Win the War Before It Begins: Why Colombia Should Integrate Its AirPower Under the Colombian Air Force

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Abstract

How should Colombia organize its airpower? Should its airpower be distributed in different military services (*multiple-service* model) or only assigned to the Air Force (*single-service* model? This paper answers that question by analyzing the attributes of military effectiveness. This analysis uses the theories of military effectiveness, structure of command, and joint and air doctrine, to compare and contrast the *integration*, *responsiveness*, and *combat skill* of those models in fighting. The Gulf War and the Six Day War are used as the basis of this analysis. The former is representative of the *multi-service* model (the U.S.), and the latter is characteristic of *single-service* model (Israel). Of course, there are vast differences between these countries, but this study is only concerned with which model better exhibited attributes of military effectiveness in fighting. This analysis concludes and recommends that Colombia should organize its airpower by applying the *single-service* model because this model produces more combat power in the battlefield and is a better fit with the Colombian Defense and Security Strategy.

Introduction

Sometimes the fight starts before war begins. In this case, the terrain is neither the jungle nor the desert in Colombia; it is the political bureaucracy of the Colombian Ministry of Defense (COLMINDEF). The players are Colombian military services, and their aim is to win the interservice struggle to obtain more airpower assets to better suit their mission in conventional warfare.[1] More often than not, the services refer to organizational models from other countries to support their arguments and relevance. The Army (COLARMY) and Navy (COLNAVY) argue that Colombia should apply the *multiple-service* model, like in the U.S., in which each individual service has a strong aviation component. They state that U.S. armed forces are the most modern, have been proven in battle, and have won nearly all of its major conflicts. Therefore, there is no logical reason for the Colombian armed forces not to implement the *multiple-service* model applied by the most powerful military force in the world. On the other hand, the Colombian Air Force (COLAF) argues that Colombia must not implement the model of a global and expeditionary force, but the model of a homeland defense and security force. Therefore, COLAF advocates that Colombia should implement the *single-service model* for its airpower, like Israel, in which all airpower assets are under a single force. COLAF argues that Israel has also won nearly all of its major conflicts because the *single-service* model leverages outstanding effectiveness in the battlefield against conventional forces. In the midst of the controversy, COLMINDEF is aware that it is more efficient, in terms of budget, to have centralized air assets under the COLAF.[2] However, its dilemma lies with which of those models Colombia should select to produce more combat power or military effectiveness in conventional warfare.

This paper concludes that Colombia should implement the *single-service* model because it leverages better the main three attributes of military effectiveness: integration, responsiveness and combat skill. The main goal of this paper is to answer "which model" is more effective in fighting, not necessarily to provide specific recommendations on how to implement the *single-service* model. Therefore, this paper is organized into three sections. First, the framework to evaluate military effectiveness of the *multiple-service* and *single-service* models; second, comparing and contrasting the military effectiveness of those models used by U.S. and Israel during similar wars; and third, recommendations and conclusions to the COLMINDEF, with the understanding that it will necessitate a further study to explain "how" COLMINDEF can move forward to the *single-service* model.

Framework to Evaluate Military Effectiveness of the Multiple-Service and Single-Service Models

Defining and Measuring Military Effectiveness

In this paper, military effectiveness is defined as the capacity to convert resources (tangibles and intangibles)[3] into fighting power.[4] This means that the more fighting power produced, with the same resources, the more effective a military force is.[5] In *Creating Military Power,*[6] Risa A. Brooks and Elizabeth A. Stanley advocate that military effectiveness can be assessed by the degree to which a military exhibits certain attributes in fighting. Three of these attributes offer the framework to evaluate the military effectiveness of U.S. and Israeli models. *Integration* (degree of consistency and mutually reinforcing of military activities through strategic, operational and tactical levels – top-down and bottom-up –); *responsiveness* (ability to tailor military activity to exploit opportunities in the battlefield); and *combat skill* (ability to execute basic tactics and complex operations through horizontal coordination).[7]

The three attributes of military effectiveness strongly relate to some tenets and concepts of military doctrine, which can be considered enablers of those attributes. In the case of *integration* and *responsiveness*, their main enablers can be the unity of command/mission command in joint operations,[8] and centralized control/decentralized execution in air operations. The unity of command´s purpose is to ensure that unity of effort is under one responsible commander for every objective. In the same vein, mission command is the exercise of authority and direction by the commander to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in operations.[9] Hence, it is possible to correlate that unity of command and mission command is to joint operations what centralized control and decentralized execution is to airpower.[10] Finally, with respect to *combat skill,* its main enablers are standardization and doctrine, because these interconnect the different forces to fight as a single force. Figure 1 illustrates these concepts.

Attributes	***Measure***	**Enablers of Attributes***
Integration	Degree of consistency and mutually reinforcing of military activities through strategic, operational and tactical levels (top-down and bottom-up consistency).	Unity of command and centralized control.
Responsiveness	Ability to tailor military activity to the context and to exploit opportunities in the battlefield.	Unity of command/ centralized control, and mission command/decentralized execution.
Combat skill	Degree of execution of basic tactics and complex operations (horizontal coordination).	Standardization and doctrine.

Relationship between Organizational Structure and Military Effectiveness in U.S. and Israeli Organizations

In *Commanding Military Power*,[11] Ryan Grauer argues organization often matters more to victory than numbers and weapons. His theory of command structure relies on well-organized armed forces who can cope better with war's uncertainty, use resources effectively, and, quite often, win.[12] Grauer's research is also supported by contingency theory, which holds that uncertainty, or the lack of relevant and opportune information, in decision making is the root of poor organizational performance.[13] Grauer believes that an organization´s structure can be understood in two organizational terms: *centralization* and *differentiation*. C*entralization* is the degree of authorization to use resources in pursuit of collective goals. In this study, an organization is *highly centralized* when the top of its hierarchy (joint staff) makes plans, assigns roles, coordinates efforts, and decides which members can change their activities and when.[14] Alternatively, a *maximally decentralized* organization is characterized by virtually all members of an organization (squadron/battalion commanders) having the authority to make those decisions. *Differentiation,* on the other hand, is about the level of diverse resources that one has and controls.[15] If each business unit of an organization has similar or equal assets in respect to others, *differentiation* is low because business units look like each other. For this study, if each service has air assets, *differentiation* is low. But if a single service has all air assets, *differentiation* is high.

However, Grauer's research does not recognize how military effectiveness is affected when both *centralization* and *differentiation* vary between force development (acquisition, training, and doctrine), and employing this force in combat. This is relevant because it can engender dichotomy (as it will be showed further in this paper) to use airpower in fighting when it was organized quite different during force development. In general terms, the U.S. builds its airpower capability with *medium centralization* and *low differentiation* and fights with *medium-high centralization and medium differentiation*. In force development of U.S. airpower, each service builds its own air capabilities, but in fighting, the authority relies on the Joint Force Commander (JFC) to employ that capability. Israel, on the other hand, has *medium-high centralization* and *high differentiation* no matter whether it is force development or fighting. The authority almost always resides in the Chief of General Staff (CGS), who is also the equivalent to the U.S. JFC, as Israeli air assets are only under the Israeli Air Force (IAF) Commander.[16] (Figure 1).

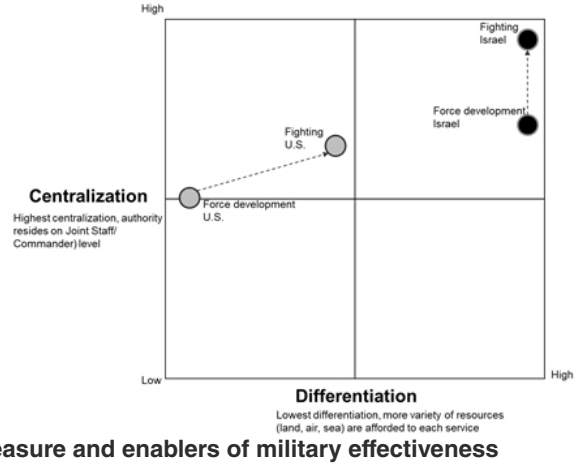

Figure 1. Attributes, measure and enablers of military effectiveness

Choosing the wars to test military effectiveness of models to organize airpower

This study is not about the comparison between U.S. and Israeli military power, nor does it suggest how U.S. and Israel should organize their military power. These countries have a huge disparity in their national interests and in their concepts of projecting military power. It is possible to argue that the U.S. uses the *multiple-service* model to develop its overwhelming military capabilities in maintaining expeditionary forces around the world and achieving its strategic goals. Israel, instead, uses the *single-service* model because it fits with Israeli homeland defense strategy and its military power remains inside Israeli borders. While U.S.' threats are on other continents, Israel's threats are around and inside its borders. U.S. has 20 times more air assets than Israel, and U.S. has aircraft carriers while Israel does not. Based on these general facts, it is clear that this study does not compare these countries. Instead, this study compares which model, *multiple-service* or *single-service*, better exhibited attributes of military effectiveness during specific wars.

Of course, the nature of war constrains comparison and contrast between two identical wars. Nevertheless, the Gulf War, in the case of the U.S., and the Six Day War, in the case of Israel, are two conflicts that are closely matched, and they allow an analysis in line with this study. In these two contemporary wars, which will be analyzed under their respective context,[17] the fighting was between conventional forces, the role of the airpower was relevant, the duration of these conflicts was short, the battlefield's terrain was alike, the U.S. and Israel conducted offensive operations, and both countries won their respective wars (endnotes explain why this study does not consider other similar wars).[18] In addition, both governments are democracies and their adversaries' governments were considered authoritarian regimes.[19] After choosing these wars, the framework to evaluate military effectiveness between *multiple service* versus *single service* model is demonstrated. (Figure 2).

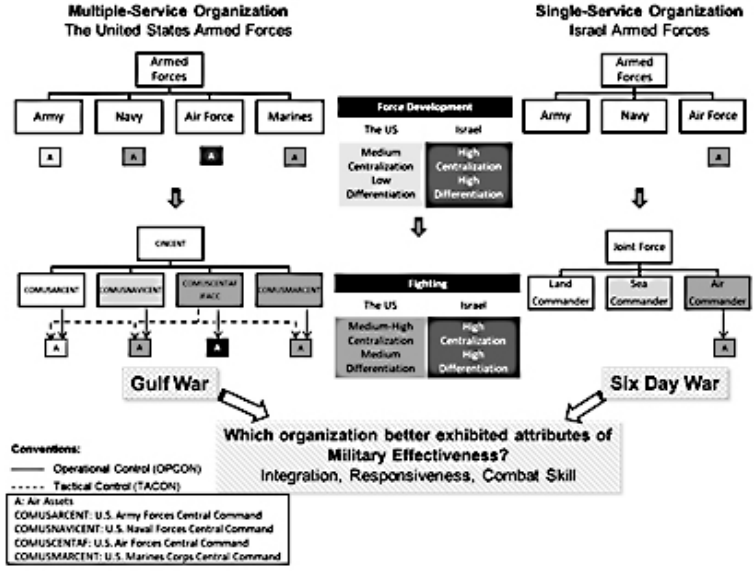

Figure 2. Framework to Evaluate Military Effectiveness of the models to organize airpower [20]

Figure 2 also shows the chain of command to employ airpower in fighting. When the U.S. conducts joint operations, service aircrafts are under tactical control (TACON)[21] of the Joint Force Air Component Commander (JFACC)[22] but service component commanders will normally retain operational control (OPCON)[23] over their assigned and attached service forces[24]. In the case of Israel, the IAF Commander, who is the equivalent to the U.S. JFACC, has OPCON and TACON over all air assets. The question is, which model, *multiple-service* or *single-service*, better exhibited attributes of military effectiveness during the Gulf War and the Six Day war respectively?

Background on the Gulf War

On August 2, 1990, Iraq invaded Kuwait. Days later, the United Nations (U.N.) Security Council called for Iraq to withdraw from Kuwait, and President George H.W. Bush ordered U.S. forces to Saudi Arabia, thus initiating Operation Desert Shield on August 7. Initially, Air Force tactical fighter aircraft arrived in Saudi Arabia and Marine tactical fighter aircraft arrived in Bahrain. The majority of U.S. forces were oriented on the defense of a vulnerable Saudi Arabia. However, during October and November 1990, the U.S. started configuring forces for an offensive strategy across multiple domains (air, land, and sea). This plan consisted of coercing Saddam Hussein through naval blockades and posterior air-attacks to comply with the U.N. resolutions. If these actions failed, the coalition's strategy formulated an offensive combined arms operational plan to destroy Iraqi military capabilities and liberate Kuwait.

Five months later, on January 17, 1991, the air offensive began against Iraqi military targets. Four interconnected and overlapped phases were developed. Phase 1 was a strategic air campaign inside Iraq. Phase 2 was to gain air supremacy (attacks against Iraq air defenses) in Kuwait. Phase 3 was oriented in shaping the battlespace in the case of committing ground forces. The last Phase primarily directed support of the ground offensive to liberate Kuwait.[25]

The coalition quickly achieved operational objectives in Phase 1 and 2. Concurrently, five weeks of coalition air-attacks on the Iraqi Army shaped the battlespace for the last Phase. Those air-attacks seriously affected the Iraqi Army's freedom of action and isolated it from its lines of supply and retreat. On February 24, the ground campaign began, and Coalition defeated the Iraqi Army in only four days, and Kuwait was liberated. The credit for this victory belongs not only to the overwhelming Coalition forces, but also to Iraqi soldiers with insufficient combat skills and their poor coordination executing complex operations.[26]

Background of the Six Day War

In 1966, war in the Middle East was only a question of time. Tensions between Israel and its Arab neighbors were the fuel for the war and their skirmishes were the ignition sparks. Palestinian guerrillas based in Syria, Lebanon, and Jordan had attacked Israel several times. In response, on November 13, 1966, Israel struck a village on the Jordanian West Bank with aircraft and heavy artillery, leaving 18 dead and 54 wounded. Later in April 1967, Israel participated in air-to-air combat engagements with the Syrian Air Force, causing the loss of six Syrian MiG fighter aircraft. To demonstrate support for Syria, Egypt mobilized its forces in the Sinai on May 14, 1967. On May 22, Egypt closed the Gulf of Aqaba to Israeli shipping and blockaded the port city of Eilat, located on the Red Sea in southern Israel. On May 30, Jordan signed a mutual defense pact with Egypt, placing Jordanian forces under Egyptian command. Days later Iraq joined in this multinational alliance as well. The third Arab-Israeli war was imminent.

Israeli fear of a potential attack from its Arab neighbors escalated to a sudden preemptive Israeli air-attack against Egypt on June 5. Most of Egypt's airpower was destroyed on the ground by the IAF. A similar air-attack decimated the Syrian Air Force on the same day. The loss of Arab air superiority placed the Arab Army in a vulnerable situation against the overwhelming Israeli air

and ground forces. On June 9, Israel launched an assault that fortified the Golan Heights, capturing it from Syrian forces after a day of heavy combat operations. This war lasted only six days. Israel's victory included the capture of the Sinai Peninsula, Gaza Strip, West Bank, Old City of Jerusalem, and the Golan Heights.

These basic facts about the Gulf War and the Six Day War are enough to get a global understanding of what happened in those conflicts and to move forward with the analysis of military effectiveness.

Analysis of Military Effectiveness Attributes

Integration

U.S. armed forces' organizational structure allowed a good level of consistency and mutually reinforcing of military activities, but the lack of joint air training and joint air doctrine constrained a better *integration*. The plan "Instant Thunder"[27] enhanced the unity of command of the Commander in Chief, U.S. Central Command's (CINCCENT), General Norman Schwarzkopf, to use the Coalition's airpower. Schwarzkopf's decisions were translated into an air tasking order (ATO) through JFACC, Lieutenant General Charles Horner, USAF (Appendix 1).[28] The ATO was the framework to assure consistency in the strategy and to enable unity of effort and synchronization –as well as avoiding air-to-air fratricide– of 2,000 to 3,000 sorties per day of most coalition's aircraft. At the end of the first day of the war, 2,759 sorties were flown, and air superiority was achieved. Ten days later, Schwarzkopf declared that Iraqi Air Force no longer was as a combat-effective force.[29]

However, the use of expeditionary forces around the world with aircrafts in each service constrained better joint air effectiveness. The Naval component that was stationed in the Arabian Gulf was trained to defeat the former Soviet Navy at sea, but it was not configured for an extended joint air campaign in an environment with minimal risk to its fleet.[30] The Commander of U.S. Naval Forces Central Command COMUSNAVCENT (wearing also naval component commander hat) was suspicious about the new command structure (the JFACC and the ATO) to conduct joint air operations.[31] The COMUSNAVCENT, who believed that he should play a role as team captain instead of a team player,[32] remained afloat and sent a representative to Riyadh, Saudi Arabi where joint planning was developed. The Navy thought that it was more important to stay afloat than to maintain daily contact with the CINCCENT and the JFACC. This parochial attitude fed by the lack of joint air training caused some delay and difficulty in integrating the Arabian Gulf carriers with JFACC-controlled operations.[33] One Navy flag officer recognized years later that the Gulf War "put a stake through the heart of the Navy's resistance to joint planning and operations."[34]

Another important factor that constrained a higher *integration* consisted of the different air doctrines regarding employment of air assets and targeting. Lieutenant General Royal Moore, Commander 1st Marine Air Wing, was skeptical of the strategic air effort. In late August 1990, Moore commented that the first bomb that fell on Iraq ought to be after the first Marine crossed the line with his bayonet fixed.[35] Additionally, in the Army and Marines' view, the air campaign virtually ignored their targets in favor of what the JFACC determined were true "strategic" targets.[36] However, it was Schwarzkopf, the CINCCENT, and also the Joint Force Land Component Commander, who decided the targeting priorities. A clearer example of those disagreements happened during the first few weeks of the air campaign. While the JFACC warned against accelerating Phase 3, the Marines and the Army desired airstrikes against frontline forces and Iraqi artillery in their tactical area of responsibility. But Schwarzkopf preferred to emphasize bombing Republican Guards and destruction of tanks with precision guided bombs.[37] This decision and the weak joint air doctrine frustrated Marines who sometimes decided to work outside of joint

air operation process, and therefore, with low regard to CINCCENT's intent.[38] Colonel Rietsch, Marine Aircraft Group-11's commanding officer said: "We were able to do our job in spite of the ATO process and that's really true… we were launching airplanes before we got the ATO."[39] Some studies argue that the overwhelming coalition airpower avoided a disaster like the Battle of Kasserine Pass during the World War II. The U.S. lost that battle because its airpower was assigned to corps commanders as they wanted, and this made it impossible to achieve air superiority.[40] This perception about tendency of ground commanders to use their airpower to act independently instead of to work jointly, was reaffirmed by Michael R. Gordon and Bernard E. Trainor in *The Generals' War*, "the campaign [in the Gulf War] was joint more in name than in fact. Each service fought its own war, concentrating on its own piece of the conflict with a single-minded intensity."[41] Hence, a RAND research states the JFACC's contribution during the Gulf War had been to coordinate rather than to command or control.[42]

In contrast, during the Six Day War, the unity of command and air doctrine enhanced the *integration* of the Israel Defense Forces (IDF), even if ground commanders felt more unity of effort than OPCON at operational level. Israel was conscious that its homeland defense strategy resided in its the unity of command to act as a single armed force instead of three. The military balance showed Israel at a big disadvantage versus its adversaries (Appendix 2). Hence, each air sortie had to support the Israeli strategy. A unique air doctrine leveraged the plan to achieve air superiority by eliminating the Egyptian Air Force (EAF) and to assure the freedom of action in the ground campaign in Sinai.[43] All service commanders served in the General Headquarters (GHQ) under the Chief of General Staff (CGS), Yitzhak Rabin. There were also three permanent district commanders: Northern (against Syria), Central (against Jordan), and Southern (against Egypt) –who were part of the GHQ as well (Appendix 1). This organization and its unique air doctrine allowed Israeli services and district commanders to have the "big picture" of the war and to develop their operational and tactical actions consistent with Israeli strategy. In the case of airpower, Maj. Gen. Mordechai Hod, IAF Commander, exerted centralized control to employ scarce air assets with flexibility, priority and synchronization across all levels of the war and theaters of operations. The war began with a massive, surprise air-attack against EAF. After 2 hours and 50 minutes of airstrike raids, Israel destroyed about 85% of EAF and declared air superiority on the Egyptian front. This paved a safe way for Southern Commander, Brig General Yeshayahu Gavish, who advanced his forces across the Sinai without EAF interference and easily integrated with IAF interdiction and close air support. Similar airpower actions were executed against Syria, Jordan, and Iraq to accelerate the freedom of action of the Israeli Army in the Central and Northern theaters.

Although the single air doctrine developed by IAF constrained the OPCON in the Northern district, it eased Central and Southern Commanders' ability to attack targets in order of priority. For example, the Southern theater commander only had direct control of his ground forces, but not of naval or air assets, which were under order of their respective service commanders, and ultimately the CGS. This chain of command facilitated the application of air doctrine to take full advantage of Israeli strengths using airpower to overcome its numeric disadvantage. When EAF was no longer a threat to Israeli ground forces, CGS ordered airstrikes against ground targets. In the first day of war, approximately 1,000 sorties[44] were against EAF and 278 sorties on Egyptian ground forces.[45] During the other five days, most airstrikes were against ground targets. The GHQ decided the targeting priority and a single air doctrine mitigated the risk of ground commanders' use airpower to achieve tactical objectives disconnected with the strategy.

In short, although the *multiple-service* model works to support the U.S. requirement to deploy its expeditionary forces around the world, this model affected the integration of airpower. In contrast, the *single-service* model leveraged a better *integration* of airpower to achieve the Israeli homeland defense strategy. In this model, when a single commander has the OPCON over all air assets, he/she can easily exercise centralized control/decentralized execution to support the

strategy and the JFC's intent, despite that OPCON could initially constrain the use of airpower to achieve operational and tactical goals. Therefore, the *single-service* model mitigates the dichotomy about airpower employment and assures that each tactical action contributes to achieve the priority objectives in the war. This consistency and priority use of airpower initially allows gaining air superiority so that the ground forces can fight with more freedom of action and win the war with more effectiveness. However, it is necessary to analyze the next two attributes of military effectiveness to get a holistic evaluation of each model.

Responsiveness

During the Gulf War, the *responsiveness* showed by Coalition Forces at the tactical level contrasts with the slow speed of coordination at the strategic level, which failed to seize the opportunity to crush the elite forces of enemy. The philosophy of mission command and decentralized execution allowed reasonable *responsiveness* at the tactical level to overcome the ATO's shortcomings. The ATO had a little room for flexibility and took 48 hours to build; however, the commander could make changes during execution.[46] For example, when fighter aircraft were restricted due to weather conditions, ground commanders were able to used\ helicopters to attack Iraqi targets, which resulted in significant destruction of Iraqi equipment in the final two days of the war.[47] Another example occurred on 29 January at Khafji. An aircraft used for Joint Surveillance and Target Attack Radar System identified the reinforcements of the Iraqi III Corps. Immediately, the JFACC diverted the necessary services' aircrafts to hit those reinforcements. As result, 200 Iraqi armored vehicles were destroyed and caused the Iraqi army to retreat in disarray.[48]

In contrast, the location of COMUSNAVCENT aboard the U.S.S Blue Ridge –rather than in Riyadh– affected the flow of information and hindered timely coordination. The JFACC communicated to COMUSNAVCENT representative in Riyadh, then COMUSNAVCENT afloat, then the Red Sea and the Arabian Gulf battle forces, the individual battle groups, and finally the carrier air wing. This extensive channel of coordination hindered cooperation.[49] Horner could easily use USAF fighter bombers because the JFACC had OPCON over these assets, but if he wanted to use the F-18 or A-6E from the Navy, the JFACC was subordinated to a lengthy chain of coordination with that service.

At the operational level, the fragmentation of the air control between ground forces commanders and the JFACC significantly contributed to the escape of the best trained and disciplined troops of the Iraqi Army.[50] The U.S. created the Fire Support Coordination Line (FSCL) to allow freedom of action and to avoid fratricides. The JFACC had the responsibility of controlling air-attacks in the area between Coalition and FSCL. On the other hand, the ground commander had the freedom to use attack helicopters and missiles between its forces and FSCL. On 27 February, XVIII Airborne Corps moved forward the FSCL well north of the Euphrates River to keep an area for attack helicopter operations unconstrained by any coordination with the JFACC. This decision limited the JFACC's use of fighter bombers to attack Iraqi Republican Guard unit. As result, much of those elite unites escaped destruction.[51] Although it was a *responsiveness* shortcoming, the coalition showed a high capability to seize opportunities at the tactical level, mostly because they had both high quality and large quantity of resources (Appendix 2).

In the case of the Six Day War, Israel showed an incredible and constant *responsiveness* at all levels of war to compensate for its numeric inferiority in military resources. While the IAF beat the EAF on the morning of June 5; Jordan, Syria, and Iraq attacked Israel in response to the airstrike on Egypt. However, Israel continued attacking its most powerful threat, the EAF. Once Israel achieved air superiority in the Southern theater, IDF quickly turned its combat power on Syria at noon on 5 June. Israel struck five Syrian air bases and destroyed 60 of its 127 combat aircrafts,[52] while the IAF lost only one Mystère. Then, Israel attacked two Jordanian airfields and destroyed 24 Hunters and badly damaged another four. Finally, on the morning of June 6, Israel

attacked Iraq's H-3 (al-Walid) airbase near Ar-Rutbah, the westernmost Iraqi airfield, destroying Iraqi planes on the ground and in the air.[53] Israeli *responsiveness* was possible thanks to unity of command and the centralized control to flexibly use its scarce air assets according to the strategic context of the war.

At the operational and tactical level, the scarcity of air assets, planning, standardization, and training promoted mission command and decentralized execution. Once higher headquarters implemented the planned operation, commanders executed this without additional direction from above. General Hod, IAF Commander, said: "Sixteen years of planning had gone into those initial 80 minutes. We lived with the plan, we slept on the plan, we ate the plan. We constantly perfected it."[54] As result, Israeli forces seized the opportunity not only in the air campaign but also in the ground campaign. For example, in the Sinai offensive, the trio Brig General Yisrael Tal (ugdah Tal), Brig General Avraham Yoffe (ugdah Yoffe), and Brig General Ariel Sharon (ugdah Sharon) seized the opportunity to defeat the Egyptian army after freedom of action was achieved with the EAF defeat. At the tactical level, during air-to-ground campaign, air control was not fragmented between air and ground commanders, and the IAF pilots often selected targets of opportunity when they flew to known strong targets.[55] Their airstrikes destroyed vehicles and dispersed Arab formations to ease their destruction by Israeli ground forces.[56] Scarcity of air assets, planning, standardization and training leveraged mission command and decentralized execution to achieve an outstanding *responsiveness* at the operational and tactical level.

On balance, the *single-service* model allowed more *responsiveness* than the *multiple-service* model. Perhaps, the main reason is when a force has scarce resources, it tends to exercise a more restricted OPCON over air assets. This kind of control reduces the time of coordination to seize opportunities in war. It also avoids the air control fragmentation between air and ground commanders and allows the careful use of air assets to compensate the numeric inferiority of the force. In addition, in both models, the mission command and the decentralized execution were the main enablers to achieve *responsiveness* at a tactical level. Now, it is necessary to analyze the last attribute of military effectiveness, which is related to the horizontal coordination between the services to execute both basic tactics and complex operations.

Combat Skill

In the Gulf War, the U.S. forces showed high professionalism and execution of combined arms operations, but the flawed joint air doctrine and standardization limited better jointness. The Gulf war proved the new joint organization could fight successfully—if not coherently.[57] The use of the JFACC not only constrained Marines to exploit the exceptions of the 1986 Omnibus Agreement to use its air assets as they wanted,[58] but it also allowed an outstanding combination of fires during the war. Marines flew approximately 9% (10,321 sorties) of all JFACC-tasked sorties from 17 January to 3 March, and 12% (1,854 sorties) of all joint air sorties during the five-day period of the ground campaign. The Tomahawk missile of the Navy was used during daylight and bad weather, and the F–117 of the Air Force operated at night to keep key and strongly defended targets under attack without risk of attrition. Another example was the combination of air-attacks with the Advanced Tactical Missile System of the Army to attack behind the Iraqi front line.[59] Similarly, the Navy and the JFACC executed combined operations when they used the high-speed radiation missile of the Navy to complement JFACC capability to suppress enemy air defense.

However, patriarchs do not like it when others try to change the rules in their own house. When the airpower acquisition process is developed by three services instead of one, it is very difficult to standardize doctrine and equipment. This was not only a problem for the JFACC, but also for the CINCCENT who had to deal with four air doctrines instead of one. While the Air Force had developed a sophisticated system to identify the enemy and to avoid air-to-air fratricide in the air-saturated environment, the Navy did not have this system because it was configu-

red to fight in a more independent and low-saturated air environment.[60] Because of this, the JFACC declared a more restrictive Beyond Visual Range Rules of Engagement (BVR ROEs). The Navy advocated the opposite. The Navy addressed this issue to Schwarzkopf who made decision of more restricted BVR ROEs. This originally limited the F-14 to forward combat air patrol. When each service develops separated airpower acquisition process, this triggered unstandardized air doctrines, low standardization in communications systems, and constrained the execution of both basic and complex air operations. Hence some critics asked, why should airpower be separately acquired if at the end it will be embedded in fighting?

Another issue that constrained a more horizontal cooperation and promoted a separatist attitude among the services was related to weak joint air training, the lack of joint understanding, and the ATO's complexity. The ATO is the heart of air operations in the USAF, but the other services were not familiarized with this concept. The USAF has low understanding of the ground campaign, in part because officers are not trained in joint operations until they achieve the grade of Major. Likewise, only the USAF had a special system to extract specific information from the ATO. As result, some Marine officers sought to act more independently from the ATO to achieve its ground campaign's objectives. One way they did this was to put the targets that the Marines wanted to strike as alternate targets, then Marines coordinated with the appropriate air wing asking that the secondary target be struck.[61] General Moore said, "this way I didn't have to play around with [joint air planning] process while I was waiting to hit a target. I kind of gamed the [ATO] process. The Navy's trouble was that they tried to do it honestly and write just what they were going to fly."[62]

In contrast, in the Six Day War, the IDF's superior *combat skills* allowed them to develop complex and basic operations, and to maintain the operational tempo while compensating for their weakness in material quantity. The IDF plan mainly included combined arms operations between air and ground forces. In essence, once air superiority was attained, Israeli airpower joined with the Israeli Army to destroy the Egyptian, Syrian, and Jordanian armies. Interestingly, although air superiority was the priority, the pilots' training was more focused on attacking dummy aircrafts and armor columns than on air-to-air tactics.[63] This training helped IAF' pilots to get a better understanding of the ground campaign. IAF fighter bomber squadrons completed 2,547 air-to-ground sorties. The main targets were armor, artillery, troop movements, and fortifications. IAF squadrons were thoroughly integrated into the ground war.[64] An example of this *integration* was the Battle of Um Katef. Both Egyptians and Israelis considered the sand dunes to the north of Um Katef impassable. However, after Israeli studies, IDF moved both their infantry and armor through those dunes. This intrepid ground maneuver combined by IAF close air support resulted in heavy Egyptian equipment losses. Additionally, each IAF pilot trained under the same doctrine and standards to apply the same tactics, technics, and procedures. This doctrine and standardization allowed IAF to keep modular capability[65], to avoid antagonist concepts, and to increase the security of both fighter and helicopter pilots. For instance, the mobility of pilots and the synchronization between squadrons leveraged the variation of fighter squadrons' size according to the circumstances. Israel did not lose helicopters[66] during their important role in personal recovery because helicopter crews trained to deal with air threats such as aircraft and surface-to-air missile. Overall, *integration* of air-ground operations, variation in size of fighter squadrons, and protection against air threats, were feasible and smooth because only one force, instead of three, was responsible for air training, doctrine and standardization.

Another outstanding Israeli feat was to maintain operational tempo to compensate for its numeric disadvantage. All Israeli airpower was concentrated on surprise attacks against the EAF. A minute failure in Israeli readiness could turn its offensive into defeat. To achieve the approximately 1,000 sorties required to destroy the EAF, the IAF maintained a 96% combat readiness rate and turned their fighter bombers in as little as seven minutes, up to eight times a day. Israeli air *combat skill* at tactical level was a remarkable trait because only the IAF was specialized to organize, train and equip Israeli airpower.

In essence, the *single-service* model better leveraged *combat skill* than the *multiple-service* model. The difference mainly resides in that only a single force was responsible for the airpower acquisition process, and that the air force's pilots had a better understanding of the ground campaign. This model facilitated a standardized air doctrine, procedures and equipment acquisition process. Likewise, a joint training and understanding was translated in cooperation instead of a separatist attitude.

Thus, the more services acquire their own airpower, the more difficult fusion becomes when fighting. With this analysis in mind, it is possible to move forward to summarize the findings and to make recommendations.

Final Analysis and Recommendations

The *single-service* model attenuates organizational bias during the transition from force development into fighting,[67] and consequently, this model produces better *integration, responsiveness,* and *combat skill* than the *multiple-service* model. Overall, an organization that develops its forces with *high centralization* and *high differentiation,* as in the *single-service* model, better leverages unity of command, unity of effort, centralized control, doctrine and standardization through all levels of the war. In the same way, it enhances mission command, decentralized execution, and the use of airpower with more flexibility and versatility when the demand for airpower exceeds available resources.. This model provides a better consistency between tactical actions and strategic goals, mitigates dichotomy about airpower, and minimizes services' predisposition to act independently instead of jointly.

Hence, it is possible to argue the U.S. won the Gulf War principally due to its high quality and large quantity of military assets, and Israel won the Six Day War mainly due to its outstanding military effectiveness. Another important inference is that Colombia's national interests are similar to Israel's interests. Colombia, like Israel, develops its military capability under the concept of homeland defense. Their threats are inside of their territories (terrorism and transnational threat) and close to their borders (conventional forces).[68] But a hegemon like the U.S. develops its military forces under the concept of global power projection with expeditionary forces[69] because its main interests and foes are on other continents.

Considering that the *single-service* model leverages better integration, responsiveness and combat skill, and the similitudes between Colombia and Israel in their national securities strategies, COLMIDEF should apply the *single-service* model to organize its airpower. This process is not easy because services fight for keeping their relevance using airpower. Hence, the success of this transition resides in a political decision in which national interest prevails over the services' parochialism. Colombia will not be the first to make this transition, which requires a well-thought-out plan to deal the future challenges in organizing, training and equipping forces. Canada made this transition in the 1960s, Belgium in 2002, and Russia in 2004.[70] COLMINDEF should study the lessons learned by those countries to integrate all airpower under COLAF and to complement the following general recommendations derived from the findings of this study.

First, over a period of three years, COLMINDEF should organize the Colombian Military Forces (CMF) under a *single-service* model. The COLNAVY and COLARMY air equipment, infrastructure and personal should be transferred to the COLAF during that period. In the same way, ground and naval equipment, infrastructure, and personal should be transferred and integrated to COLARMY and COLNAVY respectively.[71] This new organization must fit within the Colombian Security and Defense Strategy (CSDS).[72]

Second, COLMINDEF should stop the acquisition of air equipment/infrastructure to the COLNAVY and COLARMY and limit this acquisition to the COLAF. These funds should be transferred from the service who was initially budgeted the requirement to the COLAF. Acquisition process must fit with CSDS and approved through a process that assures prioritization and standardization –especia-

lly communications systems– of all joint force. The savings by the economy of scale in acquisition should be invested in the transformation process to the new organization.

Third, CFM should adjust the military education plan (MEP) with more jointness in mind. The MEP should promote a joint culture while protecting the heritage and culture of each service.[73] The MEP should include joint education during the first 18 years of military career, –including the academy–, and the remaining 100% in the subsequent years. An experience in joint position, however COLMIDEF decides, should be mandatory for promotion to Brigadier General or Master Sergeant of Command.

Fourth, the COLAF should be the unique entity responsible for air doctrine, just as the COLNAVY would be responsible for naval doctrine,and the COLARMYrfor land doctrine. The General Command of the Military Forces should remain responsible for joint doctrine. This doctrine should emphasize that military assets belong to the joint force instead of each service, and it should promote high level of integration, responsiveness and combat skill of the joint force.

Fifth, every year, CMF should develop at least one joint exercise at the strategic level and two joint exercises at the operational level to get a high degree of integration and responsiveness. In regards to the tactical level, CMF should develop a joint training plan to improve their *combat skill.*

While these recommendations are neither easy nor fast to implement, they are absolutely necessary to achieve the best military effectiveness in the Colombian military forces. When Russia, Canada and Belgium integrated their airpower, critics thought it irrational. However, what is really irrational is to lose the war before it begins. ❑

Appendix 1. War Organization

The Gulf War

The Six Day War

Appendix 2. Military Balance Tangible Resources The Gulf War

Tangible Military Resource	Iraq	Coalition	U.S.	Britain	France	Saudi Arabia	Egypt	Syria	Ratio Coalition Vs Iraq
Troops	336,000	472,700	334,000	35,000	9,500	50,000	30,200	14,000	1.4
Tanks	3,475	3,090	2,000	180	40	280	350	240	0.9

Armored Vehicles	3,080	4,510	2,425	15	120	950	750	250	1.5
Artillery	2,475	1,186	784	24	18	115	145	100	0.5
Fighter/Fighter bombers	819	1,602	1,215	84	58	245			2.0
Helicopters	511	1,695	1,500		125	70			3.3

The Six Day War

Tangible Military Resource	**Egypt**	**Jordan**	**Syria**	**Iraq**	**Arab**	**Israel**	**Ratio**
Troops	210,000	55,000	63,000		328,000	250,000	1.3:1
Tanks	1300	288	750		2338	1000	2.3:1
Armored Vehicles	1050	210	585		1845	1500	1.2:1
Artillery	575	263	315		1153	200	5.7:1
Aircraft	431	18	127	106	682	286	2.4:1

Notes

1. The arguments expressed by each Colombian service are deduced by the author who participated in the Colombian Armed Forces Capability Planning. This methodology of planning is being applied by COLMINDEF since 2013. In those meetings, have been participating the Minister of Defense, the General Commander of Military Forcers, the Chiefs and staffs of each service. In addition, one of the COLMINDEF's main concerns is to develop military forces to defend Colombia from conventional threats. Hence, this paper focus on force development to face regular warfare instead of irregular warfare. Colombian Ministry of Defense. "Colombian Armed Forces Capability Planning." [Confidential], Bogotá, 2013-2017.

2. According to Colombian Ministry of Defense, putting all air assets under the Air Force reduces the costs significativaly, because the economy of scale is possible to apply in procure, maintaining, training, infrastructure and personal. Besides, it is possible apply the best practices in aircraft maintaining. For example, the cost of one hour of UH-60 Black Hawk is almost the double in the Army than the Air Force. [Colombian Ministry of Defense. "Colombian Armed Forces Capability Planning" (Confidential), Bogota, 2013-2017].

3. Tangibles resources are men/women, equipment, infrastructure, technology. Intangibles resources are the organization and intellectual capital (knowledge, procedures and doctrine)

4. Concept adapted from Allan R. Millet and Williamson Murray, *Military Effectiveness* (New York: Cambridge University Press, 2010), 2.

5. However, military effectiveness does not automatically mean victory despite their strong relationship. A country can fight with a higher level of military effectiveness and can still lose the war. Victory depends on other factors, different from military power, such as political, economic, social, information, and so on. For example, Germany showed high military effectiveness applying blitzkrieg type tactics, however lost during World War II. And, the U.S. won practically all of their battles in Vietnam, yet lost the war politically.

6. Risa A. Brooks and Elizabeth A. Stanley. *Creating Military Power* (Stanford, California: Stanford University Press, 2007), 15.

7. Brooks and Stanley in their book, *Creating Military Power*, advocate four atributes of military effecteviness: 1) integration; 2) responsiveness; 3) skill and 4) quality (properties of weapons and equipment). To ensure a fair measure in this study, it is imperative to focus on attributes influenced by structure organizational instead of properties of weapons and equipment. Hence, integration and responsiveness are more related with how a military organization employ its force, while quality does not. Skill, in this case, best called combat skill, is how military executes basic tactics and complex operations. This last attribute could be confused with integration during this analysis. The difference between these two concepts is that integration is about top-down-top coherence and consistency, while combat skills is more about horizontal fusion or synergy.

8. The Joint Operations Manual JP-3 states unity of command and a mission command philosophy are guiding principles for joint force operations.

9. USARMY. *ADRP 6-0 Mission Command*, May 2012, https://fas.org/irp/doddir/army/adrp6_0.pdf. P 2-1

10. Centralized control maximizes the flexibility and effectiveness of air and space power under an air commander (unity of command). Decentralized execution of air and space power is the delegation of authority to commanders to achieve effective span of control and to foster disciplined initiative, situational responsiveness, and tactical flexibility (mission command). [USAF. "Volumen 1 Basic Doctrine". *U.S. Air Force Doctrine*. February 2015. http://www.doctrine.af.mil/Core-Doctrine/Vol-1-Basic-Doctrine/], 27.

11. Ryan Grauer. *Commanding Military Power* (Cambridge, United Kingdom: Carmbridge University Press, 2016), 15.

12. University of Pittsburgh. *Ryan Grauer Advances Command Structure Theory in new book: Commanding Military Power*. 2017. http://www.gspia.pitt.edu/About-GSPIA/Digital-Media-Center/News/View-Article/ArticleID/1836/Ryan-Grauer-Advances-Command-Structure-Theory-in-new-book-Commanding-Military-Power.

13. Grauer, *Commanding Military Power*, 26.

14. Ibid., 27-28.

15. To fit properly this study, the definition of Differentiation was adapted from what Grauer says: Differentiation refers to the span of control afforded to organization members with management responsibilities. [Ibid., 27].

16. Gil Ben David (*Colonel Israel Air Force*), interview by the autor, Montgomery, AL. 17 January 2018.

17. The anlaysis of military effecteviness atributes mainly uses the concepts and doctrine employed during those wars. This study does not consider changes or improvements since then.

18. Iraq Freedom is not analyzed because it was an irregular warfare, and this study only concerns to assess military effectiveness in conventional warfare. Operation Allied Force is ruled out due to the lack of land operations during the Kosovo war. The U.S. and NATO only conducted air bombing on Yugoslavia. Yom Kippur is not analyzed because, from Israel's side, it was a defensive instead of an offensive war, and this paper only considered the offensive wars whether by the U.S. or Israel.

19. Reiiter and Stam argue that all democratic belligerents are more likely to win war because they fight more effectively than autocratic regimes. [Dan Reiiter and Allan C. Stam III. "Democracy, War Initiation, and Victory". *American Political Science Review* 92, no. 2 (June 1998): 377-390].

20. Figure adjusted by the author using the information and acronyms from James A. Winnefeld and Dana J. Johnson. *Joint Air Operations. Pursuit of Unity in Command and Control, 1942-1991* (Annapolis, MD: Naval Institute Press, 1993).

21. TACON is an authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed direction and control of movements and maneuvers within the operational area necessary to accomplish assigned missions or tasks assigned by the commander exercising OPCON or TACON of the attached force. Joint Doctrine 2017. Doctrine for the Armed Forces of the United States. The Joint Staff, xxi

22. JFACC concept emerged to create a joint organization more effective in the air arena. Lesson learned from the Korea and Vietnam wars, and the Eagle Claw, Urgent Fury and El Dorado Canyon Operations reinforcement the necessity of improve the interoperability and cooperation of air assets. Scort Craig. *JFACC, A Question of Command or Coordination* (New Port: Naval War College, 1991), 3.

23. OPCON is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations and joint training necessary to accomplish the mission. [Joint Doctrine. *JP 1. Doctrine for the Armed Forces of the United States* (Washington, DC., 12 july 2017), xxi.

24. Joint Doctrine. *JP 3-30. Command and Control of Joint Air Operations* (Washington, DC., 10February 2014), II-2.

25. Thomas A. Keaney and Eliot A. Cohen. *Gulf War Air Power Survey Summary Report* (Washignton: Library of Congress Cataloging, 1993), 50.

26. After Iraq-Iran war in 1988, Saddam Hussein's paranoia for a cope, enhanced decisions that eroded Iraqi military effectiveness. Hence, he promoted militaries more for political loyalty than merits, limited the training, execute on more centralized command and restricted on horizontal and vertical information. [Caitlin Talmadge. "The Puzzle of Personalist Performance: Iraqui Battlefield Effecteveness in the Iran-Iraq War". *Security Studies* 22, no. 2 (May 2013), 180-221].

27. In late August 1990, the Chairman of the Joint Chiefs of Staff approved the plan "Instant Thunder" which was the base to get the air integration and consistency across all levels of the Gulf War.

28. Lieutenant General Charles A. Horner, was also the Commanding General of the Ninth Air Force and COMUSCENTAF.

29. Keaney and Cohen. *Gulf War Air Power Survey Summary Report*. 57.

30. Former Soviet Union supported United Nations Security Council Resolution 687 wich was the intenational framework to develop the Gulf War. Besides only Yemen and the Palestine Liberation Organization suported to Iraq. Hence, the risk to the Navy in the Arabian Gulf was minimal. See also: Winnefeld and Johnson. *Joint Air Operations. Pursuit of Unity in Command and Control, 1942-1991*. 134.

31. Winnefeld and Johnson. *Joint Air Operations. Pursuit of Unity in Command and Control, 1942-1991*. 113.

32. Ibid., 115.

33. Ibid., 134.

34. P. Mason Carpenter. *Joint Operations in the Gulf War, An Allison Analysis* (Degree Thesis, Montgomery, Air Command and Staff College Air University, 1994), 23.

35. Quilter II, Charles J. U.S. Marine Corps Reserv. *U.S. Marines in the Persian Gulf, 1990-199 I: With the I Marine Expeditionary Force in Desert Shield and Desert Storm* (Washington: History and Museum Division USMC, 1993). 101.

36. Keaney and Cohen. *Gulf War Air Power Survey Summary Report.* 155.

37. USCINCCENT's Intent: We will initially attack into the Iraqi homeland using air power to decapitate his leadership, command and control, and eliminate his ability to reinforce Iraqi ground forces in Kuwait and Southern Iraq. We will then gain undisputed air superiority over Kuwait so that we can subsequently and selectively attack Iraqi ground forces with air power in order to reduce his combat power and destroy reinforcing units. [Ibid., 27].

38. Quilter II. *U.S. Marines in the Persian Gulf, 1990-199 I: With the I Marine Expeditionary Force in Desert Shield and Desert Storm.* 121.

39. Richard B. H. Lewis. *Desert Storm–JFACC Problems Associated With Battlefield Preparation* (Research, Pennsylvania: Army War College, 1993). 28.

40. Christopher G. Marquis, Denton Dye and Ross S. Kinkead. "The Advent of Jointness During the Gulf War. A 25-Year Retrospective". *Joint Force Quarterly* 85 (April 2017): 80.

41. 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). 5.

42. Kenneth M. Pollack. "Air Power in the Six-Day War". *Journal of Strategic Studies*, 28, no. 3 (2005). 474

43. Ronald D. Jones. *Israeli Air Superiority in the 1967 Arab-Israeli War: An Analysis of Operational Art* (New Port: Naval War College, 1996). 9.

44. Pollack. "Air Power in the Six-Day War". 478.

45. However, it was awkward and sometimes risky to work outside of the ATO if coordination problems or other incidents happened. Air operations outside the JFACC/ATO umbrella were done so with great care and only when commanders could justify their decisions. Centralized control and decentralized execution became the norm, and free-lancing the exception. [Winnefeld and Johnson. *Joint Air Operations. Pursuit of Unity in Command and Control, 1942-1991.* 121].

46. Keaney and Cohen. *Gulf War Air Power Survey Summary Report.* 133.

47. Lewis. *Desert Storm–JFACC Problems Associated With Battlefield Preparation.* 33.

48. Keaney and Cohen. *Gulf War Air Power Survey Summary Report.* 174.

49. The Hammurabi and Medina Divisions of the Republican Guards were the best trained and disciplined troops of Iraqi army. [Carpenter. *Joint Operations in the Gulf War, An Allison Analysis.* 44.

50. Keaney and Cohen. *Gulf War Air Power Survey Summary Report.* 156.

51. Charles Long. *Analysis of the Six Day War* (degree thesis). Montgomery, Air Command and Staff College. 7.

52. Pollack. "Air Power in the Six-Day War". 475.

53. Jones. *Israeli Air Superiority in the 1967 Arab-Israeli War: An Analysis of Operational Art.* 14.

54. Grossgoold. *The 1967 Arabi-Israeli War: An Operational Study of the Sinai Campaign.* 11.

55. Pollack. "Air Power in the Six-Day War". 483.

56. Some force buildup of the 1980s efforts were the 1986 Department of Defense Reorganization Act (Goldwater-Nichols) and the internal agreements between services to increase the unity of effort in air-land-sea operations.

57. Winnefeld and Johnson. *Joint Air Operations. Pursuit of Unity in Command and Control, 1942-1991.* 120.

58. Carpenter. *Joint Operations in the Gulf War, An Allison Analysis.* 56.

59. Benjamin S. Lambeth. *Combat Pair: The Evolution of Air Force-Navy Integration in Strike Warfare* (Santa Monica: RAND, 2007). 13.

60. Carpenter. *Joint Operations in the Gulf War, An Allison Analysis.* 25.

61. William P. Head and Earl H. Tilford. *The Eagle in the Desert: Looking Back on U.S. Involvement in the Persian Gulf War* (Connecticut: Greenwood Publishing Group). 156.

62. Stanley S. Gunnersen. *A Study of Air Power Employment in the Six day War* (Research, Montgomery: Air Command and Staff College, 1971). 14.

63. Jones, Ronald D. 1996. Israeli Air Superiority in the 1967 Arab-Israeli War: An Analysis of Operational Art. New Port: Naval War College. P12

64. Modular capability understood how the capability to add or reduce or move air assets without discrepancy or controversy.

65. Marshall, Thomas J. Jul 1972. "Israeli Helicopter Forces: Organization and Tactics." Military Reviwe 94-98.

66. The U.S. has tried to mitigate services' bias and their redundancy and waste in roles and missions due to each service has aviation. Suggested readings about this issue are the Air Force Roles and Missions: A History and the Quadrennial Roles and Missions Review.

67. Different from Colombia, Israel has enemies with weapon massive destruction, such as nuks.

68. Critics of the U.S. model argue that the U.S. has four air forces instead of on one, which causes duplicity of roles and missions, and unconceivable high cost to maintaining them. The military spending totaled more than $1.69 trillion in 2016. The U.S. accounted for 36 percent of the total, Israel 1.1% and Colombia 0.6%. The U.S. has 13.652 military aircrafts, Israel 652 and Colombia 457. Hence, Eliot A. Cohen stated in 2013 in Colombia, "However, and I said this with some of sadness, the U.S. armed forces organization is not a good model to follow."

69. Canada and Belgium have all their air power under a single force. In the case of Russia, its air power is both in the air force and the navy. The Russian Ground Forces does not have aircrafts.

70. For example, the COLAF is the responsible for helicopters and air defense system operating in a frigate of the COLNAVY. In this case, the COLAF retains the TACON but transfers the OPCON to the Navy of these air assets.

71. This organization should also be supported in an analysis of countries that have integrated their airpower

72. One learned lesson from Canadian process of integration was the heritage of services was severely affected. Canada had to back out some decisions about this topic. [Tristin Hopper. "'Royal' returns for Canada's armed forces." *National Post*, 15 August 2011. http://nationalpost.com/news/canada/royal-returns-for-canadas-armed-forces]

73. This organization should also be supported in an analysis of countries that have integrated their airpower

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