

2010/02/12

AIRPOWER'S EFFECTIVENESS IN SUPPORT OF NATIONAL POLICY.

João Vicente[1]

Since the dawn of manned flight, airpower theorists have debated its effectiveness. Throughout history, extreme claims about airpower decisiveness to singlehandedly win wars have hindered the conceptual and real application of this valuable instrument of power. Although highly situational and with controversial narratives, airpower's effectiveness in support of national policy has significantly improved since 1945. Moreover, the study of airpower unveils certain



commonalities which have affected its effectiveness. This essay will highlight some of these factors in a trinity which considers the scope of objectives, adversary's strategy, and airpower's strategy. The discussion will start by establishing a framework to evaluate airpower's effectiveness while addressing some methodological concerns. Then it will provide some evidence which supports the argument.

First, some assumptions are in order. Clausewitz has advised us that war is a continuation of politics. [2] However, if we think about its complexity and consequences, war should be the last resort of policy, and sometimes even a failure of politics. It is always difficult to wage and its effects cannot be scientifically predicted. Therefore, from the political perspective, war, especially the ones fought for less than vital interests, will always have severe constraints which will limit airpower's effectiveness. [3] Second, some factors hinder this analysis. It's difficult to find a consensus about the political objectives of each operation which impacts airpower's employment and assessment. Moreover, measuring effectiveness is a daunting task. It becomes particularly difficult when trying to assess, in an isolated manner, the impact of a single element of power to the overall objectives of a conflict. Finally, the literature surveyed offers different interpretations about airpower's effectiveness, sometimes biased, depending on the authors' agendas, background, and knowledge. [4] Nonetheless, history may not tell us exactly what to do in the future; however it can teach us how to ask the right questions.

Therefore, in order to minimize such limitations, this study will consider airpower in its broad sense, including both kinetic and non-kinetic capabilities. [5] Moreover, the discussion is not about airpower's decisiveness but rather its effectiveness. While the former debates the ability to singlehandedly win a war and reflects the controversial narratives between air and ground power, the latter expresses how airpower has contributed to the achievement of national objectives. Since airpower can only be understood as a continuation of policy, effectiveness is here defined as the "total" airpower contribution to influence adversary's political behavior, thus supporting the achievement of the national policy objectives. [6] Hence, using this methodology, this study will now assess some commonalities which have impacted airpower's effectiveness.

Airpower has been most effective when employed to fulfill limited objectives. In a limited war, both restrained and with scarce capabilities, it is extremely important to have specific, limited, and achievable objectives. [7] Desert Storm had easily defined objectives and force was used in a decisive and overwhelming manner, with minimal restrictions. [8] In contrast, in Vietnam the political objectives varied throughout the war and directly affected airpower's effectiveness. The initial political objective was to ensure "an independent, stable, non-Communist South Vietnam." [9] On the other hand, the willingness to prevent a Third World War and to focus the domestic and international opinion away from Vietnam restrained the use of airpower, making it politically ineffective. [10] The latter political objective had a more limited scope, and aimed to withdraw American troops without leaving South Vietnam to an imminent Communist takeover. [11] Additionally, concurrently diplomatic efforts reduced the threat of conflict expansion which allowed the bombing campaign to threaten North Vietnam's vital interests. These efforts combined with a change of adversary's strategy, employing forces within a conventional warfare framework, allowed airpower to be more effective.

In the case of Operation Allied Force, political objectives overestimated the capabilities of airpower to coerce Milosevic. [12] Moreover, the political imperative for not employing ground troops and the requirement to maintain the integrity of the coalition imposed a less than desirable air strategy. Nonetheless, after 78 days of air bombing Milosevic acceded to NATO demands. [13] Although the campaign succeeded in accomplishing this objective, it failed to stop the ethnic cleansing and didn't severely damage Milosevic's armed forces. [14] The political constraints such as minimal casualties, target selection, coalition integrity, financial cost of war, reconstruction efforts, etc, hindered the rapid

and overwhelming application of airpower. However, such constraints are part of the limited use of force in the last decades. They are most noticeable in campaigns where there are no vital interests at stake, such as humanitarian interventions, and are highly influenced by the impact of global media in domestic and international audiences. Nonetheless, Allied Force demonstrated the utility of airpower in facilitating the employment of ground forces without the required attrition to fight to conquer the territory.[15] For the risk-averse modern societies, this is by itself a strategic success of airpower.

Likewise, current operations have similar limitations. In Operation Iraqi Freedom (OIF), the political objective of creating a stable, democratic Iraq finds parallel with Vietnam regarding its broadness.[16] In Operation Enduring Freedom (OEF) the political constraints that limit airpower application in Pakistan also hinder the accomplishment of the initial objectives to capture Bin Laden and eliminate Al Qaeda.[17]

The previous examples exposed the wide spectrum of objectives, sometimes not achievable by military power alone, reflecting the political expectations for a swift use of airpower. However, considering that war is a duel, the adversary (i.e. its nature, environment, and strategy) always has an important role to play.

Airpower's effectiveness is maximized against adversaries that fight in conventional ways, yet it plays an essential role in counterinsurgency conflicts. When confronting adversaries who are dependent on complex command and control systems and employ large conventional forces, airpower provides an overwhelming leverage. Additionally, the need for logistic support and movement increases the opportunities for kinetic engagements. However, if the adversary employs decentralized insurgent forces and fights in complex environments such as mountains, jungle, or urban centers, then airpower's effectiveness is reduced.

The experience in Vietnam has demonstrated that fighting guerrilla forces that use irregular warfare tactics hindered airpower's effectiveness. When Hanoi engaged in conventional methods (exposing troops in the field, increasing the need for logistical supply, and use of lines of communication to maneuver,) and airpower was widely employed using precision guided munitions and accurate intelligence, airpower's effectiveness improved.[18] Therefore, the changing nature of the conflict produced a positive impact on airpower's effectiveness, eventually compelling the adversary to an agreement.

Such lessons can be found in current conflicts, but this time in a reverse order. In OEF, defeating the Taliban didn't equate to eliminating Al Qaeda. Initially the Taliban engaged the coalition forces in a conventional way, and they were rapidly disbanded. However, once the insurgents used the complex environment and initiated the insurgency they were able to increase the "fog and friction" of war, thus reducing airpower's effectiveness.[19] Although using unprecedented space, surveillance, and information systems, OEF revealed, again, that being successful in unconventional environments requires accurate and timely intelligence, in particular human intelligence.[20] Again in OIF, during the conventional phase of the conflict, airpower was critical to control the airspace and stop and annihilate Iraqi troops, allowing freedom of action of coalition forces and reducing casualties. Once the conflict shifted its nature to an insurgency, then airpower has seen its effectiveness decrease.[21]

Within the context of the Global War on Terrorism, airpower's effectiveness can be limited. It has a successful record when employed against a state which sponsors terrorism, imposing costs that range from destruction of high value infrastructures, like in the case of Libya, to regime change, like in Afghanistan and Iraq. However, when it comes to counterinsurgency operations, the kinetic aspect loses preeminence. The desire to "win hearts and minds" poses additional constraints on airpower, in particular regarding the level of force employed and the undesired effects which can be manipulated through an adversary skillful strategic communications campaign.[22] However, assessment of airpower's effectiveness depends on the metrics and thought process. Using measures of performance which consider only the lethal and kinetic application of airpower can be deceiving. Moreover, airpower in its broadest sense goes beyond destroying infrastructure and killing people. Its effectiveness in a counterinsurgent context can still be achieved in essential roles such as theatre mobility, ISR (Intelligence, Surveillance, and Reconnaissance,) information operations, medical evacuation, humanitarian relief, support to host nation forces, and if needed precision targeting in support of ground forces.[23] Within this context, overreliance on the kinetic aspects and on single airpower solutions to conflicts has proven to be a path for limited effectiveness of airpower.

Bombing for effects, not destruction, leverages airpower's effectiveness. The massive bombing campaign during Vietnam looked pale in comparison to the accuracy, effects, and political utility of airpower in the 1991 Gulf War. The traditional carpet bombing strategy gave way to discriminate targeting. Desert Storm established the historical turning point regarding airpower's effectiveness, where the synthesis of new technology and strategy allowed the shift from destructing entire target

systems to targeting key nodes.[24] It represented the effort to apply airpower in a comprehensive and unitary way to achieve strategic results.[25] Merging stealth, precision guided munitions, bombing for effect (not destruction), and improvements in the command and control established the seeds that forever transformed airpower's political utility.[26] However, several deficiencies in Battle Damage Assessment and understanding the relationships between bombing and outcome hampered the analysis of air operations.[27] Moreover, lack of intelligence hindered the destruction of the Iraqi nuclear program and contributed also to the military failure of the anti-Scud effort. Nonetheless, the air effort towards destroying Scuds was politically justified to guarantee the neutrality of Israel.[28] The application of a new strategy, based on effects, made increasingly efficient by new technology, supported the political objectives for the campaign and shaped airpower's future strategy.

OEF is another example of airpower strategy's adaptation in support of national policy. This time, precision airpower was directed by Special Forces to support indigenous and small groups of coalition forces and destroy Taliban's fielded forces, transforming the nature of conventional war in Afghanistan.[29] The use of legacy platforms, such as the B-52, performing responsive Close Air Support (CAS) missions reveals the conceptual adaptation and innovation, which contrasts the rigid doctrines of the past regarding strategic and tactical forces.[30] This "airpower buffet" which provided around the clock interdiction and responsive CAS, helped achieve victory by overcoming political and geographical obstacles to using force in such a remote and inaccessible environment.[31]

In OIF, effect based operations were again pursued but still suffered from a lack of ability to measure and forecast effects.[32] However, as in Desert Storm, this concept revealed the potential to understand and attack the adversary from a systemic perspective, thus applying airpower in a more efficient way than past traditional targeting. Furthermore, it considerably lowered war casualties and destruction, facilitating follow on reconstruction, and above all contributed to diminishing the historic images of airpower's inhumanity.

From a conceptual perspective, the current wars have demonstrated the importance of shifting the emphasis of airpower to non-kinetic roles in order to obtain additional leverage. However, history has shown that there is no simple strategy that applies to all conflicts. Therefore, airpower strategists should not be constrained by theoretical dogmas, such as the quest for strategic decisiveness which has guided most of airpower's history. Considering airpower in its broadest sense, kinetic and non-kinetic, lethal and non-lethal, shows that those available tools should be mixed and matched, providing a "cocktail" which can better support the national objectives. In this respect, airpower's strategy and effectiveness will always be situational.

In conclusion, to be effective, airpower does not need to win wars singlehandedly. It only needs to provide flexible options to be used by the decision makers when willing to use force to compel a change of adversary's behavior. Therefore, this essay has shown that airpower's effectiveness should be assessed against its ability to support the political objectives. Within this framework, it argued that such effectiveness has significantly improved since 1945. To support this claim a framework of limited objectives, adversary strategy, and airpower strategy was used, highlighting the contextual nature of airpower's strategic utility. If one could provide a single example that synthesizes airpower's effectiveness as a result of the convergence of these governing factors probably the most compelling would be the raid against Libya in 1986. It had limited objectives, was employed against a conventional adversary, targeted key nodes of its system, and was integrated with other instruments of national power.[33] In the end airpower was fully effective in supporting the achievement of the political objectives. Although it was a single operation, it demonstrates the value of airpower as a coercive tool. However, legitimate political constraints combined with airpower's limitations and "fog and friction" always deny a simple solution to war.

The evidence presented throughout this essay reveals a conceptual evolution in airpower application, combining legacy platforms with state of the art space and informational systems melded by innovative effect based strategies. Hence, airpower's effectiveness has been maximized against adversaries who fight conventional wars, such as the case of both Gulf Wars. Additionally, the majority of examples expose airpower's growing effectiveness supporting selective strategic objectives. However, all the cases studied indicate that without an integration of efforts it is not possible to produce a long lasting solution. Although Allied Force, OEF, and OIF demonstrated brilliance from an operational perspective, thus supporting national policy, they were not able to produce long-term strategic effects which allowed a better peace.[34] However, this supreme objective goes well beyond the scope of military instruments of power and requires a holistic approach to war. Such is the conundrum that faces modern use of force.

Bibliography:

Air Force Doctrine Document (AFDD) 2-3. Irregular Warfare, 2007.

Andres, Richard B., Craig Wills, and Thomas E. Griffith, Jr. "Winning with Allies: The Strategic Value of the Afghan Model." *International Security*, Vol. 30 (Winter 2005/2006): 124-160.

Arkin, William M. *Divining Victory: Airpower in the 2006 Israel-Hezbollah War*. Maxwell AFB AL: Air University Press, 2007.

Clausewitz, Carl von. *On War*, Translated by James John Graham. Kegan Paul, Trench, Trübner & Co., 1908.

Clodfelter, Mark. *Limits of Air Power: The American Bombing of North Vietnam*. New York: Free Press, 1989.

Corum, James S., and Wray R. Johnson. *Airpower in Small Wars: Fighting Insurgents and Terrorists*. Lawrence: University Press of Kansas, 2003.

Davis, Richard G. *On Target: Organizing and Executing the Strategic Air Campaign Against Iraq*. Washington DC: Air Force History and Museums Program, 2002.

Johnson, David E. *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era*. Santa Monica: RAND, 2006.

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

Stanik, Joseph T. *El Dorado Canyon: Reagan's Undeclared War with Qaddafi*. Annapolis, MD: Naval Institute Press, 2003.

Wrage, Stephen D., ed. *Immaculate Warfare: Participants Reflect on the Air Campaigns over Kosovo and Afghanistan*. Westport CT: Praeger, 2003.

[1] Tenente-Coronel Piloto Aviador. Docente no Instituto de Estudos Superiores Militares.

Mestre em Estudos da Paz e da Guerra nas Novas Relações Internacionais, Universidade Autónoma de Lisboa.

Master in Military Operational Art and Science, US Air University.

Doutorando em Relações Internacionais, Universidade Nova de Lisboa.

[2] Clausewitz, *On War*, 23.

[3] Those political constraints influence airpower's strategy and effectiveness, and may include restricted targets, casualty avoidance, conflict duration, forces to be employed, area of operations, etc.

[4] The competing narratives about airpower's employment and results allow almost the support of any kind of argument. However, there is a bright side to this issue. It prevents, or at least severely diminishes the academic value of the extreme claims about airpower as a war winner. In the author's opinion this extreme vision of airpower is long overdue and it has detracted from the optimal understanding and employment of airpower in support of national policy.

[5] Kinetic capabilities such as defense and attack roles, as well as non-kinetic elements, such as transport, intelligence, surveillance, reconnaissance, information operations, or medical evacuation.

[6] Using Mark Clodfelter framework, airpower's effectiveness must be measured in terms of its contribution to achieving the desired political objectives. Clodfelter, *The Limits of Air Power*, 215. Also Richard Davis supports this framework. Davis, *On Target*, 285.

[7] The meaning of limited war (as opposed to total war) refers to the restricted nature of conflict, both in national interests, capabilities employed, and scope of political constraints to the use of force.

[8] The political objectives for Desert Storm were to force the Iraqi withdrawal from Kuwait, to restore Kuwaiti sovereignty, to ensure security and stability of Saudi Arabia and Persian Gulf, and to protect US lives. Johnson, *Learning Large Lessons*, 22.

[9] Clodfelter, *The Limits of Air Power*, 204.

[10] *Ibid.*, 204, 209.

[11] *Ibid.*, 204.

[12] The political objectives for Allied Force were threefold. First, demonstrate the seriousness of NATO's opposition to aggression and its support for peace. Second, stop Milosovic from continuing attacking civilians. And third, if necessary, damage Serbia's capacity to wage future war on Kosovo. Wrage, *Immaculate Warfare*, 7. One explanation for Milosevic capitulation argues that "the combination of NATO airpower and threat of ground invasion confronted Serbia with certain defeat." Johnson, *Learning Large Lessons*, 84. Others offer additional reasons such as the restiveness of Milosovic's populace, or his abandonment by his patrons, the Russians. Wrage, *Immaculate Warfare*, viii.

[13] Johnson, *Learning Large Lessons*, 68.

[14] Wrage, *Immaculate Warfare*, 65.

[15] *Ibid.*, 8.

[16] Political objectives in OIF were initially to remove Saddam from power to eliminate his capacity to support terrorism and develop weapons of mass destruction; maintain international support for US actions in particular from the Islamic world. After the regime change, create the conditions for a democratic government while maintaining maximum international support for US action. Clodfelter, *The Limits of Air Power*, 221.

[17] Political objectives for OEF were (1) destroy Al Qaeda including denying sanctuary for terrorists attacks, (2) retribution for the 9/11 attacks, (3) preventing future terrorism, (4) maintaining maximum international support for US actions in particular from the Islamic world. *Ibid.*, 221.

[18] *Ibid.*, 206.

[19] Clausewitz addresses "fog of war" as a fundamental attribute which exposes battlespace's uncertainty regarding the knowledge about the adversary, the environment, and even friendly forces. Friction differentiates "war in paper" from reality. It includes several variables that will impact the execution of the plan, from topography, meteorological conditions, fear, confusion, etc. Clausewitz, *On War*, 77-83. Those factors were ultimately expressed in the failure of Operation Anaconda, considering the coalition casualties and the shortfalls in battlespace awareness and command and control. Johnson, *Learning Large Lessons*, 97. Technology, in particular the connection of sensors and shooters in a network centric environment, may contribute to the decrease of "fog and friction" but the immutable nature of war prevents complete certainty.

[20] The fact that most of the insurgents escaped to Pakistan, and that Bin Laden was not captured exposes some of the shortfalls of OEF. Besides proper intelligence, this can be also attributed to the limitations of the "Afghan Model" which relied too much in indigenous forces, which sometimes don't have the interest, the skill, or determination to accomplish essential tasks. Andres, Wills, and Griffith, "Winning with Allies: The Strategic Value of the Afghan Model," 152.

[21] Clodfelter, *The Limits of Air Power*, 222.

[22] The term "heart and minds" expresses the fundamental challenge of irregular warfare. In traditional warfare "the objective may be to convince or coerce key military or political decision makers, defeat an adversary's armed forces, destroy an adversary's war-making capacity, or seize or retain territory in order to force a change in an adversary's government or policies." In irregular warfare the struggle shifts the emphasis to obtain "legitimacy and influence over the relevant populations." AFDD 2-3, 2.

[23] The extensive study of small wars has provided precious lessons about the effectiveness of the so called "support roles of airpower." This study states that when fighting insurgency, "the indirect application of airpower, that is, the support role of aviation, often proves the most important contribution." Corum and Johnson, *Airpower in Small Wars*, 427. The same lessons are being re-learned in OEF and OIF.

[24] Davis, *On Target*, 317.

[25] Reynolds, *Heart of the Storm*, xi.

[26] The air strategy, based upon Instant Thunder framework developed by John Warden, employed parallel and simultaneous attacks to shock and paralyze the adversary. Based on Warden's Five Ring Model and viewing the adversary as a system of systems, allowed airpower to affect key nodes and cause the disruption of the entire system.

[27] Davis, *On Target*, 285.

[28] Ibid., 299.

[29] Andres, Wills, and Griffith, "Winning with Allies: The Strategic Value of the Afghan Model," 134.

[30] During the Cold War, strategic command (i.e. bombers) had the preponderance of assets, leadership positions, and doctrinal control. The notion that if airpower was able to fight a nuclear conflict then it would be able to fight any war has detracted from learning the right lessons from the conflicts during the Cold War period.

[31] Ibid., 144.

[32] Johnson, Learning Large Lessons, 126.

[33] The political objectives for the raid against Libya were: punish Qaddafi for the West Berlin attack, to disrupt Libyan terrorist operations, and to dissuade Qaddafi from supporting terrorism. This operation contributed to change Qaddafi's behavior and provided deterrence to other state sponsors of terrorism. Stanik, El Dorado Canyon, ix. Some of the political constraints involved the minimum risk for US forces, reduced Libyan collateral damage, while imposing a devastating impact on Qaddafi. Ibid., 151. This mission showed that decisive application of airpower in conjunction with economic and diplomatic measures can influence and facilitate the attainment of foreign policy objectives. Ibid., 202. The lessons learned from this mission were applied in large scale 5 years later in Desert Storm.

[34] Johnson, Learning Large Lessons, xxi. The same occurred during the Israeli air campaign in 2006. Although operational brilliant the airpower campaign didn't automatically ensure the desired strategic results. Arkin, Divining Victory, 146.

14 TEXTOS RELACIONADOS:

2011/05/16

CONTRIBUTOS DO PODER AÉREO EM OPERAÇÕES DE ESTABILIZAÇÃO, SEGURANÇA, TRANSIÇÃO E RECONSTRUÇÃO (II PARTE)

João Nunes Vicente[1]

2011/05/15

CONTRIBUTOS DO PODER AÉREO EM OPERAÇÕES DE ESTABILIZAÇÃO, SEGURANÇA, TRANSIÇÃO E RECONSTRUÇÃO (I PARTE)

João Paulo Nunes Vicente[1]

2010/06/13

PODER AÉREO: RECURSO DA MODERNA COERÇÃO MILITAR

Mauro Barbosa Siqueira (Brasil)

2010/04/27

PODER AEROSPAZIAL BRASILEIRO: DISSUAÇÃO E SEGURANÇA, COERÇÃO COMO MEDIDA EFICAZ À DEFESA NACIONAL

Mauro Barbosa Vieira (1) (Brasil)

2010/02/07

GEORGE KENNEY AND WILLIAM TUNNER: A BRIEF ANALYSIS OF TWO ICONIC AIR LEADERS

João Vicente[1]

2008/06/23

AINDA A DEMISSÃO DO SECRETÁRIO E DO CHEFE DO ESTADO-MAIOR DA USAF

Alexandre Reis Rodrigues

2008/06/09

A DEMISSÃO DO SECRETÁRIO E DO CHEFE DO ESTADO MAIOR DA USAF

Alexandre Reis Rodrigues

2008/04/02

A RELEVÂNCIA ESTRATÉGICA DO PODER AÉREO NUMA APROXIMAÇÃO ÀS OPERAÇÕES BASEADA EM EFEITOS[1] (PARTE II)

João Vicente

2008/04/01

A RELEVÂNCIA ESTRATÉGICA DO PODER AÉREO NUMA APROXIMAÇÃO ÀS OPERAÇÕES BASEADA EM

EFEITOS[1] (PARTE I)

João Vicente

2008/02/25

A SOMA DE TODOS OS MEDOS?

Marcelo Rech[1] (Brasil)

2007/05/30

OPERAÇÕES EM REDE. CONTRIBUTOS PARA O SEU ESTUDO[1]

João Nunes Vicente [2]

2007/02/04

OPERAÇÕES BASEADAS EM EFEITOS: O PARADIGMA DA GUERRA DO SÉCULO XXI[2]

João Vicente[1]

2006/01/26

CONSIDERAÇÕES SOBRE O PODER AERO-ESPACIAL

António de Jesus Bispo

2004/12/21

OS MODERNOS PENSADORES DO PODER AÉREO

Eduardo Silvestre dos Santos