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THE ROLE OF OFFENSIVE AIR POWER IN LOW INTENSITY CONFLICT

by

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A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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The United States has assumed the role of the world's last remaining superpower, and as such has been called upon to act in the leadership role in addressing the world's wrongs. With the elimination of the U.S.'s "traditional" adversary, the orientation away from global war and toward smaller, regional conflicts is the new norm. The reemerging crisis in the Balkans and other regions of the world has resulted in a domestic and international call for U.S. action. The highest levels of U.S. government have seen the "promise" of air-power as a means of influencing events in these areas of low intensity conflict without entering the potential quagmire reminiscent of Vietnam. In this regard, the history of American air-power's effectiveness since World War II is most instructive in demonstrating how limited the applicability of offensive air power really is to low intensity conflict. The ultimate effectiveness of offensive air power depends most heavily on its capability to credibly affect the vulnerabilities of the belligerent's center of gravity and its support structure.

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The United States has assumed the role of the world's last remaining superpower and as such has been called upon to act in the leadership role in addressing the world's wrongs. With the elimination of the U.S.'s "traditional" adversary, the orientation has been away from global war and toward smaller, regional conflicts as the new norm. The reemerging crisis in the Balkans and other regions of the world has resulted in a domestic and international call for U.S. action. The highest levels of U.S. government have seen the "promise" of air-power as a means of influencing events in these areas of low intensity conflict without entering the potential quagmire reminiscent of Vietnam. In this regard, the history of American air-power's effectiveness since World War II is most instructive in demonstrating how limited the applicability of offensive air power really is to low intensity conflict. The ultimate effectiveness of offensive air power depends most heavily on its capability to credibly affect the vulnerabilities of the belligerent's center of gravity and its support structure.

PREFACE

In researching the background required for this paper, I was initially convinced that offensive air-power had a long and nearly unbroken history of accomplishing its assigned mission, regardless of the background political processes. Like most Americans, I had taken pride in the apparent success of the bombing raid on Libya in reducing terrorism, was satisfied with the Navy's intercept of the Achille Lauro hijackers, and felt that although strategic bombing did not win the war in Vietnam, it did bring it to an end. Countless hours spent watching "12 O'Clock High," "Top Gun," CNN's coverage of Operation Desert Storm, and other platitudes to air-power have innoculated a large percentage of Americans with the comforting mindset of U.S. aviation's awesome power to coerce.

What was most informative to me was just how far off the mark this mindset is. I don't deny the ability of air-power to wreak havoc and destruction upon an enemy if the will to do so exists. The fact that in spite of this contradictory information that has been collected and analyzed by the highest levels of our government, the urge to reach for offensive air is most disturbing. With this information in mind, the thought processes of our European allies regarding potential air action in the Balkans becomes more understandable, while the thought process of our own administration seems more foreign. This paper is an attempt to sort out the appropriate lessons to be derived from the history to ensure that we have a true understanding of the operational limits and uses of air-power.

TABLE OF CONTENTS

ABSTRACT..... i

PREFACE..... ii

I INTRODUCTION..... 1
Low Intensity Conflict Defined..... 2
Historical Basis for the Air-Power Mystique... 3
Arguments for the Use of Offensive Air-Power.. 4

II POTENTIAL AIR TARGETS IN LIC..... 7
Center of Gravity and Vulnerabilities..... 7
Catagories of Targets..... 8
Target: Civil Populace..... 8
Target: Military C^3..... 10
Target: Leadership..... 10
Target: Industrial Infrastructure including Petroleum Refineries..... 12
Target: Transportation and Support Networks... 14
Target: Enemy Armed Forces/Belligerents..... 15
Target: Enemy Alliances..... 16

III ANALYSIS OF POTENTIAL USES OF AIR-POWER..... 18
The Demonstrative Use of Air-Power..... 18
The Synergistic Use of Air-power..... 19
The Decisive Use of Air-power..... 20

IV CONCLUSIONS..... 22

NOTES..... 24

BIBLIOGRAPHY..... 26

I. INTRODUCTION

As the world moves away from the threat of nuclear Armageddon and toward a more "civilized" relationship between nations, a major dilemma remains for the U.S. The means of handling "rogue" nations intent upon confrontation presents the quandary of maintaining our interests without excessive cost in terms of manpower, finances, or international reputation. Inappropriately chosen responses can result in escalation and quagmire. Potential U.S. actions encompass a wide range of options including political censure, economic sanctions and embargo, through the limited use of military force. Selection of responses grouped along the lower end of the spectrum appear suited in cases of "Low Intensity Conflict" (LIC).

There is a growing tendency on the part of some political and military leaders to consider the solo use of offensive air-power as the appropriate form of military force in low intensity conflict. The "need" to intervene in the current Bosnia-Hercegovina crisis coupled with a reluctance to commit ground troops in a potentially protracted war has already resulted in a call for air strikes against Serbian forces by the highest levels of U.S. government. It is my contention that such a use of air-power is only rarely applicable in LIC. Further, I contend that the lessons of U.S. involvement in conflicts since the Second World War have been misinterpreted by many of our political and intellectual leaders to the point that they perceive air-power as being more effective a tool than it actually is. This thesis will examine the sources of some of these misconceptions and

the potential pitfalls for U.S. policy makers. It will then examine the historical appropriateness of offensive air-power for use by strategic and operational commanders against selected catagories of targets and the applicability to future LIC.

Low Intensity Conflict Defined

According to the U.S. Army and Air Force manual on Low Intensity Conflict, this type of engagement is:

> "...a political-military confrontation between contending states or groups below conventional war and above the routine, peaceful competition among states. It involves protracted struggles of competing principles and ideologies. Low Intensity Conflict ranges from subversion to the use of armed force..."[1]

Four types of military activities that are specifically designated as LIC actions are insurgency and counterinsurgency, counterterrorism, peacetime contingency operations and peacekeeping.[2] Because LIC demands restraint in response chosen, especially when considering the use of military force, careful selection as to the applicability of the means to be employed relative to the ends desired is crucial. This is even more critical when considering that in most cases, international cooperation or at least neutrality is required.

The goal of U.S. actions in LICs is to "coerce" the opposing nation(s) into complying with the actions and behavior we desire. As already noted, this can be done either diplomatically or economically, or can involve the use of force. In the case of LIC:

> "...coercion seeks to change the behavior of the victim without decisive military victory."[3]

U.S. Low Intensity Conflict military doctrine emphasizes flexible means that when combined with other policy tools will result in

accomplishment of national goals. One Department of State Foreign Service Institute policy study noted:

> "The basic principles of LIC military doctrine emphasize: indirect military assistance with direct involvement of U.S. combat troops only in exceptional circumstances, discriminate use of force, adaptability and perseverance,..."[4]

These principles had a precursor in the "Vietnamization" doctrine established by President Nixon in July 1969.[5]

Historical Basis for the Air-Power Mystique

Giulio Douhet was among the first proponents of air power as a force."...capable of accomplishing war missions solely with its own means, to the complete exclusion of both army and navy."[6] Although the capabilities he envisioned were long in coming, his concept of a populace totally at the mercy of a power with a superior air force was shared by many, including notably the British who focused on area bombardment of Germany in World War II, and by the Americans, who pursued their own campaign against industrial targets and transportation networks. The U.S. summary report on the effectiveness of strategic bombing in the European theater came to the conclusion that allied air power was decisive in the war in Europe, requiring that Germany would have had to cease fighting in 1945 even if the allied invasion had not occurred.[7]

Other air-power proponents, examining its utilization in low and "mid-intensity" conflicts, argue that strategic air-power had a proven cause-effect relationship in ending the Vietnam War. Arguments have been made that strategic air-power in the Vietnam War "bombed" the North Vietnamese to the conference table, and forced a settlement

to that conflict.[8] Further, air-power proponents are quick to point to the apparent effectiveness of the limited air strike against Libya in reducing its state sponsorship of terrorism,[9] or of large-scale air power "decisively" destroying the Iraqi armed forces in operation Desert Storm.[10] William Arkin, Director of Military Research for Greenpeace noted that the success of air power in the gulf has resulted in air power becoming the weapon of choice for political leaders dealing with regional conflicts.[11] Finally, the intercept of an Egyptian airliner carrying four Achille Lauro hijackers by U.S. Navy F-14s, captured the interest and imagination of the American public and provided "proof" of American resolve and capability, and of the ability of air-power to force American will on an unruly world.

It should be noted that these few examples are not necessarily accurate in their portrayal. Nonetheless, this type of "press," combined with the public's historical infatuation with aviation, has created a mindset conducive to the view that air-power is a type of panacea for the world's conflicts. With this illusion created, the tendency to "look to the air" when examining potential tools for use in LIC can be explained further by a review of its presumed characteristics.

Arguments for the Use of Offensive Air Power

First and foremost, air-power is viewed as a relatively "low risk" application of force, both in terms of numbers of personnel directly exposed to potential enemy action and also by the speed at which it can make its presence known and then exit the scene. In many cases, a single offensive air event can be completed before the enemy

forces have time to fully react. Compared to land forces, which require time to be inserted and extracted and which pose an increased risk of incurring numerous casualties or prisoners, the use of air power poses a relatively "clean" means of applying military force and thus appears appropriate to LIC. Retired British Maj. Gen. Julian Thompson summed it up well when evaluating the political call for offensive air strikes in Bosnia:

> "Assessed coldly, it is cheap in blood and treasure: at worst a few air crews, and some aircraft - far less emotive than several hundred dying and wounded soldier, possibly in the glare of television cameras."[12]

A second reason for selecting air-power in LIC (or any other conflict) can be traced to the technological innovation in precision weapons. Much of the focus of the media on Operation Desert Storm's air campaign was due to the supposedly "surgical" nature of modern air power. The use of precision weapons has lulled the public (and many politicians) into believing that a conflict can be fought in a near "bloodless" manner, at least as far as U.S. casualties are concerned. Further, there is a perception that this technology allows for exceptional levels of discrimination between combatants and non-combatants, an idea at least partially fostered by the military itself. A classic example of this "precision weapon" mind-set was shown in the initial refusals of U.S. government spokesmen to accept the possibility that a Tomahawk cruise missile could have been responsible for the damage at the Al Rashiid hotel during a raid on Iraqi weapons facilities. Precision weapons may indeed be an appropriate tool for use against some targets in LIC, but very

stringent requirements must be met for them to be effective.

A third reason for the propensity toward the use of air-power in LIC is that it is a natural precursor to a land campaign. It buys time for the attacker while weakening the enemy, prepares the area of battle for the eventual introduction of ground forces, and provides a "demonstration of national resolve" that may be sufficient in and of itself to achieve the desired end. Again, air-power would appear to be an appropriate tool for application in LIC.

While each of the above reasons for the use of offensive air-power in LIC is valid in its own way, the use of any form of force is pointless unless it is used in a way that is both militarily credible and effective. The factors which determine whether a force (be it military or otherwise) is credible and effective are tied largely to the targets selected and their relationship to the enemy center of gravity, and the capability of the force to impact the target/center of gravity sufficiently to cause a change in policy.

II. POTENTIAL AIR TARGETS IN LIC

Center of Gravity (CG) and Vulnerabilities

The use of military force by its nature is almost precluded in most cases of LIC. If armed force is to be utilized effectively within the constraints of keeping a conflict at a low level, it must be appropriately applied, capable of exploiting enemy vulnerabilities, and be rapid and measured in execution. The only way to meet all of these requirements is to take action that will directly or indirectly significantly impact the enemy CG. Failure to do so will inevitably lead to either escalation or strategic default.

What is this CG? Clauswitz called it:

> "...the hub of all power and movement, on which everything depends. "That is the point against which all our energies should be directed."[13]

For my purposes, I have defined the CG as "the critical component(s) of a belligerent's will or capability, without which continued resistance or offensive action can not be sustained." My view of CG is much like a stool - it may have anywhere from one to several legs, with the removal or weakening of any one ultimately undermining the entire structure. For example, in a nation ruled by a ruthless dictator and his staff, the leadership is the probable center of gravity. The supports for this CG may include the military forces which keep the leadership in power and the alliances that support and shield it from aggressive outside interference. The ultimate goal of warfare then, whether in LIC or higher level conflict, is to determine the CG and its support structure, then target their vulnerabilities.

When determining appropriate targets for political-military action, expending efforts on those areas which do not support the center of gravity are counter-productive. Therefore, not only must the center of gravity be determined at the strategic level, but additionally, the selection of targets that make the CG vulnerable must be identified. Then, at the operational level, the means of exploiting the vulnerabilities of those targets is explored.

Catagories of Targets

The operational commander must make a careful selection of the enemy's targets which are potentially vulnerable to the use of air power. When making his selection, there are seven general catagories of targets available. Each of these offers different potential vulnerabilities to the CG and its support structure. These catagories are:

(1) Civil Populace

(2) Military Command, Control, Communication targets

(3) Leadership

(4) Industrial Infrastructure including Petroleum Refineries

(5) Transportation and Supply Networks

(6) Direct targeting of Enemy Armed Forces/Belligerents

(7) Attack/isolation of Enemy Allies

Target: Civil Populace

Attacks on the civil population are conducted in an attempt to influence their will to fight, or to attempt to turn them against their own leadership. The wholesale killing of non-combatants by a nation that accepts international norms of behavior is neither an

acceptable nor credible threat in any case short of unlimited war. In any case, it is wholly inappropriate to LIC. Further, attacks on civilian quality of life targets (electricity, water, consumer goods, etc) also generally exceed the limitations of LIC. The operational commander can, however, attempt to influence the civil populace by making them understand that they are vulnerable to attack (leaflet drops, overflights, weapons demonstrations, etc) without actually targeting them. Although this latter option superficially would appear to be applicable to LIC, the credibility factor (not likely to be used) seems to render it ineffective. History has demonstrated the military ineffectiveness of direct and indirect attacks on non-combatants. For example, the World War II bombing of German cities did not break the will of the populace, any more than did the torching of Tokyo by U.S. forces or the air campaign of terror against the British citizenry with the V-1 and V-2 rockets. Further, the U.S. Strategic Bombing Survey noted that in spite of the air campaign's impact on German morale, "...they continued to work efficiently as long as the physical means of production remained. The power of a police state over its people cannot be underestimated."[14] Finally, such attacks bestow political "pariah" status by the domestic and international community on the attacker, such as that accorded the Royal Air Force for its WW II area bombing campaign.[15] Accordingly, because of the combination of military ineffectiveness, lack of credibility, and lethality considerably beyond "low-intensity" levels, air attacks or demonstrations against the civil populace has no place in LIC.

Target: Military Command, Control, and Communications

Attacks on the Military Command, Control, and Communications (C^3) networks are commonly exploited military targets and have the potential to paralyze much of the enemy's military capability without inflicting large numbers of casualties or extensive physical damage. In this case, if properly chosen relative to the center of gravity, such attacks may be entirely appropriate to LIC, and may be militarily effective. This is especially useful in that it tends to preclude escalation by minimizing casualties while at the same time demonstrating resolve and reducing enemy military capability. On the other hand, if such an attack is used against a nation in the midst of war of a popular war as those involving ethnic conflict or resurgent nationalism, the command and control structure may be so disjointed as to be untargetable or irrelevant.

Target: Civil and Military Leadership

Centers of civil and military leadership have occasionally been the direct targets of choice for air attack. The removal or intimidation of the guiding forces behind an enemy nation's actions may be sufficient to force compliance with an opposing nation's will. The general public and many leaders believe that the sudden arrival of U.S. precision guided bombs on both personal and military headquarters of Muammar el-Qadhafi in 1986 brought an immediate and lasting change in the terrorist sponsoring behavior of Libya. A reduction in overt terrorism sponsored by Libya was noted in the year following the attack. If true, it could be explained that this attack directly targeted the CG (the leadership of Libya) and demonstrated its

vulnerability in a highly credible manner thereby coercing Qadhafi to change Libya's behavior. The fallacy in this line of thought is that in fact, the attack was actually counterproductive.

Although overtly Libya appeared to be reducing its participation in sponsoring terrorism after the raid, in fact the state was increasing both the lethality and effectiveness of its tactics. Libya went "underground," attempting to hide behind front organizations in an attempt to hide its connection to terrorism. In response to Britain's approval for the U.S. raids from its territory, Libya increased support to the Provisional Irish Republican Army, shipping approximately five to ten tons of Semtex and another 120 tons of other arms.[16] Further, Libyan anti-U.S. targeted operations increased in 1986, resulting in the shooting of two U.S. Embassy officers and the use of Libyan influence resulting in the murder of one U.S. and two British hostages in Lebanon that year.[17] A Libyan connection was traced to many subsequent acts of horrendous violence including attacks on U.S. military installations and personnel, and the destruction of Pan Am Flight 103 in December 1988 and UTA Flight 772 in September 1989. Based upon the data available, there is little reason to believe the commonly held opinion that the air-attack on Libya in any way deterred it from continuing its terrorist sponsoring activities, and in fact helped focus its attention on the U.S. and our allies.

There are further dangers in targeting the enemy's leadership. Besides the difficulty in maintaining a track on individuals, the removal of the enemy's leaders probably surpasses the boundaries of

LIC and acceptable norms of international behavior. Further, it could eliminate the individuals capable of negotiating a settlement and avoiding post-conflict chaos. Although the latter has not been demonstrated in the case with air-warfare, certainly Bismark found out how difficult conflict termination could be after accidentally removing the Emperor of France. Further, attacks on the leadership has the potential to create national martyrs, or may create a vacuum for new leaders of the same persuasion to fill.

Target: Industrial Infrastructure

Attacks on the enemy's industrial infrastructure may be crippling to a nation's economy, war machine, and national will, hence it is almost out of the realm of LIC. Attacks upon specific segments of industry though, such as chemical or nuclear weapons plants would likely be acceptable to the international community as a measured response. Israel's preemptive attack on Iraq's nuclear facility received relatively mild international rebuke. Attacks on those industries that directly support war production are generally sound operational goals in larger conflicts, however, direct attacks on the economic engine that supports a country often leads to escalation of the conflict and may create a demand for restitution and or revenge by the populace.

In World War II, the destruction wrought on the German economy and war machine as a result of the air campaign demonstrates both the promise and the limits of attacks on the industrial infrastructure. On a positive side, destruction of the German petroleum plants by U.S. strategic bombers made Germany's loss virtually inevitable even if the

allied invasion had not occurred as it did. However favorable the outcome, it must be noted that the amount of resources and time required for the allies to cause this major degradation in German industrial output, and more importantly, to continue the attacks, was a herculean task. To end production of a single synthetic oil plant (Leuna) took 6,552 bombing sorties over a full year.[18] Further, even in the face of a determined allied coalition, the failure to properly coordinate all air-resources against the CG and its support structures allowed production of some German war materials such as combat aircraft and submarines to increase throughout the war.

In North Vietnam, a similar failure was shown in the inability of the bombing campaign to gain strategic victory for the U.S. In spite of the U.S. having dropped more than triple the bomb tonnage of all ordnance dropped in Europe, Asia, and Africa in WW II,[19] air-power failed to destroy the offensive capability of the North Vietnamese, simply because the wrong support structure for the CG had been targeted and the one chosen was irrelevant to its mission. The DRVN had insufficient industrial capacity or organic needs to be overly affected by such a campaign. North Vietnam was "bombed" to the conference table only when the proposed settlement was highly favorable to its cause. To explain further, consider that in May 1968, the U.S. demanded withdrawal of North Vietnamese troops from the south prior to any settlement. By May, 1972 however, although the U.S. upped the ante by resuming the bombing of the North and by mining Haiphong harbor, it also agreed to allow the DRVN troops to remain in place in the south. This pact, and the subsequent version signed in

January 1973, was accepted by the North Vietnamese because it was in their best interests to do so and left them in position to achieve all of their goals without further U.S. interference. In short, there is little evidence that the air war accomplished any strategic purpose.

Target: Transportation and Supply Networks

Just as attacks on the enemy's industrial infrastructure generally push the boundaries of LIC, so will attacks on a nation's transportation and supply networks. By its very nature, damage or destruction of the transportation network will also have a significant impact on the civil populace's quality of life and the industrial viability of a nation. Nonetheless, an attack on the military transportation and supply network can render enemy military forces immobile, as well as eliminating the primary means of transporting material for war production. The attacks against the German transportation network was assessed as one of the most effective uses of strategic air-power in World War II and played a pivotal role in the collapse of German armed forces on the western front in March 1945.[20] Regardless, because of the magnitude of destruction visited upon a belligerent, except in very selective cases direct attacks on the belligerent's transportation networks are inappropriate for LIC.

The interdiction or embargo of supplies sent to an enemy by sea, land and air have been demonstrated throughout history to often have a profound effect upon an enemy's ability or willingness to resist. Although such action has typically been associated with naval forces, the use of air-power in this manner is probably one of the most appropriate uses for solo air-power in LIC.

Target: Enemy Forces

The option of a direct attack on the enemy's armed forces in most cases is a direct attack on the CG or its support structure. The questions that arise are those of its vulnerability to attack, and the possibility of spiraling escalation of the conflict. Unless an air campaign can be decisive in short order, as long as the enemy has the ability to respond, he is likely to do so. The emotional desire for retribution or the belief in the likely limitations of the attacker's charter for military action, may result in rapid escalation with all means at his disposal. If enemy forces are to be attacked, it is highly desireable the enemy be firmly convinced of his own military inferiority or has been rendered essentially powerless to respond. Even so, it would not be advisable (and is inappropriate in LIC) to render such destruction upon the enemy that he sees no reason to not employ terror weapons as a last-ditch effort or show of defiance.

The highly successful Operation Desert Storm air campaign has been credited with being the decisive factor in that conflict. The use of offensive air power was a successful tool because it indirectly attacked Iraq's CG, the leadership. The vulnerability of the Iraqi military to coalition air and ground forces weakened the primary support structure for the Iraqi leadership, ultimately leading to Iraqi compliance with UN resolutions. Although I would argue that in "scale" Operation Desert Storm hardly qualified as a LIC (although it certainly did in length of engagement!), it does demonstrate the potential capability of air-power to influence a LIC by attack on

enemy forces. However, it is important to note that the Pentagon's study of the war noted that allied warplanes couldn't destroy Iraq's NBC warfare plants or hit any mobile Scuds, and that it required commitment of a large percentage of U.S. air assets.[21]

At a lesser level of LIC, the U.S. response to the October 1985 hijacking of the Achille Lauro and the killing of a U.S. citizen appeared to be proof of air-power's capability to achieve it's goals through the use of a demonstrated threat. Although many in the U.S. rejoiced over the capture of the killers, the political repercussions were tremendous. U.S. action humiliated the Egyptian government, and then was followed by vicious political attacks against an ally, Italy, for the release of the suspected leader of the group, Abul Abbas.[22] Although this direct "targeting" of the belligerents by our naval air forces accomplished the operational goal assigned, the political ramifications of the action had major reverberations that lasted for years. LIC requires combined action across the entire political-military-economic spectrum. The reliance on a military answer may have felt good, but arguably may have caused more harm than good.

Target: Enemy Alliances

Finally, the attack or isolation of an enemy's allies, effectively accomplished, will help isolate the enemy itself and may reduce its capacity and willingness to continue a conflict. The danger of using force (save in a demonstrative fashion) against an enemy's allies in LIC is that it widens the war, and may drive the enemy and his allies even closer together. The likelihood of the U.S. using force against a non-combatant is very low and breaks with U.S.

political tradition. Accordingly, air-power is not a credible tool for use against an enemy's allies unless it is also being targeted directly against the enemy. The exception to this is that it is useful in enforcing embargo or interdiction of supplies to the enemy.

III. ANALYSIS OF POTENTIAL USES OF AIR-POWER

When analyzing the role air-power should play in LIC (or any conflict for that matter), the lessons of the past give some good indications of what it's appropriate position should be. Accordingly, the following general lessons are suggested:

1) Air-power, used in a solo fashion or in conjunction with other displays of military power and national will, can be effective when used in a demonstrative manner *if* the "presumed threat" emphasizes a capability to exploit enemy CG vulnerabilities *and* such use is *credible* in terms of past action and international norms of behavior.

2) Air-power has often been a useful adjunct to other military and political forces across the full spectrum of conflict if used in a synergistic manner with those forces.

3) On those occasions when air-power has been credited with being the decisive factor in armed conflict, it has been used in conjunction with other forces, and has been used in an overwhelming manner. The literature does not readily support the conjecture that air-power can be *decisive* when used in a limited manner or as the solo force used once armed conflict begins.

The Demonstrative Use of Air-Power

The operational commander, when selecting air-power as the primary means of demonstrating national will without actually engaging in combat, can only be effective if the threat is credible and its limits unknown. LtGen Bernard Trainor, USMC (ret) noted:

> "The minute you use military power, the enemy will be able to see the limits and capabilities of that power. You're in your best posture the day before you're going to strike, because they don't know what you're going to do."[23]

One analysis of the means of U.S. global power projection noted numerous examples of land based air-power acting in some role in approximately one-half of all incidents of American power demonstrations, with a much higher ratio if naval air forces were considered.[24] The conspicuous presence of Naval and Air Force aircraft in the Philippines demonstrated U.S. interest in the stability of Corazon Aquino's government and helped ensure that the attempted military coup against her in 1989 did not succeed. Whether or not these demonstrations were effective, or if they would even have been required is unknown, because in most cases, the desired end state was achieved.

Air-power demonstrations are limited to most of the same constraints in potential target selection as are combat uses of aircraft. Demonstrations which would suggest U.S. willingness to conduct wholesale bombing of the civil populace is unlikely to be effective because it would not be credible. Further, in order to be effective, demonstrations must show the potential capability of the air (or other forces) to exploit the vulnerabilities of the CG and its support structure.

The Synergistic Use of Air-power

Air-power is most effective and applicable to LIC when used to enhance the full range of military activity. As demonstrated by the U.S. in Panama, Grenada, and elsewhere and by the British in the

Falklands, air-power was a critical component in nearly every military action undertaken since WW II. The presence of army and navy helicopter air forces in the Persian Gulf has helped ensure the successful completion of interdiction efforts against both Iraq and Iran from the start of their war up to the present. Marine helicopter gunships helped ensure that the U.S. entry and operations in Somalia were essentially unopposed. The presence of air-power in conjunction with other forces reduces the individual weaknesses of each service component, and serves to act as a true force multiplier, greatly enhancing effectiveness of forces in accomplishing their mission.

The Decisive Use of Air-power

Air power is at it's most decisive when it is used in conjunction with other military actions, and when used in an overwhelming fashion. One of the reasons air-power was decisive in Desert Storm was because the Iraqi army built into relatively immobile reinforced positions in anticipation of attack by coalition ground forces. Once rendered immobile, the large-scale application of ordnance ensured the maximum possible level of destruction to the army, which was critical to the power base of the Iraqi leadership, its CG. Air power was decisive in WW II's European Theatre because it continued to pound all accessible German petroleum industry and transportation network in an unrelenting manner. Initially, the German war machine was able to rebuild at a rate equal to or greater than that at which it was destroyed. Thereafter, especially after 1943, the tremendous firepower of U.S. Strategic Air was concentrated against the vulnerabilities of the German CG's support structure, and the end of German capability to

resist came relatively rapidly. Smaller, ill-targeted attacks by British bombers both in the preceding three years up through ultimate German surrender, had little influence on the war's duration.

IV. CONCLUSIONS

In attempting to determine some guidelines for the use of air-power in LIC, it is useful to go back to one of Douhet's axioms:

> "The truth of the matter is that no hard and fast rules can be laid down on this aspect of aerial warfare. It is impossible even to outline general standards, because the choice of enemy targets will depend upon a number of circumstances, material, moral and psychological, the importance of which, though real, is not easily estimated. It is just here, in grasping these imponderables, in choosing enemy targets, that future commanders of Independent Air Forces will show their ability."[25]

It is interesting to note the conclusions of the Chief of Staff of the Soviet Air Defense Forces to the U.S. operational success of Desert Storm. "Air-power can only be decisive in very limited military conflicts."[26] It is my assertion that this is the same lesson which is to be derived from the historical analysis of American involvement in conflicts since WW II. Prior to choosing air-power as the means to attain the desired ends in LIC, strategic and operational commanders must give careful consideration to whether the goal desired is attainable within their politically derived operational constraints, and further, whether failure to attain the operational and strategic goal after having commenced an air campaign will leave the situation in worse shape than before the campaign began. Even as a demonstration of national resolve, the effectiveness of air-power is limited by the enemy's perception of the credibility of your employing it, and its likely impact on his vulnerabilities.

Once you have demonstrated to the enemy that the CG is or isn't

vulnerable within the credible limits of the action you have chosen, you have in essence laid down your poker hand with all cards face up. Accordingly, if air-power is chosen as the instrument of policy to be used in LIC, the focus of all forces, including air-power, must be directed against the CG and its underpinnings from the start.

The key focus for the operational commander must derive from a careful study of the enemy's center of gravity, its support structure, and the vulnerabilities of the same. If these vulnerabilities are not exploitable (for any reason) by air-power, either in a solo fashion or in conjunction with other forces, then the commitment of said forces will likely not result in success, will damage the credibility given the future use of force by any would-be antagonists. This could ultimately lead to commitment of further forces, expanding both the conflict and the risk factor to deployed forces, and setting the stage for potential strategic defeat.

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