶³

The Gulf Experience

Such was the case during the planning for the Gulf War. Prior to the start of the ground phase, land commanders expected heavy losses as they penetrated the breaches. In commenting on General Schwarzkopf's fears on the eve of the ground campaign, one analyst concluded:

...while [Schwarzkopf] was confident of victory he was still very, very much concerned that the victory would be a costly one for Americans...And the answer to that would not come until G-Day when the forces attacked and the Iraqis started to collapse and then he was uncertain as to what all that meant, as to whether this could be a trap or some of the forces get too far out in front.⁶⁴

Their fears were misguided because they underestimated the destructive and psychological impact airpower had wielded on the forward-deployed Iraqi troops. This misunderstanding on the part of land commanders was understandable. Prior to the Gulf War, predictions on friendly casualties varied widely, some as high as 50,000.⁶⁵ Using models developed for AirLand Battle doctrine, initial plans for a ground offensive by

General Schwarzkopf's brightest strategy architects projected 10,000 American casualties.⁶⁶

Fortunately, more because of the peculiar personalities of those responsible for the ultimate strategy in the Gulf War than existing joint doctrine, airpower was allowed to play a significant role. As it turned out, it played the dominant role.⁶⁷ What finally emerged from the experience in the Gulf was the evidence that under certain conditions, an air-oriented (as opposed to air-only) strategy can achieve decisive results.⁶⁸

SECTION IV

Leveraging America's Airpower

...To have at the decisive moment, at the decisive point, an overwhelming superiority of force--this law of military success is also the law of political success....⁶⁹

--V. I. Lenin, quoted in Trotsky, *The History of the Russian Revolution*, 1932

One who has few must prepare against the enemy; one who has many makes the enemy prepare against him.⁷⁰

--Sun Tzu, *The Art of War*, c. 500 BC, tr. Griffith

In an article on the future role of defense, Dr William Perry discussed the importance of exploiting America's strengths to defeat future threats. A vital element to his formula is the role of "air dominance." Perry recognized that air dominance "allows U.S. strike forces to devastate opposition ground and naval forces while ensuring U.S. ground and naval forces can operate without fear of opposing air forces."⁷¹ Far from the short-sighted concept that airpower can now "go it alone," Perry's comments suggest that when appropriate, and when applied expertly, airpower can provide unique opportunities for decision.

As was demonstrated in the Gulf and in Bosnia, America's advantage in airpower is unmatched. By most any conceivable measure, the US far outdistances all other nations in air weaponry. A recent RAND study of the global balance of airpower characterized, America's advantage over the rest of the world as "commanding."⁷² The study went on to say this "overwhelming dominance" should continue "for the foreseeable future."⁷³ If one takes into account NATO air forces, the lead is all the better. Another RAND study concluded:

*...the calculus has changed and airpower's ability to contribute to the joint battle has increased. Not only can modern airpower arrive quickly where needed, it has become far more lethal in conventional operations. Equipped with advanced munitions either in service or about to become operational and directed by modern C³I systems, airpower has the potential to destroy enemy ground forces either on the move or in defensive positions at a high rate while concurrently destroying vital elements of the enemy's warfighting infrastructure. In short, the mobility, lethality, and survivability of airpower makes it well suited to the needs of rapidly developing regional conflicts. These factors taken together have changed--and will continue to change--the ways in which Americans think about military power and its application.*⁷⁴

The Airpower Quotient

Airpower's ability to respond rapidly, "compress time,"⁷⁵ and strike directly and simultaneously at an enemy's whole⁷⁶ provide incredible options for decisionmakers. In describing the role US airpower has assumed in modern warfare Eliot Cohen stated:

American air power has a mystique that is in the American interest to retain. When presidents use it, they should either hurl it with devastating lethality against a few targets...or extensively enough to cause sharp and lasting pain to a military and society...American leaders at the end of this century indeed have been vouchsafed with a military instrument of a potency rarely known in the history of war.⁷⁷

The preeminence of US airpower will only grow as initiatives in both hardware and doctrine development mature. Air Force Chief of Staff, General Ronald R. Fogleman summed up the state of US airpower progression: "In the first quarter of the 21st century we will have the ability to find, fix or track, and target, in near real time, anything of significance, fixed or moving, on the surface of the Earth."⁷⁸

Given America's distinct advantage in airpower, the ability to leverage that, or any such strength, is one of the fundamental elements of operational art.⁷⁹ Joint doctrine encourages commanders to exploit such leverage. "Asymmetrical actions that pit joint force strengths against enemy weaknesses and maneuver in time and space can provide the decisive advantage."⁸⁰ Such was Schwarzkopf's reasoning as he proposed courses of action for the Gulf War.

Again, the whole point of studying Iraq had been to come up with its strengths and weaknesses and our strengths and weaknesses and to devise a strategy which allowed us to use our strengths against

their weaknesses. And obviously one of the very, very great strengths that we had was our ability with strategic air power and tactical air power. And one of his very great weaknesses vis a vis our strength was his very, very weak air force. It would have been absolutely stupid to go into a military campaign against his forces who had a tremendous advantage on us on the ground numbers wise and said, 'OK, we'll only fight this battle on the ground, we won't fight in the air.' That would have been ludicrous."⁸¹

Strategy and the Role of the Decisionmaker

The critical link between merely possessing a dominant advantage, and being able to *apply* it for useful purposes is strategy. Strategy is "a plan of action that organizes efforts to achieve objectives."⁸² It involves the "*decisionmaking process* that connects the ends sought...with the ways and means."⁸³ Strategy selection is the realm of the most senior leaders in military and government. To ensure America takes full advantage of its air dominance, officers with an understanding and faith in airpower must be given a place in the decisionmaking process.

One of those places is the geographic commanders in chief (CINCs). Geographic CINCs fight America's wars. They are the key link between the national command authorities (NCA) and the assigned combat units. "Based on guidance and direction from the NCA, [CINCs] prepare strategic estimates, strategies and plans to accomplish the missions assigned by higher authorities."⁸⁴ Geographic CINCs are uniquely positioned to propose air or surface oriented solutions. Yet, geographic CINCs have been the domain of the Army, Navy, and Marine Corps. Since World War II, only one Air Force officer has ever served as a geographic CINC, General Lauris Norstad, Commander, US European Command from 1956-1962.⁸⁵ Clearly, the time has come to remedy this situation.

This is not to say that assigning airmen as Geographic CINCs will result in air-oriented strategies for every problem--far from it. Officers selected for such duty must have the wisdom to explore the entire landscape of solutions and recommend the best course of action. Depending on the circumstance airpower can support, complement, or be supported by the surface component. But to restrict such assignments to only those who have spent the majority of their careers focusing on surface-oriented solutions can only diminish the role airpower might play in the future.

CONCLUSION

Airpower, like land and sea power, will continue to be *a* decisive instrument of national power. Whereas the Berlin Airlift, Operation Linebacker II, and Operation Deliberate Force were examples of airpower used in a limited role for limited objectives, the success of airpower in the Gulf War points to a broader use.

Choosing the appropriate strategy, one that best achieves the political objectives without unnecessary risk, will remain a crucial decision. There will be times when the centerpiece of that strategy must be a naval task force or “boots on the ground.” When that is the case, airmen and airpower must stand ready to assume whatever role best supports that strategy.

But as powered flight approaches its centennial, air-oriented strategies have earned their place and will increasingly demand consideration. America stands alone in its ability to project power through the medium of air and space across the globe and bring a would-be adversary to its knees. It is a reputation worth keeping. For senior leaders to fully exploit that capability, airmen must gain full partnership on the joint warfighting team.

END NOTES

¹"Excerpts from Interview with Hussein on Crisis in Gulf," *New York Times*, August 31, 1990, A-10.

²John Diamond, "Services Fight for Budget Share," The Associated Press, November 21, 1996, AOLNewsProfiles@aol.net, 1.

³For the purposes of this paper, the term "airpower" is more than aircraft of the United States Air Force. It refers to all the various elements of America's air and space force. Those include military and military-gained fixed and rotary wing aircraft, cruise and ballistic missiles, and the people and infrastructure that supports them.

⁴Togo D. West, and Dennis J. Reimer, *A Statement on the Posture of the United States Army Fiscal Year 1997*, Posture Statement presented to the 104th Congress, 2d sess., (Washington DC: US Department of the Army, 1996), 5.

⁵Charles M. Westenhoff, compiler, *Military Air Power: The CADRE Digest of Air Power Opinions and Thoughts*, (Maxwell AFB, AL: Air University Press, 1990), 174.

⁶J. F. C. Fuller, *The Decisive Battles of the United States*, (New York: Hutchinson & Co., 1942), 172.

⁷Joint Chiefs of Staff, *Doctrine for Joint Operations*, Joint Pub 3-0, (Washington DC: US Government Printing Office, February 1, 1995), III-10.

⁸Joint Chiefs of Staff, *National Military Strategy of the United States*, (Washington DC: US Government Printing Office, January 1992), 11.

⁹F. G. Hoffman, *Decisive Force: The New American Way of War*, (Westport, CN: Praeger, 1996), 99.

¹⁰William J. Clinton, The White House Office, *A National Security Strategy of Engagement and Enlargement*, (Washington DC: US Government Printing Office, February 1996), 19.

¹¹Joint Chiefs of Staff, *National Military Strategy of the United States of America: A Strategy of Flexible and Selective Engagement*, (Washington DC: US Government Printing Office, 1995), ii.

¹²*Random House Webster's College Dictionary*, (New York: Random House, 1991), 351.

¹³See Joint Chiefs of Staff, *Department of Defense Dictionary of Military and Associated Terms*, Joint Pub 1-02, (Washington DC: US Government Printing Office,

March 23, 1994). However “decisive engagement” is defined on page 107 as is “decisive points” in Joint Pub 3-0, page xii.

¹⁴Department of the Army, *Operations*, Army Field Manual 100-5, (Washington DC: US Government Printing Office, June 1993), 1-5.

¹⁵Department of the Navy, *Naval Warfare*, Naval Doctrine Publication 1, (Washington DC: US Government Printing Office, March 28, 1994), 71.

¹⁶Department of the Navy, *Warfighting*, Fleet Marine Field Manual 1, (Washington DC: US Government Printing Office, March 6, 1989), 61.

¹⁷Department of the Air Force, *Basic Aerospace Doctrine of the United States Air Force*, Air Force Manual 1-1, Volume II, (Washington DC: US Government Printing Office, 1992), 116.

¹⁸Richard B. Clark, “The Decisiveness of Air Power,” *Air Power Journal*, Spring 1992, 2.

¹⁹David M. Link, “Decisive Operations,” How to Fight Force XXI Concept Development Program, July 19, 1996, <<http://www-cgsc.army.mil:80/cgsc/cdd/decisive.htm>>, January 10, 1997.

²⁰Joint Chiefs of Staff, *Joint Warfare of the Armed Forces of the United States*, Joint Pub 1, (Washington DC: US Government Printing Office, January 10, 1995), I-1.

²¹Richard B. H. Lewis, “JFACC: Problems Associated with Battlefield Preparation in Desert Storm,” *Airpower Journal*, Spring 1994, 4.

²²Department of Defense, *Conduct of the Persian Gulf War: Final Report To Congress, Chapters I-VIII*, (Washington DC: US Government Printing Office, 1992), xiv.

²³Les Aspin and William Dickinson, US Congress, House Committee on Armed Service, *Defense for a New Era: Lessons of the Persian Gulf War*, (Washington DC: US Government Printing Office, March 30, 1992), vii.

²⁴For an assessment of airpower’s role and a compilation of the views of advocates, experts, and skeptics, see James A. Winnefeld, Preston Niblack and Dana J. Johnson, *A League of Airmen: U.S. Air Power in the Gulf War*, (Santa Monica, CA: RAND, 1994), 275-278. See also Michael R Gordon and Bernard Trainor, *The General’s War: The Inside Story of the Conflict in the Gulf*, (New York: Little, Brown and Company, 1995), 474 and Jeffrey Record, *Hollow Victory: A Contrary View of the Gulf War*, (New York: Brassey’s Inc., 1993), 114.

²⁵Peter G. Tsouras, *Warriors’ Words: A Dictionary of Military Quotations*, (London: Arms and Armour Press, 1994), 406.

²⁶Robert Rodrigo, *Berlin Airlift*, (London: Cassell & Company, 1960), 1.

²⁷*Operation Vittles, Observers Report*, (Washington DC: United States Army, 1949), 12.

²⁸Randall B. Woods and Howard Jones, *Dawning of the Cold War: The United States' Quest for Order*, (Chicago, IL: Elephant Paperbacks, 1991), 203.

²⁹Rodrigo, 211.

³⁰David Clay Large, "The Great Rescue," *MHQ: The Quarterly Journal of Military History*, Spring 1997, 20.

³¹David McCullough, *Truman*, (New York: Simon & Schuster, 1992), 631.

³²Richard M. Nixon, *RN: The Memoirs of Richard Nixon*, (New York: Grosset & Dunlap, 1978), 325.

³³Mark Clodfelter, *The Limits of Air Power: The American Bombing Campaign of North Vietnam*, (New York: The Free Press, 1989), 182. See also Robert A. Pape, *Bombing to Win: Air Power and Coercion in War*, (Ithaca, NY: Cornell University Press, 1996), 202.

³⁴Clodfelter, 184.

³⁵*Ibid.*, 194.

³⁶Pape, 202.

³⁷Earl H. Tilford, Jr., *Crosswinds: The Air Force Setup in Vietnam*, (College Station, TX: Texas A&M University Press, 1993), 171.

³⁸Richard M. Nixon, *No More Vietnams*, (New York: Arbor House, 1985), 158.

³⁹Henry Kissinger, *White House Years*, (Boston, MA: Little, Brown and Company, 1979), 1461.

⁴⁰Bruce Wallace, "Turning the Tide," *MacLeans*, September 11, 1995, 37.

⁴¹*Ibid.*

⁴²Craig Covault, "NATO Air Strikes Target Serbian Infrastructure," *Aviation Week & Space Technology*, September 11, 1995, 27.

⁴³Craig Covault, "Air Power Alters Bosnia Equation," *Aviation Week & Space Technology*, September 4, 1995, 22.

⁴⁴ Craig Covault, "NATO Air Strikes Target Serbian Infrastructure," *Aviation Week & Space Technology*, September 11, 1995, 27.

⁴⁵ William J. Clinton, "Success of the NATO Air Campaign," *U.S. Department of State Dispatch*, October 2, 1995, 713.

⁴⁶ Stephan A. Planken, "Operation Deliberate Force," http://www.cybercomm.nl/stp/b_deliberate_force.html, February 4, 1997, 11-12.

⁴⁷ Planken, 12.

⁴⁸ Clinton, "Success of the NATO Air Campaign," 713.

⁴⁹ Department of the Air Force, *Global Engagement: A Vision for the 21st Century Air Force*, (Washington DC: Department of the Air Force, 1997), 20.

⁵⁰ W. Phillips Davison, *The Berlin Blockade: A Study in Cold War Politics*, (Princeton, New Jersey: Princeton University Press, 1958), xii.

⁵¹ Davison, xi.

⁵² Large, 21.

⁵³ Wallace, 38.

⁵⁴ Tsouras, 406.

⁵⁵ Clodfelter, *The Limits of Air Power*, 2.

⁵⁶ R. J. Overy, *The Air War, 1939-1945*, (Chelsea, MI: Scarborough House, 1991), 203.

⁵⁷ *Ibid.*, 100.

⁵⁸ *Ibid.*

⁵⁹ *Ibid.*, 101.

⁶⁰ Ronald R. Fogleman, "Aerospace Doctrine: More than Just a Theory," *Airpower Journal*, Summer 1996, 41.

⁶¹ *Ibid.*

⁶² Mark Clodfelter, "Of Demons, Storms, and Thunder: A Preliminary Look at Vietnam's Impact on the Persian Gulf Air Campaign," *Airpower Journal*, 27-28.

⁶³Robert A. Cline, *Air Power in Conflict Resolution*, (Carlisle Barracks, PA: U.S. Army War College, 1996), 29.

⁶⁴Bernard Trainor, "Interview with Bernard Trainor, co-author of *The Generals' War*, WGBH Educational Foundation, "Frontline: The Gulf War, An Oral History: Examining the Gulf War Through the Eyes and in the Words of Those Who Played Major Roles," Broadcast January 9 and 10, 1996, <http://www.bbc.co.uk:80/the_vault/gulf/oral/trainor/5.html>, March 5, 1997.

⁶⁵"Pax Americana?," *National Review*, April 1, 1991, 13. See also Record, 58-59.

⁶⁶Gordon, 132-133.

⁶⁷*Ibid.*, x.

⁶⁸Winnefeld, 287.

⁶⁹Tsouras, 409.

⁷⁰*Ibid.*, 412.

⁷¹William J. Perry, "Defense in an Age of Hope," *Foreign Affairs*, November/December 1996, 77.

⁷²Christopher J. Bowie, Kirninder Braich, Lory Arghavan, Marcy Agmon, and Mary Morris, *Trends in the Global Balance of Airpower*, (Santa Monica, CA: RAND, 1995), 86.

⁷³*Ibid.*, 87.

⁷⁴Christopher J. Bowie, Fred Frostic, Kevin Lewis, John Lund, David Ochmanek, and Philip Propper, *The New Calculus: Analyzing Airpower's Changing Role in Joint Theater Campaigns*, (Santa Monica, CA: RAND, 1993), 83-4.

⁷⁵Richard Hallion, "Air Power Today and Tomorrow: A Post-Gulf War View," *RUSI Journal*, October 1994, 24.

⁷⁶Phillip S. Meilenger, *10 Propositions Regarding Air Power*, (Washington DC: Air Force History and Museums Program, 1995), 34.

⁷⁷Eliot A. Cohen, "The Mystique of U.S. Air Power," *Foreign Affairs*, January/February 1994, 124.

⁷⁸Ronald R. Fogleman, "Global Engagement," Speech delivered at the Smithsonian Institution, Washington DC, November 21, 1996, <http://www.af.mil/news/speech/current/Global_Engagemen.html> February 24, 1997, 3.

⁷⁹Joint Pub 3-0, III-9.

⁸⁰Ibid., III-15.

⁸¹Norman Schwarzkopf, "Interview with General Norman Schwarzkopf, Commander-in-Chief, Central Command (CENTCOM), WGBH Educational Foundation, "Frontline: The Gulf War, An Oral History: Examining the Gulf War Through the Eyes and in the Words of Those Who Played Major Roles," Broadcast January 9 and 10, 1996, <http://www.bbc.co.uk/80/the_vault/gulf/oral/schwarzkopf/2.html>, March 3, 1997.

⁸²Dennis M. Drew, and Donald M. Snow, *Making Strategy: An Introduction to National Security Processes and Problems*, (Maxwell AFB, AL: Air University Press, 1988), 13.

⁸³Ibid., 13.

⁸⁴Joint Pub 3-0, I-8.

⁸⁵Supreme Headquarters Allied Powers Europe (SHAPE), "SHAPE History," No date, <<http://www.shape.nato.int/history.htm>>, February 21, 1997, 4.

BIBLIOGRAPHY

Books

- Aspin, Les and William Dickinson. US Congress, House Committee on Armed Service. *Defense for a New Era: Lessons of the Persian Gulf War*. Washington DC: US Government Printing Office, March 30, 1992.
- Atkinson, Rick. *Crusade: The Untold Story of the Persian Gulf War*. New York: Houghton Mifflin Company, 1993.
- Barnett, Jeffery R. *Future War: An Assessment of Aerospace Campaigns in 2010*. Maxwell AFB, AL: Air University Press, 1996.
- Bowie, Christopher J., Fred Frostic, Kevin Lewis, John Lund, David Ochmanek, and Philip Propper. *The New Calculus: Analyzing Airpower's Changing Role in Joint Theater Campaigns*. Santa Monica, CA: RAND, 1993.
- Bowie, Christopher J., Kirninder Braich, Lory Arghavan, Marcy Agmon, and Mary Morris. *Trends in the Global Balance of Airpower*. Santa Monica, CA: RAND, 1995.
- Builder, Carl H. *The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the U.S. Air Force*. New Brunswick, NJ: Transaction Publishers, 1994.
- Clausewitz, Carl von. *On War*. Edited and Translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1984.
- Cline, Robert A. *Air Power in Conflict Resolution*. Carlisle Barracks, PA: US Army War College, 1996.
- Clinton, William J. The White House Office. *A National Security Strategy of Engagement and Enlargement*. Washington DC: US Government Printing Office, February 1996.
- Clodfelter, Mark. *The Limits of Air Power: The American Bombing Campaign of North Vietnam*. New York: The Free Press, 1989.
- Cushman, John H. *Thoughts for Joint Commanders*. Annapolis, MD: John H. Cushman, 1993.

- Davison, W. Phillips. *The Berlin Blockade: A Study in Cold War Politics*. Princeton, New Jersey: Princeton University Press, 1958.
- Drew, Dennis M. and Donald M. Snow. *Making Strategy: An Introduction to National Security Processes and Problems*. Maxwell AFB, AL: Air University Press, 1988.
- Fuller, J. F. C. *The Decisive Battles of the United States*. New York: Hutchinson & Co., 1942.
- Gordon, Michael R. and Bernard Trainor. *The Generals' War: The Inside Story of the Conflict in the Gulf*. New York: Little, Brown and Company, 1995.
- Hallion, Richard. *Storm Over Iraq: Air Power and the Gulf War*. Washington DC: Smithsonian Institution Press, 1992.
- Head, William and Earl H. Tilford, Jr. eds. *The Eagle in the Desert: Looking Back on U.S. Involvement in the Persian Gulf War*. Westport, CN: Praeger, 1996.
- Hoffman, F. G. *Decisive Force: The New American Way of War*. Westport, CN: Praeger, 1996.
- Hosmer, Stephen T. *Psychological Effects of U.S. Air Operations in Four Wars, 1941-1991: Lessons for U.S. Commanders*. Santa Monica, CA: RAND, 1996.
- Kearney, Thomas A. and Eliot A. Cohen. Gulf War Air Power Survey, Department of the Air Force. *Gulf War Air Power Survey, Summary Report*. Washington DC: US Government Printing Office, 1993.
- Kissinger, Henry. *White House Years*. Boston, MA: Little, Brown and Company, 1979.
- Magyar, Karl P., ed. *Challenge and Response: Anticipating US Military Security Concerns*. Maxwell AFB, AL: Air University Press, 1994.
- Mann, Edward C. III. *Thunder and Lightning: Desert Storm and the Airpower Debates*. Maxwell AFB, AL: Air University Press, 1995.
- Mason, R. A., ed. *War in the Third Dimension: Essays in Contemporary Air Power*. New York: Brassey's Defence Publishers, 1986.
- McCullough, David. *Truman*. New York: Simon & Schuster, 1992.
- Meilenger, Phillip S. *10 Propositions Regarding Air Power*. Washington DC: Air Force History and Museums Program, 1995.

Nixon, Richard M. *RN: The Memoirs of Richard Nixon*. New York: Grosset & Dunlap, 1978.

_____. *No More Vietnams*. New York: Arbor House, 1985.

Operation Vittles, Observers Report. Washington DC: United States Army, 1949.

Overy, R. J. *The Air War, 1939-1945*. Chelsea, MI: Scarborough House, 1991.

Pape, Robert A. *Bombing to Win: Air Power and Coercion in War*. Ithaca, NY: Cornell University Press, 1996.

Perry, William J. US Defense Department. *Annual Report of the Secretary of Defense to the President and the Congress*. Washington DC: US Government Printing Office, March 1996.

Random House Webster's College Dictionary. New York: Random House, 1991.

Record, Jeffrey. *Hollow Victory: A Contrary View of the Gulf War*. New York: Brassey's Inc., 1993.

Reynolds, Richard T. *Heart of the Storm: The Genesis of the Air Campaign Against Iraq*. Maxwell AFB, AL: Air University Press, 1995.

Rodrigo, Robert. *Berlin Airlift*. London: Cassell & Company, 1960.

Sharp, U.S. Grant. *Strategy for Defeat: Vietnam in Retrospect*. San Rafael, CA: Presidio Press, 1978.

Shultz, Richard H., Jr. and Robert L. Pfaltzgraff, Jr. eds. *The Future of Air Power in the Aftermath of the Gulf War*. Maxwell AFB, AL: Air University Press, 1992.

Tilford, Earl H., Jr. *Crosswinds: The Air Force Setup in Vietnam*. College Station, TX: Texas A&M University Press, 1993.

Tsouras, Peter G. *Warriors' Words: A Dictionary of Military Quotations*. London: Arms and Armour Press, 1994.

US Department of Defense. *Conduct of the Persian Gulf War: Final Report To Congress, Chapters I-VIII*. Washington DC: US Government Printing Office, 1992.

US Department of the Air Force. *Basic Aerospace Doctrine of the United States Air Force*. Air Force Manual 1-1, Volume I. Washington DC: US Government Printing Office, March 1992.

- _____. *Basic Aerospace Doctrine of the United States Air Force*. Air Force Manual 1-1, Volume II. Washington DC: US Government Printing Office, 1992.
- _____. *Global Engagement: A Vision for the 21st Century Air Force*. Washington DC: Department of the Air Force, 1997.
- US Department of the Army. *The Army*. Army Field Manual 100-1. Washington DC: US Department of the Army, June 1994.
- _____. *Decisive Force: The Army in Theater Operations*. Army Field Manual 100-7. Washington DC: US Government Printing Office, May 31, 1995.
- _____. *Operations*. Army Field Manual 100-5. Washington DC: US Government Printing Office, June 1993.
- US Department of the Navy. *Naval Warfare*. Naval Doctrine Publication 1. Washington DC: US Government Printing Office, March 28, 1994.
- _____. *Warfighting*. Fleet Marine Field Manual 1. Washington DC: US Government Printing Office, March 6, 1989.
- US Joint Chiefs of Staff. *Department of Defense Dictionary of Military and Associated Terms*. Joint Pub 1-02. Washington DC: US Government Printing Office, March 23, 1994.
- _____. *Doctrine for Joint Operations*. Joint Publication 3-0. Washington DC: US Government Printing Office, February 1, 1995.
- _____. *Doctrine for Planning Joint Operations*. Joint Publication 5-0. Washington DC: US Government Printing Office, April 13, 1995.
- _____. *Joint Warfare of the Armed Forces of the United States*. Joint Publication 1. Washington DC: US Government Printing Office, January 10, 1995.
- _____. *National Military Strategy of the United States*. Washington DC: US Government Printing Office, January 1992.
- _____. *National Military Strategy of the United States of America: A Strategy of Flexible and Selective Engagement*. Washington DC: US Government Printing Office, 1995.
- United States Strategic Bombing Surveys, Summary Reports, European War, Pacific War*. Reprint. Maxwell AFB, AL: Air University Press, 1987.

- Vallance, Andrew G. B. *The Air Weapon: Doctrines of Air Power Strategy and Operational Art*. New York: St. Martin's Press, 1996.
- Van Creveld, Martin with Stephen L. Canby and Kenneth S. Brower. *Air Power and Maneuver Warfare*. Maxwell AFB, AL: Air University Press, 1994.
- West, Togo D., Jr. and Dennis J. Reimer. *A Statement on the Posture of the United States Army Fiscal Year 1997*. Posture Statement presented to the 104th Congress, 2d sess. Washington DC: US Department of the Army, 1996.
- Westenhoff, Charles M, compiler. *Military Air Power: The CADRE Digest of Air Power Opinions and Thoughts*. Maxwell AFB, AL: Air University Press, 1990.
- Winnefeld, James A. Preston Niblack and Dana J. Johnson. *A League of Airmen: U.S. Air Power in the Gulf War*. Santa Monica, CA: RAND, 1994.
- Winnefeld, James A. and Dana J. Johnson. *Joint Air Operations: Pursuit of Unity in Command and Control, 1942-1991*. Annapolis, MD: Naval Institute Press, 1993.
- Woods, Randall B. and Howard Jones. *Dawning of the Cold War: The United States' Quest for Order*. Chicago, IL: Elephant Paperbacks, 1991.
- Woodward, Bob. *The Commanders*. New York: Simon & Schuster, 1991.

Articles

- "At Long Last." *National Review*. September 25, 1995, 16.
- Biddle, Stephen. "Victory Misunderstood: What the Gulf War Tells Us about the Future of Conflict." *International Security*. Vol. 21, No. 2 (Fall 1996), 139-179.
- Bush, George. "Remarks at the United States Air Force Academy Commencement Ceremony in Colorado Springs, Colorado, May 29, 1991." *Weekly Compilation of Presidential Documents*. June 3, 1991, Volume 27—Number 22, 683-686.
- Canan, James W. "Lesson Number One." *Air Force Magazine*. October 1991, 26-31.
- Cerami, Joseph R. "Presidential Decisionmaking and Vietnam: Lessons for Strategists." *Parameters*. Winter 1996-97, 66-80.
- Christopher, Warren. "The United Nations: The Momentum for Reform Must Accelerate." *U.S. Department of State Dispatch*. October 2, 1995, 711-714.
- Clark, Richard B. "The Decisiveness of Air Power." *Air Power Journal*. Spring 1992.

- Clinton, William J. "Success of the NATO Air Campaign." *U.S. Department of State Dispatch*. October 2, 1995, 713.
- Clodfelter, Mark. "Of Demons, Storms, and Thunder: A Preliminary Look at Vietnam's Impact on the Persian Gulf Air Campaign." *Airpower Journal*. Winter 1991, 17-32.
- Cohen, Eliot A. "The Mystique of U.S. Air Power." *Foreign Affairs*. January/February 1994, 109-124.
- Correll, John T. "Airpower, One Year Later." *Air Force Magazine*. February 1992, 6.
- _____. "The Semifinal Verdict." *Air Force Magazine*. June 1992, 6.
- _____. "Shooting Blind." *Air Force Magazine*. March 1994, 2.
- Covault, Craig. "Air Power Alters Bosnia Equation." *Aviation Week & Space Technology*. September 4, 1995, 22-24.
- _____. "NATO Air Strikes Target Serbian Infrastructure." *Aviation Week & Space Technology*. September 11, 1995, 27-28.
- _____. "Precision Missiles Bolster NATO Strikes." *Aviation Week & Space Technology*. September 18, 1995, 22-23.
- Dugan, Michael J. "Operational Experience and Future Applications of Air Power." *RUSI Journal*. August 1992, 35-38.
- Dupuy, Trevor N. "How the War was Won." *National Review*. April 1, 1991, 29-31.
- Fedarko, Kevin. "At the Edge of Peace." *Time*. October 2, 1995, 48-50.
- "Finally." *The New Republic*. September 18 & 25, 1995, 9.
- Fogleman, Ronald R. "Aerospace Doctrine: More than Just a Theory." *Airpower Journal*. Summer 1996, 40-47.
- Grant, Rebecca. "Closing the Doctrine Gap." *Air Force Magazine*. January 1997, 48-52.
- Hallion, Richard. "Air Power Today and Tomorrow: A Post-Gulf War View." *RUSI Journal*. October 1994, 23-29.

Hussein, Saddam. "Excerpts from Interview with Hussein on Crisis in Gulf." Interview by Dan Rather, CBS News as recorded by Federal News Service. *New York Times*. August 31, 1990, A-10.

Kaminski, Paul G. and Joseph W. Ralston. "Modernizing U.S. Tactical Aviation for Air Dominance." Prepared joint statement before the Research and Development and Military Procurement subcommittees, House National Security Committee, June 27, 1996. *Defense Issues*. Volume 11, Number 86.

Krepinevich, Andrew and Michael Vickers. "Embrace New Air Power Age: USAF Must Reduce Force Structure, Boost Stealth." *Defense News*. November 18-24, 1996, 15.

Large, David Clay. "The Great Rescue." *MHQ: The Quarterly Journal of Military History*. Spring 1997, 14-21.

Lewis, Richard B. H. "JFACC: Problems Associated with Battlefield Preparation in Desert Storm." *Airpower Journal*. Spring 1994, 4-21.

Luttwak, Edward N. "Washington's Biggest Scandal." *Commentary*. May 1994, 29-33.

Morocco, John D. "Bombing Compels Serb Withdrawal." *Aviation Week & Space Technology*. September 25, 1995, 36.

New, Terry L. "Where to Draw the Line Between Air and Land Battle." *Airpower Journal*. Fall 1996, 34-49.

"Pax Americana?" and "Bonfire of the Democrats." *National Review*. April 1, 1991, 12-15.

Perry William J. "Defense in an Age of Hope." *Foreign Affairs*. November/December 1996, 64-79.

Powell, Colin L. "U.S. Forces: Challenges Ahead." *Foreign Affairs*. Winter 1992/1993, 32-45.

Roberts, Adam. "From San Francisco to Sarajevo: The UN and the Use of Force." *Survival*. vol. 37, no. 4, Winter 1995-96, 7-28.

Snider, Don M. "The US Military in Transition to Jointness: Surmounting Old Notions of Interservice Rivalry." *Airpower Journal*. Fall 1996, 16-27.

Wallace, Bruce. "Turning the Tide." *MacLeans*. September 11, 1995, 36-38.

Widnal, Sheila E. "An Air Force for Tomorrow." Prepared remarks to the National Press Club, Washington DC, June 14, 1996. *Defense Issues*. Volume 11, Number 55.

Internet

Diamond, John. "Services Fight for Budget Share." The Associated Press. November 21, 1996. AOLNewsProfiles@aol.net. November 21, 1996.

Faber, Peter. "Competing Theories of Airpower: A Language for Analysis." No date. <<http://www.cdsar.af.mil/faber.html>>. October 21, 1996.

Fogleman, Ronald R. "Global Engagement." Speech delivered at the Smithsonian Institution, Washington DC. November 21, 1996. <http://www.af.mil/news/speech/current/Global_Engagemen.html>. February 24, 1997.

Link, David M. "Decisive Operations." How to Fight Force XXI Concept Development Program. July 19, 1996. <<http://www-cgsc.army.mil:80/cgsc/cdd/decisive.htm>>. January 10, 1997.

Supreme Headquarters Allied Powers Europe (SHAPE). "SHAPE History." No date. <<http://www.shape.nato.int/history.htm>>. February 21, 1997.

Planken, Stephan A. "Operation Deliberate Force." No date. <http://www.cybercomm.nl/stp/b_deliberate_force.html>. February 4, 1997.

Watts, Barry D. "Doctrine, Technology and War." Remarks for the Air & Space Doctrinal Symposium, Maxwell AFB, AL, April 30- May 1, 1996. <<http://www.cdsar.af.mil/watts.htm>>. October 21, 1996.

WGBH Educational Foundation. "Frontline: The Gulf War. An Oral History: Examining the Gulf War Through the Eyes and in the Words of Those Who Played Major Roles" Broadcast on January 9 and 10, 1996. <<http://www2.pbs.org/wgbh/pages/frontline/gulf/oral/>>. March 5, 1997.