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ASSAULT AIRLIFT: ACHIEVING RELATIVE SUPERIORITY AND SURVIVABILITY IN SOF DIRECT-ACTION

by

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December 2017

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Assault airlift can contribute to a higher degree of direct-action mission success for special operations forces, independent of mission objective achievement, by bolstering the likelihood that assault forces can return home safely. As America's domestic social and political sensitivity to casualties continues to rise, mission success has become principally contingent upon the nation's perceived ability to ensure the survival and return of the assault force and to achieve mission objectives. The concept of force survival as a prerequisite to mission success in all but the most *in extremis* cases is validated through historical case studies, including Operation KINGPIN. President Barack Obama acknowledged the ability to safely extract the assault force as a primary consideration in the "go-ahead" for Operation NEPTUNE'S SPEAR; Operation EAGLE CLAW and Operation ANACONDA bear this same characteristic. Yet the current "theory of special operations" overly focuses on actioning mission objectives and insufficiently addresses extraction—a critical component necessary today for overall mission success along with survival of the mission force. The demand for a "two-way mission" can be satisfied through the use of assault airlift to capitalize on Admiral William McRaven's theory of relative superiority via the principles of simplicity, speed, and surprise.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAA	anti-aircraft artillery
AFB	Air Force Base
AFO	advanced force operations
AFSOC	Air Force Special Operations Command
AFSOF	Air Force Special Operations Forces
ABC	American Broadcasting Company
ABCCC	Airborne Battlefield Command and Control Center
AM	*ante meridiem*: before noon
AP	Associated Press
ASROC	anti-submarine rocket
AV	area of vulnerability
BBC	British Broadcasting Corporation
BIM	blade indicating mechanism
C4ISR	command, control, computers, communications, intelligence, surveillance, target acquisition, and reconnaissance capabilities
CASEVAC	casualty evacuations
CFACC	Combined Forces Air Component Commander
CIA	Central Intelligence Agency
CJCS	Chairman, Joint Chiefs of Staff
CJTF	combined joint task force
COL	Colonel, United States Army
Col	Colonel, United States Air Force
CNN	Cable News Network
CVN	naval hull classification symbol
DA	direct-action
DNA	deoxyribonucleic acid
DOD	Department of Defense
DShK	Degtyaryova-Shpagina Krupnokaliberny (Russian-made heavy machinegun)
DZ	drop zone (for aerial delivery, such as via parachute)

EKIA	enemy, killed in action
EW	early warning radar
EWO	electronics warfare officer
FARP	forward arming and refueling point
FLIR	forward-looking infrared
GAR/I	ground acquisition responder/interrogation locator beacons
GMT	Greenwich Mean Time
GPS	global positioning system
HLZ	helicopter landing zone (for vertical-lift assets, such as helicopters and tiltrotors)
IP	initial point (an aviation term used to describe the orientation point just prior to the final run-in leg to an objective area)
ISR	intelligence, surveillance, target acquisition, and reconnaissance
JCS	Joint Chiefs of Staff
JDAM	joint direct attack munition
JFC	joint force commander
JP	Joint Publication
JSOA	joint special operations area
KIA	killed in action
Lt	Lieutenant
LZ	landing zone (for fixed-wing assets, such as airplanes)
MAC	Military Airlift Command
MACV-SOG	Military Assistance Command, Vietnam – Studies and Observation Group
MC	mission complete
MEDEVAC	medical evacuation
MFP-11	Major Force Program 11
MIA	missing in action
MiG	Mikoyan-Gurevich (Russian aircraft manufacturer)
MIGCAP	Mikoyan-Gurevich Combat Air Patrol (a U.S. tactic to counter North Vietnamese Army fighters during the Vietnam War)
NATO	North Atlantic Treaty Organization
NBC	National Broadcasting Company

NOAA	National Oceanic and Atmospheric Administration
NPS	Naval Postgraduate School
NSA	National Security Agency
NSWC	Naval Special Warfare Command
NVA	North Vietnamese Army
NVGs	night vision goggles
PM	*post meridiem:* after noon
POW	Prisoner(s) of War
PV	point of vulnerability
QRF	quick reaction force
RAF	Royal Air Force (airfields and airbases in the United Kingdom are designated as RAF bases. ex: RAF Mildenhall)
RASTA	rocket-assisted short takeoff and landing
RIM-66	standard missiles
ROE	rules of engagement
RPG	rocket propelled grenade
RS	relative superiority
RTAFB	Royal Thai Air Force Base (airfields and airbases in Thailand were designated RTAFB's during the Vietnam War. ex: Takhli RTAFB)
RTB	return to base
SAM	surface-to-air missile
SEAL	Naval special operations forces adept at operating across the domains of sea, air, and land
SFOD	Special Forces Operational Detachment (ex: Special Forces Operational Detachment – Delta would be known as "SFOD-D")
Sgt	Sergeant
Shrike	anti-radiation missile
SOAR	Special Operations Aviation Regiment (ex: 160th SOAR)
SOF	special operations forces
SOG	special operations group (operations group comprised of multiple aviation squadrons under a special operations wing)
SOS	special operations squadron (aviation flying squadron under a special operations group)
SOW	Special Operation Wing (ex: 352nd SOW)

SUV	sport utility vehicle
Tech.	Technical (ex: Tech. Sgt.)
T/O	takeoff
UBL	Usama bin Laden
US	United States
USA	United States Army
USAF	United States Air Force
USAFA	United States Air Force Association
USAHEC	United States Army Heritage and Education Center
USASOAC	United States Army Special Operations Aviation Command
USASOC	United States Army Special Operations Command
USMC	United States Marine Corps
USN	United States Navy
USSOCOM	United States Special Operations Command
UW	unconventional warfare
the “X”	an infiltration or exfiltration point collocated with an objective area (precisely and directly referring to the objective area’s specific location)
the “Y”	an infiltration or exfiltration point offset from an objective area site

EXECUTIVE SUMMARY

> Assault airlift, when synergized by relationship-focused leadership, can increase the probability of achieving overall mission success by increasing the survivability of special operations direct-action mission assault forces.[1]

As a new global paradigm emerges where fragmented states and non-state factions collide, the next generation of special operations warriors steps forward to take on the mantle.[2] They will wield the tools forged in the wars of their fathers, and they will do so in an increasingly challenging battlefield environment[3]: under intense real-time public scrutiny,[4] embroiled with political sensitivities,[5] and steeped in a continually

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[1] This statement is put forward as the thesis of this work.

[2] The increasingly fragmented state and non-state dark network structures emerging and rising in proliferation, as well as their counter-mechanisms, are adequately addressed by the following authors: John Arquilla, "The End of War as We Knew It? Insurgency, Counterinsurgency and Lessons from the Forgotten History of Early Terror Networks," *Third World Quarterly* 28, no. 2 (2007): 369–386, accessed May 02, 2017, http://www.tandfonline.com.libproxy.nps.edu/doi/pdf/10.1080/01436590601153861?needAccess=true; David Ignatius, "How ISIS spread in the Middle East: And How to Stop It," *The Atlantic, 29* (2015), accessed March 02, 2017, https://www.theatlantic.com/international/archive/2015/10/how-isis-started-syria-iraq/412042/; Jeffrey Record, "Collapsed Countries, Casualty Dread, and The New American Way of War," *Parameters* 32, no. 2 (2002): 4–24, http://go.galegroup.com/ps/anonymous?id=GALE%7CA89811487&sid=googleScholar&v=2.1&it=r&linkaccess=fulltext&issn=00311723&p=AONE&sw=w&authCount=1&isAnonymousEntry=true.

[3] The increasing complexity of the battlefield environment is iterated by the following: Charles A. Pfaff, "Chaos, Complexity and The Battlefield," *Military Review* vol. 80, no. 4 (July–August 2000): 82; Richard A. Bettis and Michael A. Hitt, "The New Competitive Landscape," *Strategic Management Journal* 16, no. S1 (1995): 7–19, http://www.jstor.org/stable/2486767.

[4] Steven Livingston examines the effects of real-time public and media monitoring of various military operations in his article, *Clarifying the CNN effect: An Examination of Media Effects according to Type of Military Intervention*. The effect of increased media access to focus on military operations against non-peer threats is illustrated by examples such as Philip Smucker's book, *Al Qaeda's Great Escape: The Military and the Media on Terror's Trail*. Steven Livingston, *Clarifying the CNN effect: An Examination of Media Effects According to Type of Military Intervention,* Research Paper R-18 (Harvard University: President and Fellows of Harvard College, 1997), http://www.genocide-watch.org/images/1997ClarifyingtheCNNEffect-Livingston.pdf; Philip Smucker, *Al Qaeda's Great Escape: The Military and the Media on Terror's Trail* (n.p.: Potomac Books, Inc., 2005).

[5] Carl Von Clausewitz, *On War [Vom Kriege],* trans. and eds. James John Graham vol. 1. (London: N. Trübner & Company, 1873), 119.

increasing sensitivity to casualties.[6] Future special operations forces (SOF) direct-action operators will have to understand both the capabilities and limits of the tools they receive from those who precede them. Their success or failure, and thus the success or failure of the policies and the populations they support, will depend on it.

Assault airlift[7] can contribute to a higher degree of success in SOF direct-action missions, independent of mission objective achievement, by bolstering the likelihood that SOF assault forces can return home safely. In today's casualty-sensitive political environment, success cannot be achieved in SOF direct-action unless one can get their forces in and back out safely. This concept of force survival as a prerequisite to mission success, in all but the most *in extremis* cases, is evidenced in the news regarding the

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[6] The rising sensitivity to casualties and the various causes are examined and causes posited by the following sources: Hyde, "Casualty Aversion," 17; Hugh Smith, "What Costs Will Democracies Bear? A Review of Popular Theories of Casualty Aversion," *Armed Forces & Society* 31, no. 4 (2005): 487–512, http://sfxhosted.exlibrisgroup.com/nps?sid=google&auinit=H&aulast=Smith&atitle=What+costs+will+democracies+bear%3F+A+review+of+popular+theories+of+casualty+aversion&id=doi:10.1177/0095327X0503100403&title=Armed+Forces+and+Society&volume=31&issue=4&date=2005&spage=487&issn=0095-327X; Record, "Collapsed Countries, Casualty Dread, and The New American Way of War," 4–24.

[7] ***Assault Airlift:***

The synchronized and integrated employment of air assets into a direct-action mission assault force in pursuit of relative superiority to achieve operational mission success through the ability to clandestinely penetrate denied or politically sensitive airspace for rapid and precise infiltration and exfiltration of a special operations mission assault force.

This definition was constructed, in part, from the mission statements of the operational units who are most closely associated with assault airlift: Those of the 160th Special Operations Aviation Regiment (160th SOAR) and Air Force Special Operations Command (to include the 1st Special Operations Wing (1st SOW), the 27th SOW, the 352d SOW, and their subordinate units). "U.S. Army Special Operations Command, 160th Special Operations Aviation Regiment (Airborne)," U.S. Army Special Operations Aviation Command (USASOAC), accessed July 21, 2017, http://www.soc.mil/USASOAC/160th.html; Hurlburt Field, Public Affairs Office, "8th Special Operations Squadron," 1 SOW, Hurlburt Field, March 28, 2017, http://www.hurlburt.af.mil/About-Us/Fact-Sheets/Fact-Sheets/Article/204532/8th-special-operations-squadron/; Hurlburt Field, Public Affairs Office, "15th Special Operations Squadron," 1 SOW, Hurlburt Field, 2017, accessed July 21, 2017, http://www.hurlburt.af.mil/About-Us/Fact-Sheets/Fact-Sheets/Article/204537/15th-special-operations-squadron/; Capt. Larry van der Oord, "20 SOS Green Hornets–When Only the Best Will Do," 27th Special Operations Wing, Public Affairs, May 11, 2012, http://www.afsoc.af.mil/News/Features/Display/Article/163740/20-sos-green-hornets-when-only-the-best-will-do/; US Air Force, "9th Special Operations Squadron–U.S. Air Force Fact Sheet," USAF, 2017, accessed July 21, 2017, http://www.cannon.af.mil/Portals/85/documents/9th%20SOS%20Factsheet.pdf?ver=2016-05-05-114236-577; "352d Special Operations Wing-About Us," 352d Special Operations Wing, accessed December 04, 2016, http://www.352sow.af.mil/About-Us/Mission-Vision-and-Priorities/; 7th Special Operations Wing, 352d Special Operations Wing, RAF Mildenhall, 2016.

Yemen raid of 2017[8] and validated through historical case studies, such as the Son Tay prisoner of war rescue mission of 1970[9] and the Usama bin Laden Abbottabad strike of 2011.[10] President Barack Obama acknowledged that the ability to safely extract the assault force was a primary consideration in the "go-ahead" for Operation NEPTUNE'S SPEAR, the bin Laden raid.[11] Other case studies, such as Operation EAGLE CLAW and Operation ANACONDA, bear this same characteristic. Yet the current "theory of special operations" focuses narrowly on attaining relative superiority, a decisive advantage of a smaller force over a larger and intrinsically advantaged defensive force,[12] during the infiltration and actions-on-the-objective stages of mission execution.[13] It falls short of identifying a critical component nominally necessary for overall mission success in the majority of contemporary cases—adequate mobility for the extraction and survivability of the mission assault force.[14]

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[8] Vanden Brook and Korte, "Three Probes Opened into SEAL's Death in Controversial Yemen Raid."

[9] John Gargus, *The Son Tay Raid: American POWs in Vietnam Were Not Forgotten* (Texas: Texas A&M University Press, 2010).

[10] Peter L. Bergen, "Architect of bin Laden Raid: The Anxious Moments," CNN, May 02, 2016, http://www.cnn.com/2016/05/02/politics/osama-bin-laden-raid-architect-mcraven-bergen/index.html.

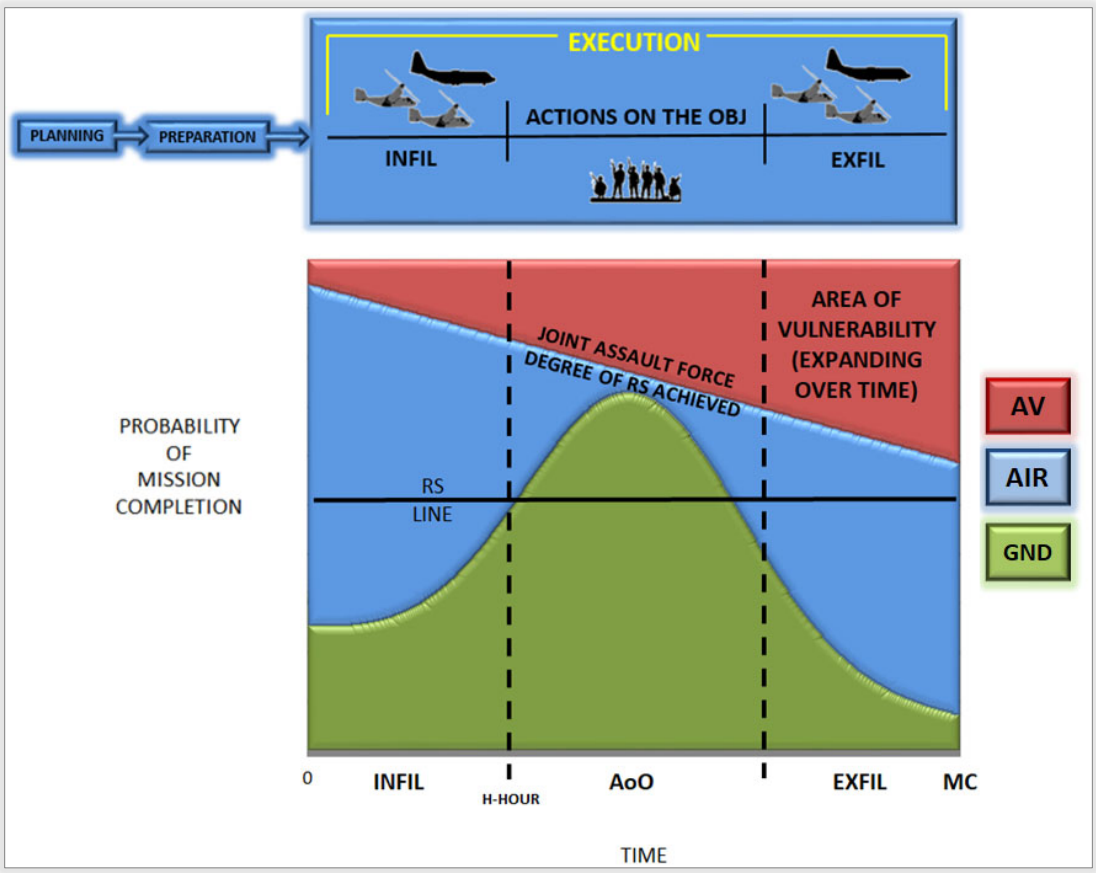
[11] Bergen, "Architect of bin Laden Raid."

[12] Relative superiority exists when a smaller attacking force has the ability to execute a simple plan decisively, with violent speed and precision, to achieve a single objective against a surprised but larger defensive force. McRaven posits that relative superiority exists as an abstract concept that can be used as "a powerful tool to explain victory and defeat." He defines is as follows:

> ***Relative Superiority:***
>
> *"a condition that exists when an attacking force, generally smaller, gains a decisive advantage over a larger or well-defended enemy."* William H. McRaven, *SPEC OPS: Case Studies in Special Operations Warfare: Theory and Practice* (New York: Presidio Press, 1996), 4.

[13] Five of the eight case studies Admiral William H. McRaven presents in his foundational book, *SPEC OPS,* arguably represent planned "one-way missions," where the final stage of execution, exfiltration, was either infeasible or ignored all together, resulting in a high probability of mission force elimination or capture. McRaven, *SPEC OPS*, 29–72, 46, 73–114, 75–77, 125, 115–162, 163–200, 178–181, 187, 201–244, 231, 245–286, 276, 287–331, 333–380.

[14] This observation was extrapolated from McRaven's Model in *SPEC OPS,* the modeling concepts of the economist Milton Friedman, and the observations of Dr. Kalev I. "Gunner" Sepp, Dr. Jesse R. Hammond, and Dean Gordon H. McCormick, Defense Analysis faculty at the Naval Postgraduate School (NPS), Monterey, CA. See last footnote of this section for information on individual contributions.



Ability to contribute to relative superiority is through the use of McRaven's principles of simplicity, speed, and surprise.

Latent potential of functional assault force components is displayed throughout the stages of mission execution: infiltration, actions-on-the-objective, and exfiltration.

Figure 1. Latent Potential of Assault Force Elements to Contribute to Relative Superiority[15]

Case study analysis illuminates how the demand for a "two-way mission" can be satisfied by using SOF assault airlift to capitalize on McRaven's theory of relative

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Milton Friedman, *Capitalism and Freedom* (Chicago, IL: University of Chicago Press, 2009); Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS*, 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

15 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

superiority via the principles of *simplicity*, *speed*, and *surprise*. Operations KINGPIN, EAGLE CLAW, ANACONDA, and NEPTUNE'S SPEAR each express this same result by illuminating the key aspects of assault airlift that define its presence and contributions to mission force survival. These key tenets of assault airlift are: *clandestine bypass of enemy defenses*; *precise direct-or-offset delivery and extraction*; *suppressive fire*; *versatility, flexibility, and maneuver*; *securely integrated long-range communications*; *environmental and adversarial threat intelligence*; and *aerial refueling*. Each of these characteristics individually and cumulatively represent higher grades of relative superiority achievement through assault airlift and the maximized functional use of airlift assets as contributing mechanisms toward the probable survival of the mission assault force.

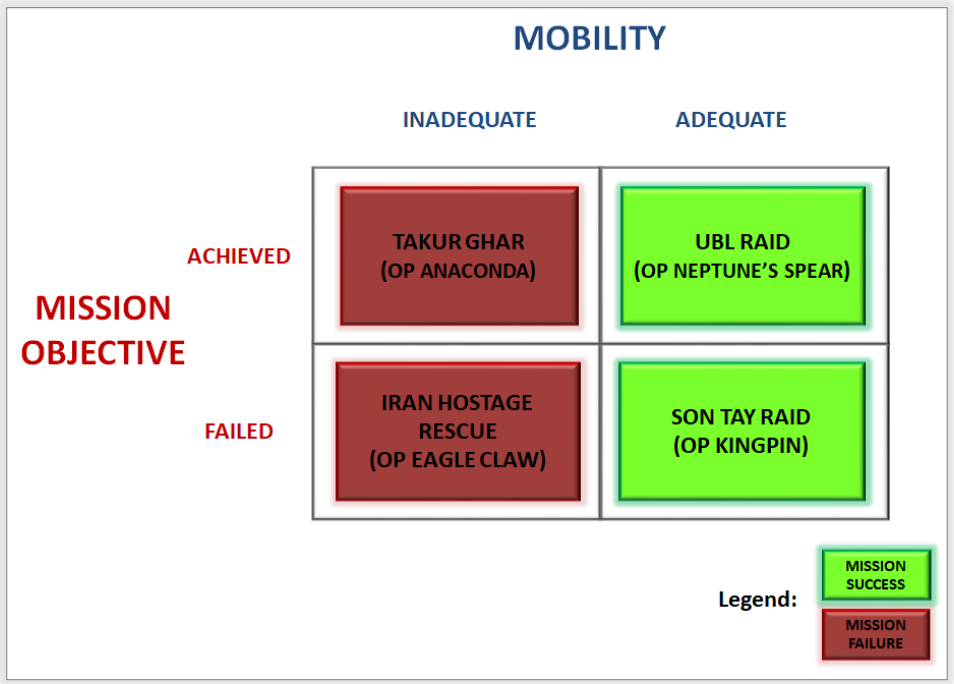

Figure 2. Adequate Mobility Is a Prerequisite to Mission Success, Independent of Mission Objective Achievement[16]

16 Adapted from Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

Assault airlift is not achievable without high levels of mission force integration. These levels of achievement are only made possible thorough synchronization of heterogeneous individuals hailing from the various organizational backgrounds of the conventional service branches. Yet, the leadership selection processes and organizational structures currently employed remain heavily influenced by these ancestoral roots designed to implement attrition warfare strategies. This design is inefficient at providing the level of integration necessary to achieve a joint SOF mission force capable of operating with relative superiority as its strategic means. It produces leaders overly focuses on stove-piped processes and skillsets aimed toward a singular end and underestimates the value of developing leaders focused on synergizing the diverse individuals that make these operations happen.

Relationship-focused leadership, with its balanced prioritization between a mission focus and empowering subordinates, affords the innovative environment necessary to ensure the heterogeneous concerns of all mission assault force elements are identified and addressed. Traditional technical leadership styles, though ostensible capable of achieving comparable success in conventional command structures, are less able to achieve this required level of synergy in SOF due to a focus on parent service priorities and identity roles that magnify inter-service tensions. Traditional technical leadership struggles to identify and address the disparate needs of functionally heterogeneous assault force elements. Without the exceptional strength and humility of relationship-focused leaders stepping forward to fill the gap between disonate organizational structures, inadequate integration occurs to achieve assault airlift, as evidenced in Operations EAGLE CLAW and ANACONDA.[17]

[17] Chua Lu Fong and L. T. A. Chua, "Operation EAGLE CLAW, 1980: A Case Study in Crisis Management and Military Planning," *Journal of The Singapore Armed Forces* 28 (n.d. 2002): n.p., https://masterkan.wordpress.com/2014/06/15/operation-eagle-claw-1980-years-ago-col-beckwith-nd-i-exchanged-e-mails/; Richard B. Andres and Jeffrey B. Hukill, "ANACODA: A Flawed Joint Planning Process," *Joint Force Quarterly* (4th Quarter, 2007): 135–140, http://www.au.af.mil/au/afri/aspj/apjinternational/apj-s/2009/3tri09/andreseng.htm; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, September 11, 2017.

In order to provide maximized benefits to SOF direct-action mission forces, air elements should be even more integrated and synchronized with their ground counterparts, an effect historically proven best achieved through relationship-focused leadership. By investing in the leaders and joint organizational structures proven best able to achieve direct-action mission success, senior leaders and elected officials can increase the probability of mission success through added resiliency and survivability in the mission force construct.[18]

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[18] The following individuals specifically contributed to or had ideas that contributed to the modeling, methods, and observations that made this research possible: Admiral William H. McRaven, Dr. Jesse R. Hammond, Dr. Kalev I. Sepp, Dean Gordon H. McCormick, and economist Milton Friedman.

Admiral William McRaven's groundbreaking work during his time as co-founder of the Defense Analysis program at NPS, later published in his book, *SPEC OPS*, and its encompassing theory of special operations, the concept of relative superiority, and the associated principles are the foundational basis of this work. McRaven's contributions to this field cannot be overstated.

Dr. Hammond is an assistant professor in the Department of Defense Analysis at NPS. He assisted in the identification of survival of the mission force as a prerequisite to overall mission success, the refinement of graphical representations, and the modeling and methodology utilized to perform this research and reach these conclusions.

Dr. Sepp is a retired Special Forces (Green Beret) Army Colonel, former Deputy Assistant Secretary of Defense for Special Operations Capabilities, and a Senior Lecturer in the Department of Defense Analysis at NPS. He contributed the idea that each assault element retains the "latent potential" to contribute to relative superiority at differing levels during the various stages of mission execution.

Dean McCormick, as a member of the Research and Development (RAND) Corporation, developed the foundational "Diamond" counterinsurgency model still used to simplify the complexities of insurgent conflicts in military and academic forums. Later, in the role of Dean at NPS, McCormick made the observation that mission execution is subdivided into a three-part sequential process, the final portion of which, exfiltration, is required in all but the most *in extremis* cases in order to achieve mission success.

Some of the conceptual ideas of the demand for relative superiority and the contributing forces meeting the dynamic supply required throughout the stages of mission execution were derived after studying the supply and demand relationships expanded upon by the renowned economist Milton Friedman in his legendary book, *Capitalism and Freedom.*

Milton Friedman, *Capitalism and Freedom* (Chicago, IL: University of Chicago Press, 2009); Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS*, 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

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It is an honor to acknowledge the inspirational and guiding influences of my thesis advisors, the faculty, and staff of the Naval Postgraduate School in Monterey, California, on making this journey possible.

Dr. Elizabeth Robinson, Dr. William Fox, Dr. Leo Blanken, Dr. Hy Rothstein, Dr. Camber Warren, Ms. Janet Borchardt, Dr. Thomas Johnson, Colonel Robert Burks, Dr. Michael Jaye, Dr. Robert O'Connell, Dr. Siamak Naficy, Dr. Bradley "B.J." Strawser, Dr. Douglas Borer, Colonel Brian Greenshields, Dr. Marcos Berger, Ms. Jennifer Duncan, Dr. Sean Everton, Mr. Dan Cunningham, Dean Gordon McCormick, and Dr. John Arquilla: Thank you for your unyielding support and genuine passion for educating those who defend us all. Our nation is grateful for your individual and collective contributions toward a better tomorrow.

In my second term at the Naval Postgraduate School, I had the privilege of taking "The History of Special Operations Forces," taught by Dr. Kalev I. "Gunner" Sepp, a retired Special Forces (Green Beret) Army Colonel and former Deputy Assistant Secretary of Defense for Special Operations Capabilities. As a senior lecturer in the Department of Defense Analysis, Dr. Sepp invested himself into cultivating the leaders our nation and society need. One of his most fond quotes is: "Every man should write a book, build a house and raise a son," attributed in part to the Talmud (a collection of Jewish ceremonial laws) and Jose Martí (a Cuban poet and revolutionary). The encouragement of Dr. Sepp enabled many of us to aspire to go where we otherwise may not have ventured to tread. Thank you, Sir.

The diligent investments of Dr. Jesse R. Hammond, assistant professor in the Department of Defense Analysis at the Naval Postgraduate School and second reader on this document, have also transcended the long hours he spent with me and others like me. Much appreciation is owed to his efforts working through the details of models, methodologies, and rationales in an attempt to help us reach out to you, the reader. Thank you, Dr. Hammond.

Without the dedication and professional development provided by these insightful souls, it would not have been possible to provide ideas as insightful and, hopefully, useful in such a palatable form. Without them, you would be left with even more pages to tirelessly sift through while gleaning far less meat on these pages of bone. Any goodness or employable aspects found in this work stand as testaments to their guiding intellect. Any faults found within are my own and have merely managed to clandestinely slip past their diligent eyes. All else is attributed accordingly.

Lastly, and most importantly, I would like to thank my family. Without the loving support of Hope, Ava, James, and Vivian, I would not have been able to invest the hours and concentration required to create this work. I love you, and thank you.

I. INTRODUCTION: HOW ASSAULT AIRLIFT CAN ACHIEVE RELATIVE SUPERIORITY AND SURVIVABILITY IN SOF DIRECT-ACTION

> The enemy has a tight timeline for our product, violence, and we aim to deliver our product … anytime, anyplace.
>
> —Lieutenant General Bradley A. Heithold, Commander,
> Air Force Special Operations Command,
> Hurlburt Field, Florida, 2015[1]

A. PROLOGUE

As a new global paradigm emerges in which fragmented states and non-state factions collide, the next generation of special operations warriors steps forward to take on the mantle.[2] They will wield the tools forged in the wars of their fathers, and they will do so in an increasingly challenging battlefield environment[3]: under intense real-time public scrutiny, embroiled with political sensitivities, and steeped in a continually

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[1] Lieutenant General Bradley A. Heithold, Commander, Air Force Special Operations Command, Hurlburt Field, Florida, 2015.

[2] The increasingly fragmented state and non-state dark network structures emerging and rising in proliferation, as well as their counter-mechanisms, are adequately addressed by the following authors: John Arquilla, "The End of War as We Knew It? Insurgency, Counterinsurgency and Lessons from the Forgotten History of Early Terror Networks," *Third World Quarterly* 28, no. 2 (2007): 369–386, accessed May 02, 2017, http://www.tandfonline.com.libproxy.nps.edu/doi/pdf/10.1080/01436590601153861?needAccess=true; David Ignatius, "How ISIS spread in the Middle East: And How to Stop It," *The Atlantic, 29* (2015), accessed March 02, 2017, https://www.theatlantic.com/international/archive/2015/10/how-isis-started-syria-iraq/412042/; Jeffrey Record, "Collapsed Countries, Casualty Dread, and The New American Way of War," *Parameters* 32, no. 2 (2002): 4–24, http://go.galegroup.com/ps/anonymous?id=GALE%7CA89811487&sid=googleScholar&v=2.1&it=r&linkaccess=fulltext&issn=00311723&p=AONE&sw=w&authCount=1&isAnonymousEntry=true.

[3] The increasing complexity of the battlefield environment is iterated by the following sources: Charles A. Pfaff, "Chaos, Complexity and The Battlefield," *Military Review* vol. 80, no. 4 (July–August 2000): 82; Richard A. Bettis and Michael A. Hitt, "The New Competitive Landscape," *Strategic Management Journal* 16, no. S1 (1995): 7–19, http://www.jstor.org/stable/2486767.

increasing sensitivity to casualties.[4] Future special operations forces (SOF) direct-action operators will have to understand both the capabilities and limits of the tools they receive from those who precede them. Their success or failure, and thus the success or failure of the policies and the populations they support, will depend on it.

Admiral William H. "Bill" McRaven is a legend in the Special Forces community. Not only did he literally write the book on *SPEC OPS,*[5] but his theory of special operations defined how SOF would conduct direct-action missions throughout the war against terrorism. McRaven, recently retired from military service, served as a prominent leader in the special operations community, and he has been dedicated to its operators and mission from the beginning. McRaven developed the theory of special operations as a way of explaining the success and failure of special operation direct-action missions during his time studying at the Naval Postgraduate School in Monterey, California, in 1993. The use of his theory culminated over a decade later when McRaven commanded Operation NEPTUNE'S SPEAR, the Usama bin Laden (UBL) raid in

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[4] Steven Livingston examines the effects of real-time public and media monitoring of various military operations in his article, *Clarifying the CNN effect: An Examination of Media Effects according to Type of Military Intervention*. An example that will be utilized in this work is the live-Tweeting of the Usama bin Laden Abbottabad raid by an indigenous neighbor, Sohaib Athar, reported on by Jolie O'Dell in her article, "One Twitter User Reports Live From Osama Bin Laden Raid." Lastly, the effect of increased media access to focus on military operations against non-peer threats is illustrated by examples such as Philip Smucker's book, *Al Qaeda's Great Escape: The Military and the Media on Terror's Trail*. Steven Livingston, *Clarifying the CNN effect: An Examination of Media Effects According to Type of Military Intervention,* Research Paper R-18 (Harvard University: President and Fellows of Harvard College, 1997), http://www.genocide-watch.org/images/1997ClarifyingtheCNNEffect-Livingston.pdf; Philip Smucker, *Al Qaeda's Great Escape: The Military and the Media on Terror's Trail* (n.p.: Potomac Books, Inc., 2005); Jolie O'Dell, "One Twitter User Reports Live From Osama Bin Laden Raid," Mashable, May 1, 2011, http://mashable.com/2011/05/01/live-tweet-bin-laden-raid/#TNDbXK4PSqqw;

Carl Von Clausewitz, *On War [Vom Kriege],* trans. and eds. James John Graham vol. 1. (London: N. Trübner & Company, 1873), 119.

The trend of continuing increase of sensitivity to casualties, especially in times of non-existential threats, can be gleaned from the following recommended articles: Charles K. Hyde, "Casualty Aversion," *Air & Space Power Journal* 14, no. 2 (February 2000): 17, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA378509; Hugh Smith, "What Costs Will Democracies Bear? A Review of Popular Theories of Casualty Aversion," *Armed Forces & Society* 31, no. 4 (2005): 487–512, http://sfxhosted.exlibrisgroup.com/nps?sid=google&auinit=H&aulast=Smith&atitle=What+costs+will+democracies+bear%3F+A+review+of+popular+theories+of+casualty+aversion&id=doi:10.1177/0095327X0503100403&title=Armed+Forces+and+Society&volume=31&issue=4&date=2005&spage=487&issn=0095-327X; Record, "Collapsed Countries, Casualty Dread, and The New American Way of War," 4–24.

[5] William H. McRaven, *SPEC OPS: Case Studies in Special Operations Warfare: Theory and Practice* (New York: Presidio Press, 1996).

Abbottabad, Pakistan, during the period of darkness of 01–02 May 2011, eliminating the most wanted man of the 21st century (as described by Peter Bergen in his 2002 book, *Holy War, Inc.: Inside the Secret World of Osama bin Laden*).[6] The importance of McRaven's theory of special operations cannot be overstated.

McRaven's theory of special operations has been the cornerstone for how SOF has operated since it was codified in his 1993 Naval Postgraduate School (NPS) thesis and the subsequent 1996 book, *SPEC OPS: Case Studies in Special Operations Warfare: Theory and Practice.*[7] It addresses how an asymmetric advantage can provide a relatively smaller attacking force with the opportunity to achieve success against a much larger and otherwise advantaged defensive force. Constructed in the aftermath of the Cold War, McRaven's model focuses on enabling an assault force to complete their actions-on-the-objective.

1. The Model's Current Gap

However, as influential as it is, McRaven's theory of special operations retains two incongruencies that make it less effective for use today. It does not recognize the survival of the mission assault force as a necessary prerequisite for mission success. Nor does it specifically address a key underlying factor that is foundational to the supporting principles of special operations direct-action missions—two-way transportation.

In today's casualty-sensitive environment, policy makers, executive leaders, and domestic public political support collectively demand a "two-way mission" in all but the most extreme cases. Hugh Smith addresses this concept along with other possible explanations for a public increased sensitivity to casualties in his 2005 journal article, "What Costs Will Democracies Bear? A Review of Popular Theories of Casualty Aversion," published in *Armed Forces & Society*.[8] Only when faced with proximal existential threats do necessary risks warrant potential sacrifice of SOF direct-action

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[6] Peter L. Bergen, *Holy War, Inc.: Inside the Secret World of Osama bin Laden* (n.p.: Simon and Schuster, 2002.), 1.

[7] McRaven, *SPEC OPS.*

[8] Smith, "What Costs Will Democracies Bear?" 487–512.

operators in pursuit of a mission's objective. Anything less than an existential threat demands the utmost effort be invested into ensuring the survival of the assault force. In these cases the survivability of the mission assault force demands the maximum provision. Senior military leaders are charged with meeting this demand and increasingly, they turn to assault airlift to provide the solution.[9]

While McRaven does touch on the importance of concealing the timing and method of insertion, the resulting special operations theory fails to more directly address the importance of transportation as an enabling mechanism creating the conditions necessary for survival of the assault force, a prerequisite for mission success in the modern environment.[10] Five of the eight case studies in *SPEC OPS* arguably represent

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[9] The term "assault airlift" is attributed to Colonel Leighton "Lee" Anderson, Air Force Special Operations Command, 2016. In 2003, then Major Anderson was presented with the Jabara Award. The citation accompanying this award follows:

> "Major Leighton T, Anderson, United States Air Force Academy Class of 1992, distinguished himself as an MH-53M aircraft commander and flight lead during a direct-action assault mission during Operation ENDURING FREEDOM. Major Anderson expertly inserted the multinational Special Forces team to the objective area, a housing compound in central Afghanistan, which required precise aircraft maneuverability due to the limited landing zones in the narrow, high-altitude valley. While returning to extract the special forces team, the objective area was completely obscured with dust from the previous landings; several helicopters were unable to land due to the extreme conditions. Major Anderson, employing a 'radar altitude hold technique' he had developed on previous missions, was one of the few pilots who successfully landed to retrieve the ground troops. Two other aircraft, unable to land after repeated attempts and dangerously low on fuel, were ordered to depart and refuel. Major Anderson, knowing the ground troops' safety would be in jeopardy without AC-130 support while waiting for the other helicopters to refuel and return, loaded the additional 12 special ops personnel on board. Major Anderson's aircraft, holding over triple the planned exfil load, barely had enough power to take off. Despite zero visibility, and being dangerously close to several high stone walls, walled compounds and steep terrain, Major Anderson carefully drifted several feet off the ground utilizing maximum power available. Continuing to fly by only instruments, he eventually gained sufficient airspeed and accelerated away from the ground and cleared the dust, only then realizing the narrow margin by which the main rotor blades had missed hitting a stonewall on the side of the landing zone. Of the seven MH-53M aircraft used in the 14-hour operation, there were a total of ten blown tires and two airframes with significant structural damage; Major Anderson had made three perfect dust-out landings with no aircraft damage. His radar altitude hold technique is now being taught to students during initial aircraft training. Major Anderson's outstanding bravery and professional expertise as flight lead were essential to the successful mission. The distinctive accomplishments of Major Anderson reflect great credit upon himself and the United States Air Force." "USAFA Jabara Award Database," United States Air Force Association (USAFA), accessed August 17, 2017, http://jabara.usafalibrary.com/person.asp?id=41

[10] McRaven, *SPEC OPS*, 14.

"one-way missions," where the final stage of execution, exfiltration, was either infeasible or ignored all together.[11] Yet, sacrifices of this magnitude prove to be too high for current domestic and military support to stomach under any but the most *in extremis* circumstances, as .discussed in Charles K. Hyde's article, "Casualty Aversion," posted in *Air & Space Power Journal* in 2000 and Hugh Smith's 2005 article, "What Costs Will Democracies Bear? A Review of Popular Theories of Casualty Aversion."[12]

Given the preference to utilize air mobility for SOF direct-action missions, and given the success of McRaven's theory of relative superiority, the next consistent step is to determine how best air transportation can be used to augment the theory of relative superiority.[13] Under what circumstances do the qualities of assault airlift make it preferable over other mobility mechanisms for SOF direct-action? What is assault airlift? How does assault airlift enhance the capacity of SOF direct-action mission forces? What are the resultant symptoms if assault airlift is being adequately achieved? How can

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[11] The German glider assault on Eben Emael was arguably a "one-way mission" (29–72). Their survival was contingent upon both mission success and reinforcements from conventional forces. They did not otherwise have a viable extraction plan (46). Alexandria (73–114) was planned as a "one-way mission" (75–77), as was Saint-Nazaire (125) (115–162). The Mussolini rescue (163–200) was planned and authorized with a perceived 80% loss rate (178–181), and the final exfiltration plan for Mussolini left the majority of the remaining German assault force behind (187). The escape plan for the midget submarines that attacked the Tirpitz was not feasible (201–244), as there was inadequate time for their extraction before their explosives detonated (231). The Ranger raid on Cabanatuan, a prisoner of war (POW) rescue mission, was necessarily a "two-way mission" (245–286), though their most vulnerable moment was during the extraction phase (276). Operation KINGPIN was also planned as a POW rescue mission for the prisoners perceived to be at Son Tay, thus representing a "two-way mission" (287–331). Lastly, the Israeli Raid on Entebbe was a hostage rescue attempt that was planned as a "two-way mission" (333–380). Collectively, these examples arguably represent five "one-way missions" and three "two-way missions." Of note, all of the "two-way missions" required extraction of objective personnel. McRaven, *SPEC OPS*, 29–72, 46, 73–114, 75–77, 125, 115–162, 163–200, 178–181, 187, 201–244, 231, 245–286, 276, 287–331, 333–380.

[12] Hyde, "Casualty Aversion," 17; Smith, "What Costs Will Democracies Bear?" 487–512.

[13] The trend of preferential utilization of air mobility for SOF direct-action missions can be observed by referencing historical examples of raids, especially those of recent years. The following sources are recommended for such purposes: "US Raid on al-Qaeda in Yemen: What We Know So Far," BBC News, February 03, 2017, http://www.bbc.com/news/world-middle-east-38808631; David Axe, "8,000 Miles, 96 Hours, 3 Dead Pirates: Inside a Navy SEAL Rescue," Wired, October 17, 2012, https://www.wired.com/2012/10/navy-seals-pirates/; Peter L. Bergen, "Architect of bin Laden Raid: The Anxious Moments," CNN, May 02, 2016, http://www.cnn.com/2016/05/02/politics/osama-bin-laden-raid-architect-mcraven-bergen/index.html; Richard Whittle, "MacKay Trophy for AFSOC Osprey Crews: A Tale of Bullet Riddled Planes," Breaking Defense, November 03, 2014, http://breakingdefense.com/2014/11/mackay-trophy-for-afsoc-osprey-crews-a-tale-of-bullet-riddled-planes/; Paul L. Hastert, "Operation ANACONDA: Perception Meets Reality in the Hills of Afghanistan," *Studies in Conflict & Terrorism* 28, no. 1 (February 2007): 11–20, http://www.tandfonline.com/doi/pdf/10.1080/10576100590524294?needAccess=true.

Bergen, "Architect of bin Laden Raid."

assault airlift bolster McRaven's six principles, and how can it best be integrated into the planning, preparation, and execution phases of SOF direct-action missions? In essence, how does assault airlift increase the likelihood of achieving the survivability of the mission force, thus increasing the probability of mission success for SOF direct-action?

2. Research Question

How can assault airlift and extraction increase special operations direct-action mission force survival and overall mission success?

3. Purpose

The purpose of this research is not meant in any way to degrade or minimize the contributions of the ground assault force toward the achievement of mission success. Quite the contrary, their contribution to the success of SOF direct-action missions has been highly documented. Ground assault forces retain a critical role and their presence represents a condition necessary to achieve overall mission success in all but the most extreme examples.[14] However, what has been less documented and is generally less understood are the contributions of their air assault force brethren towards this common endeavor.

This research attempts to demonstrate that adequate assault airlift is just as relevant to overall mission success as the capabilities brought forward by the ground assault force. In time-sensitive cases where SOF direct-action is called for, neither of independent assault force elements can achieve mission success alone. Nor can they achieve mission success utilizing a conventional counterpart. It is not feasible to expect a SOF ground element to receive adequate assault airlift from a conventional airlift asset any more than it is feasible to expect a SOF air element to achieve mission success by

[14] Operation CARTHAGE was planned, prepared, and executed as a special operations direct-action air raid conducted in 1945 to support a Danish resistance movement against occupying German forces. It involved no specific SOF ground assault force and the air component was comprised of strike aircraft. It was conducted in a manner and involved elements that allow its classification as a SOF direct-action mission. However, examples like this serve to prove the point that SOF direct-action missions generally do incorporate ground assault forces. A SOF direct-action mission that does not incorporate a ground assault force is easily the exception and not the rule. Bo C. Andersen, "Operation CARTHAGE," Guest Lecture Presentation for "The History of Special Operations Forces," Naval Postgraduate School, Monterey, CA, 2016.

transporting a conventional ground asset. One could no sooner argue that a SOF ground assault force, as highly trained and sophisticated as their tactics and personnel have become, could use a conventional air transportation asset to implement such a daring and high-risk raid as the type excluded at Abbottabad as one could argue that an air assault force could execute such a mission with a conventional forces ground element. No. It takes both SOF air and ground assault force elements to achieve mission success.

An integrated and synchronized air and ground assault force is required to successfully accomplished SOF direct-action missions. The SOF air and ground elements are brothers in this regard, and the success of their mission depends on their cooperation and seamless integration. And as McRaven beckons, "If we can determine, prior to an operation, the best way to achieve relative superiority, then we can tailor special operations planning and preparation to improve our chances of victory."[15]

B. EXISTING LITERATURE: EXAMINING SUCCESSES AND FAILURES

Examination of existing literature reveals two primary approaches to the conversation of SOF direct-action, concisely identified by Brian W. Reeves of the Naval Postgraduate School in his 1997 master's thesis, "Navy SEALs: Theory vs. Reality."[16] The conversations either revolve around identifying principal causes of failure or determining components and conditions necessary for success.[17] Lucien S. Vandenbroucke, Austin Long, David Saul, Eliot A. Cohen and John Gooch, giants in the military strategic analysis realm, collectively take the tone that analyzation of failure can prove to be more productive than analysis of success (Cohen and Gooch with *Military*

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15 McRaven, *SPEC OPS*, 1–2.

16 Brian W. Reeves, "Navy SEALs: Theory vs. Reality," (master's thesis, Naval Postgraduate School, 1997.)

17 Austin Long, "The Limits of Special Operations Forces," *Prism: A Journal of the Center for Complex Operations*, vol. 6, no. 3, (December 2016): 34–47, http://libproxy.nps.edu/login?url=http://search.proquest.com/docview/1853272381?accountid=12702; Reeves, "Navy SEALs," 1–6; Colin S. Gray, "Handfuls of Heroes on Desperate Ventures: When do Special Operations Succeed?" *Parameters, U.S. Army War College Quarterly* vol. 29, no. 1 (Spring 1999): 1–24, http://libproxy.nps.edu/login?url=http://search.proquest.com/docview/1306225446?accountid=12702; Eliot Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War Vintage* (New York: 1991); Lucien S. Vandenbroucke, *Perilous Options: Special Operations as an Instrument of U.S. Foreign Policy* (Oxford: Oxford University Press, 1993); Saul David, *Military Blunders: The How and Why of Military Failure* (New York, NY: Skyhorse Publishing, 2012); McRaven, *SPEC OPS.*

Misfortunes: The Anatomy of Failure in War Vintage in 1991; Vandenbroucke in 1993 with *Perilous Options: Special Operations as an Instrument of U.S. Foreign Policy*; Saul with *Military Blunders: The How and Why of Military Failure* in 1997 and 2012; and Long in 2016 with *The Limits of Special Operations Forces*).[18] McRaven and Colin S. Gray take the opposite approach (McRaven in 1996 with *SPEC OPS* and Gray in 1999 with "Handfuls of Heroes on Desperate Ventures: When do Special Operations Succeed?"), seeking to identify conditions necessary for success.[19] Reeves attempts to marry these two sides by bridging the gap between McRaven and Vandenbroucke in his 1997 Naval Postgraduate School thesis, *Navy SEALs: Theory vs. Reality*.[20] There seems to be a great deal to gain by studying both successes and failures.

In line with the validity of both of these approaches, this research attempts to determine which components and conditions are necessary for mission success while also addressing proximate and potentially underlying original causes of mission failure. In doing so, the lack of the prerequisite components and conditions necessary for mission success should be able to explain SOF direct-action mission failures.

1. Scoped for the Target Audience

In addition to these two approaches, there are two perspectives predominantly proliferated for analysis of SOF mission success or failure: the argument is either expressed from the strategic level, designed to influence policy makers, or from the tactical level, to influence SOF operators.[21]

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[18] Long, "The Limits of Special Operations Forces," 34–47; Cohen and Gooch, *Military Misfortunes*; Vandenbroucke, *Perilous Options*; David, *Military Blunders*.

[19] Gray, "Handfuls of Heroes on Desperate Ventures;" McRaven, *SPEC OPS.*

[20] Reeves, "Navy SEALs."

[21] The term "elite" is not condoned as an appropriate descriptor of special operations forces. More accurate terms, such as "specialized," are considered more appropriate. Yet, the term "elite" has been utilized to identifying specialized mission units in the writings of other authors. Its repetition here does not constitute an acceptance or promotion of an elitist mentality on the part of this author. Long, "The Limits of Special Operations Forces," 34–47; Gray, "Handfuls of Heroes on Desperate Ventures;" Eliot A. Cohen, "Chapter 5: The Future of Elite Units," in *Commandos and Politicians: Elite Military Units in Modern Democracies,* no. 40, Center for International Affairs, Harvard University, 1978; Vandenbroucke, *Perilous Options*; McRaven, *SPEC OPS.*

The strategic perspective targets policy, executive leadership, and force structure to determine when and how conventional forces or SOF should be developed and utilized. Existing literature from authors such as Vandenbroucke, Long, Saul, Cohen, and Gooch, present their perspectives so that their recommendations and discoveries can be utilized to mitigate risks and influence policymakers at this strategic level.[22]

McRaven and Gray, on the other hand, attempt to provide information necessary for mission employment by identifying the components necessary for tactical operators to achieve success.[23] This perspective appears to aim at influencing the field-grade officers who will be overseeing the planning, preparation, and execution of missions with the SOF forces under their command structures. McRaven focuses on the guiding principles necessary to achieve the mission's objective while Gray focuses on the conditions most favorable for SOF mission success.[24] McRaven essentially narrows his scope and defines it to encompass only direct-action SOF mission,[25] while Gray allows his aperture to take in a broader scope encompassing all SOF mission sets.[26]

In line with McRaven's perspective, this research will utilize a scope narrowed to the SOF direct-action mission context, although portions or variations of it may be generalizability for other SOF or conventional mission sets. It will be applicable to advisors of senior leaders who wish to convey the capabilities and limits of assault airlift and joint SOF endeavors, as well as to field grade officers charged with developing and executing SOF direct-action missions.

2. The Literary Gap

While all of these perspectives and approaches are useful, analysis of existing literature draws a singular conclusion: No matter the camp one finds oneself in, no matter

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[22] Long, "The Limits of Special Operations Forces," 34–47; Cohen and Gooch, *Military Misfortunes*; Vandenbroucke, *Perilous Options*; David, *Military Blunders*.

[23] Gray, "Handfuls of Heroes on Desperate Ventures," *1–24*; McRaven, *SPEC OPS.*

[24] Gray, "Handfuls of Heroes on Desperate Ventures;" McRaven, 1–27.

[25] Joint Chiefs of Staff, *Special Operations*, GL-11, x; McRaven, 2–3.

[26] Gray, "Handfuls of Heroes on Desperate Ventures," 1–24.

the perspective or methodology one chooses to employ, it remains oversight gap in the literature that only two of the aforementioned authors confront the importance of transportation to the overall outcome of mission success, and they do so only in light passing.[27] McRaven addresses the importance of mobility primarily as a means of simplifying a SOF direct-action mission plan to allow more concise execution for the ground assault force. He discusses the importance of concealing the timing and "to a lesser degree the means of insertion" of the ground assault force to maintain operational security.[28]

In addition, McRaven's model, based heavily on the existential threat crises associated with World War II-type conflicts, accepts the fact that it may be necessary to sacrifice SOF direct-action assault forces in order to achieve mission objectives.[29] The need for adequate transportation to extract an assault force from behind enemy lines is effectively negated by removing the demand for it.[30] This approach, while accurate at portraying the willingness of a nation to sacrifice members when facing an existential threat, is not necessarily accurate at portraying the risks a nation is willing to bear when facing non-existential threats.[31] In these cases, achieving a mission objective at the cost of the survival of a SOF team is not necessarily synonymous with mission success.

How does forgoing exfiltration, and therefore allowing the elimination of the assault force, increase the chances of achieving a mission's objective? The extraction phase of mission execution, known as exfiltration, is the most difficult to achieve, and the mission objective can often be obtained without extracting the mission assault force, McRaven accurately observes. Instead of expending resources to insert, action-the-

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[27] Gray, "Handfuls of Heroes on Desperate Ventures," 16–17; McRaven, *SPEC OPS*, 14, 106.

[28] McRaven, 14.

[29] Six of McRaven's eight case studies were from World War II. McRaven.

[30] McRaven, 106.

[31] Even in the case of an existential threat, the assault force should be recovered if the resources allow for it. This is obviously the preferential outcome. The sacrifice of a mission force is not ideal. Such sacrifice may only be justified and necessitated when confronting existential threats, such as those faced during World War II, or in large-scale conventional conflicts. It is always ideal, regardless of the type of threat, to achieve the safe return of a mission force. The argument here does not deny that. It merely acknowledges that the need for such sacrifice is less prevalent when facing non-existential threats, which are more prolific than existential threats in the modern world.

objective, and extract the assault force, the mission can be simplified by focusing only on actioning the objective, which does not require extraction of the force. The overall result is less investment to achieve the mission objective, but at the cost of the mission force.

McRaven explains the current logic: "Obviously one-way trips have their drawbacks for the individual operators, but from a mission accomplishment standpoint they improve the possibility of success by reducing the extraction variables."[32] In doing so, he acknowledges but fails to rectify the difficulties of exfiltration with the general need for the safe return of a mission force. Nations, militaries, and units generally react poorly when their investments and the very lives of their special operators' are not valued. Non-existential threats strive to be able to warrant such sacrifices. Not only that, but some SOF missions, to include hostage rescue or the retrieval of intelligence or weapons of mass destruction, demand "two-way" missions. The result is a demand for a more plausible and reproducible "two-way" mission force.

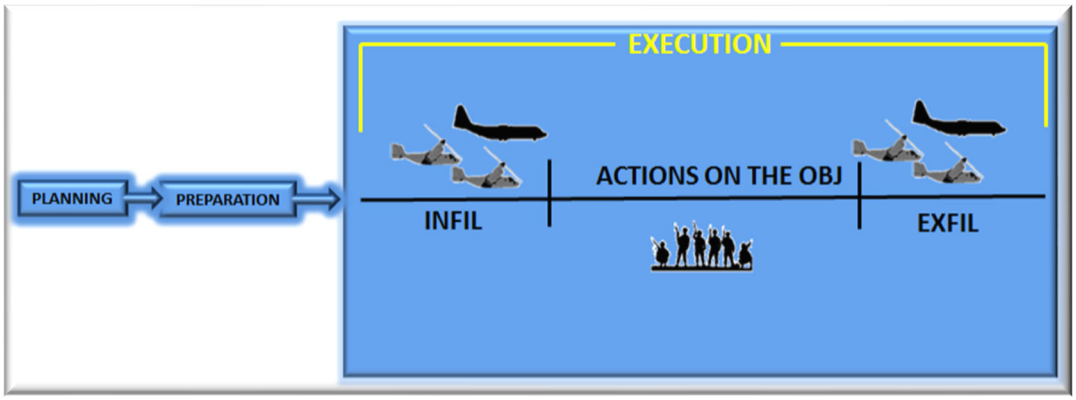
C. PHASES OF DIRECT-ACTION MISSIONS AND STAGES OF EXECUTION

In order to understand how best to approach achieving both survival of the mission force and the mission objectives, it is necessary to examine the chronological phases of a mission. There are three sequential stages of a direct-action mission: planning, preparation, and execution.[33] Planning includes when a commander's intent is codified into a mission statement. This defines the mission objective. It is what must be done and the reason for action. It also includes an initial approach to achieving the mission objective, identification of mission forces, placement of restrictions or limitations on mission parameters, and lays out levels of risk acceptance. Preparation is the gathering of mission forces, the development of means by which they will accomplish their assigned tasks, and the refinement of their skills through practice, repetition, and full-scale rehearsals. Finally, during the execution phase, the mission is carried out.

[32] McRaven, *SPEC OPS*, 106.

[33] McRaven, 9–11.

The execution phase itself usually consists of three sequential steps: infiltration, actions-on-the-objective, and exfiltration.[34] During infiltration, the ground assault force is transported to the target area. The target area for SOF direct-action missions is commonly located in denied or hostile territory, possibly behind enemy lines. Once at the target area, the ground assault force will proceed to prosecute achievement of their primary mission objective. After the actions-on-the-objective are accomplished, and the ground assault force is then extracted from the target site and returned to a place of safety, potentially with some sort of precious cargo in tow (rescued hostages, retrieved intelligence, or liberated weaponry) (see Figure 1).



Phases of a Mission: Planning, Preparation, and Execution.[35]
Execution Phase internal stages: Infiltration, Actions-on-the-Objective, and Exfiltration.[36]
This depiction serves to illustrate the contributions of the air and ground assault force elements

[34] Dean Gordon McCormick of the Naval Postgraduate School explicitly made the observation that mission execution is subdivided into three-part sequential process, the final portion of which, exfiltration, is required in all but the most *in extremis* cases in order to achieve mission success. Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016.

[35] Adapted from McRaven, *SPEC OPS*, 7, 11.

[36] Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016.

during the progression of mission execution.[37]

Figure 1. Phases of a Mission and Stages of Mission Execution[38]

Each of these phases faces its own challenges, but the final stage, exfiltration, is the one most frequently discounted in the current model. So what makes exfiltration so difficult that the survival of the mission force is transacted for its elimination from a mission plan?

1. The Difficulty of Exfiltration

Exfiltration is difficult because the modern design focuses on maximizing the capabilities of the ground assault force to achieve the mission objective at the cost of mission force survivability. The powerful element of surprise is often spent by this stage of execution, diminishing the likelihood of survival for the mission force. The fog and frictions of war have culminated to make this stage the most complex to adequately surmount. Finally, there is an inadequate focus on developing the transportation assets most capable of achieving relative superiority for, and thus the survival of, the mission force during this stage of execution.

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[37] It is important to note that the purpose of any model is to necessarily simplify the complexity of reality in order to provide a tool that can be used to, in this case, predict future behaviors or outcomes. The best model is one that is as simple as possible, without simplifying it beyond the scope of usefulness, Dean McCormick has admonished. This means that the best model is a simple one that discards tangible yet unsubstantial factors that exist in reality. The model is derived from reality. It is a simplified version of reality. However, at some point, simplifying a model any further makes it unusable, as too many significant variables have been discarded. Therefore, there comes a point where a model is unable to be simplified further while also retaining its usefulness. The very nature of models ensures that they represent a simplified version of reality and are not all encompassing. Given certain circumstances, it may be necessary to integrate further variables into a model to make it more germane to a new or more complex application. Such integrations are necessary in many cases, but it is often necessary to first understand the basic workings of the underlying simplified model before proceeding on to more integrated versions. This work attempts to integrate the contributions of assault airlift into McRaven's theory of special operations. In doing so, it remains a simplified version of reality and its ability to encompass all future scenarios is not unlimited. Additional augmentation of the model may well be deemed necessary to incorporate specific changes driven by technological or contextual developments in the future. Dr. Gordon McCormick "Guerrilla Warfare," (Lecture, Naval Postgraduate School, Monterey, CA, March 01, 2017); Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; Adapted from McRaven, *SPEC OPS*, 7, 11.

[38] Adapted from Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS*, 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

Exfiltration is the stage when an assault force is likely to be the most vulnerable. McRaven acknowledges that the vulnerability of the assault force increases as a function of time.[39] The longer an assault force is exposed the more vulnerable it becomes. Exfiltration is the final stage of mission execution and as such it bears the burden of conditions that have most probably worsened and grown less than ideal throughout the engagement. Exfiltration thus inherently represents the stage when the assault force is most exposed to any given threat, whether it is from the enemy or the environment. It also represents the stage when ground assault forces, while being most effective at accomplishing actions-on-the-objective, are least capable of providing themselves with the versatility and flexibility required to achieve their own survivability. By design, the ground assault force is most effective at actioning the objective. That is what it is constructed and trained to do. It is very effective at this. It is not designed to maximize its own survival after the fact. Its survival is instead contingent upon the transportation mechanism utilized for its extraction.[40] It is for this reason that McRaven, focused on the ground force capabilities, states "one-way trips … improve the possibility of success by reducing the extraction variables."[41] Extraction is not necessarily feasible for a mission force whose sole design was based on accomplishing the mission objectives. However, this "expendable mission force" design is not always suitable to fulfill the demand for the return of the mission force. But inherent strengths and weakness of the ground mission force are not the only factors contributing to the difficulty of extraction.

The element of surprise, a dominant principle enabling the effectiveness of the assault force, has usually dematerialized by the exfiltration phase of execution. Surprise has a powerful effect, but it is only momentary, transient in nature. The effect of surprise does not last. It dissolves quickly. The lack of surprise, as an advantage to the assault force during the exfiltration phase, requires extensive compensation by other means to

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[39] McRaven, *SPEC OPS*, 8.

[40] This concept will be covered in more detail during the contrast of attrition warfare and relative superiority.

[41] McRaven, *SPEC OPS*, 106.

ensure the survival of the assault force.[42] The lack of surprise can be compensated for, but with its loss speed and simplicity become ever so much more essential to the survival of the mission assault force.

By the exfiltration phase of mission execution, the cumulative fog and frictions of war have already demanded the implementation of contingencies that must be accommodated by whatever form of mobility is used during the exfiltration phase of execution. Things have gone wrong. Casualties have been incurred. Assets have been misallocated, squandered, or spent. All of these complications culminate to mark exfiltration as the most difficult phase of mission execution in which to achieve adequate transportation and maintain the survival of the mission force.

Existing literature assumes to take for granted the underlying importance of adequate mobility while disregarding the survivability of the mission assault force as a prerequisite to mission success. This disconcerted approach may stem from the fact that transportation itself is so intrinsically integrated into the conventional military establishment that the three main service branches of the Department of Defense (DOD) are literally named based on their primary medium of transportation: Army, Navy, and Air Force.[43] This conventional delineation apparently functions well for conventional forces facing existential threats to the nation. However, taking transportation for granted in such a way eliminates a necessary focus on developing it as a tactical asset with strategic importance for SOF. This perspective may be reinforced from the common use of SOF to support conventional strategies focused on the achievement of objectives aimed at the mitigation of existential threats to the nation itself. The use of SOF during the Iraq and Afghanistan wars, during most of which SOF was operated in a subordinate

[42] This observation was derived with the assistance of the perspectives provided by Dean Gordon McCormick of the Naval Postgraduate School. Dr. Gordon McCormick "Guerrilla Warfare," (Lecture, Naval Postgraduate School, Monterey, CA, March 01, 2017).

[43] "About the Department of Defense (DOD): History," United States Department of Defense, 2017, https://www.defense.gov/About; "Military Departments: Uniformed Services," United States Department of Defense, 2017, https://www.defense.gov/About/Military-Departments/Uniformed-Services.

role to the overarching conventional leadership and command structures, rings of this possibility.[44]

In the end, the cause of this error is less important than remedying it so as to more effectively achieve mission success. Adequate transportation to and from the mission objective is critical to the survival of the mission force, which is a condition necessary to achieve mission success in all but the most *in extremis* cases.

2. "Two-Way" Missions: Recognizing Adequate Transportation Is Essential for Mission Force Survival and Overall Mission Success

Military doctrine acknowledges the critical importance survival of the mission force plays towards overall mission success. Joint Publication (JP) 3-05, *Special Operations*, demands "exfiltration must be thoroughly planned before committing the force."[45] This is in concert with the views commonly expressed by leadership, but the theory of special operations and current planning doctrine do not adequately acknowledge the fundamental role transportation plays in achieving the survivability of the assault force. Because of this, assault airlift is not studied, understood, or supported in the ways that would best enable it to achieve this end.

To his credit, McRaven advocates concealing the time and method of insertion. His advocacy here is warranted, but it falls short of placing the demand for a two-way mission on the means of mobility utilized, as is required to achieve mission success in the preponderance of SOF direct-action missions performed today. This approach does not do justice to the critical role transportation plays in getting a ground assault force both to

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[44] The 9/11 attacks were perceived as an existential threat to the citizens of the United States. Terrorism had found a way to reach into the heart of American power at home and strike at the very centers of power, populated by presumably innocent civilians going about their daily lives. While the existence of the nation as a whole may have been less at stake, the feeling of an individual's existence having been threatened by the acts of terrorism was deeply realized. There were considerations as to whether or not the attack had damaged the economic sovereignty of the United States, threatening the existence of their way of life. This justified the follow-on conventional military responses. The nation, as a whole, felt the existence of its members had been threatened. The response called for would be "in kind," regardless of the political or geographic nuances.

[45] Joint Chiefs of Staff, *Special Operations*, JP 3-05, (Joint Chiefs of Staff, 2014), III-3. http://www.dtic.mil/doctrine/new_pubs/jp3_05.pdf.

and from an objective area, nor does it demand mobility provide exfiltration, a necessary prerequisite for the survivability of the mission assault force.

Gray goes somewhat further than McRaven and directly addresses the importance of transportation, but his approach lumps transportation in with all other technological developments contributing to the art of war.[46] While this perspective may be taken, it does not allow the granularity required to distinguish between the contributions of an assault rifle, night vision goggles, body armor, or a horse in their augmentation of relative superiority throughout the three stages of mission execution. This approach therefore misses the mark of recognizing the imperative on mobility to safely insert and extract the ground assault force in order for a mission to succeed in all but the most extreme of circumstances.

General Robert H. Barrow, former Commandant of the United States Marine Corps, emphasized in 1980 the strategic importance of transportation to conventional military organizations when he said (quoted in Scott DiMarco's 2014 *Huffington Post* article, "10 Leadership Lessons from a Combat Logistician,") that, "Amateurs talk about tactics, but professionals study logistics."[47] This quote, along with the DOD organizational structure discussed earlier, highlight the strategic importance of transportation to achieving conventional military objectives. Again, transportation is recognized for its strategic importance, but recognition without action merely assumes that the operationalizing required to maximize the probability of survival for a SOF mission force will evolve on its own without the need for intelligent design.

Despite the overwhelming recognition of the strategic importance of adequate transportation, there is not an observable acknowledgement of it as a prerequisite for mission success when doctrine and theory attempt to demonstrate how best a jointly composed SOF direct-action mission assault force might plan, prepare, and execute a mission. There seems to be a tendency for SOF organizations, senior leaders, and even executive elected civilian oversight to ignore the potential consequences that accompany

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[46] Gray, "Handfuls of Heroes on Desperate Ventures," 2, 16–17.

[47] Scott DiMarco, "10 Leadership Lessons from a Combat Logistician," *Huffington Post*, October 21, 2014, http://www.huffingtonpost.com/scott-dimarco/10-leadership-lessons-from-combat_b_5697572.html.

the loss of a mission assault force. These consequences radiate up from those who experience the ultimate sacrifice at the tactical level to the senior military leaders who were responsible for planning the mission and even exude up to the elected and appointed civilian leadership who authorize the strike. The Carter administration ended with the failure of Operation EAGLE CLAW.[48] The Trump administration received criticism for the loss of a single assault force member during the Yemen raid of 2017, reported on by Tom Vanden Brook and Gregory Korte in *USA Today*'s 2017 article, "Three Probes Opened into SEAL's Death in Controversial Yemen Raid."[49] Yet despite these threats to even the senior leaders involved in developing and authorizing SOF direct-action missions, there seems to be an overarching focus primarily on infiltration and prosecuting the actions-on-the-objective while including transportation during exfiltration as an afterthought.

This overt focus on the contributions of the ground assault force is imbalanced, as adequate transportation during infiltration and exfiltration stages stands as an ordinarily indispensable component for mission success. Without adequate transportation during the extraction, in particular, the survivability of the mission assault force becomes seriously jeopardized.

3. Components of a Mission Assault Force

It is important to distinguish between the functional components of a mission assault force and to recognize the indispensability of each to overall mission success. Generally, the mission assault force is composed of both the ground assault force and the air assault force. When this is the case, the contributions of each are imperative to overall mission success. They are brothers, and neither can accomplish the mission without the other. Both are necessary components of a successful special operations direct-action mission, yet the current conversation and theory of special operations fall short of acknowledging this critical distinction.[50]

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[48] Bowden, "The Desert One Debacle."

[49] Tom Vanden Brook and Gregory Korte, "Three Probes Opened into SEAL's Death in Controversial Yemen Raid," *USA Today*, February 27, 2017, http://www.usatoday.com/story/news/politics/2017/02/27/three-probes-opened-into-seals-death-raid-controversial-yemen-raid/98488108/.

[50] McRaven, *SPEC OPS*.

Failure to differentiate between these two functional components, even at this basic level, represents a failure to identify the primary enabler of two of the three mission execution phases. This differentiation is necessary in order to understand how each of these functional components can best be synchronized to achieve both mission success and the survivability of the mission force.

In addition to the previously stated oversight of inclusion of adequate transportation as a prerequisite to survivability and mission success, existing literature fails to differentiate between the components of a SOF direct-action mission force. When airlift is the chosen mechanism for transportation, as is often the case, the assault force is comprised of a ground assault force and an air assault force.[51] Just as the ground assault force is the primary enabler of the actions-on-the-objective, the air assault force is the primary enabler of the infiltration and exfiltration phases of mission execution.

It is true that at a basic level, a mission objective can be achevied with a single operator trained to both infiltrate, action an objective, and exfiltrate. However, the inclusion of technologically specialized equipment decreases the chances that the infiltration and exfiltration platforms will be manned by the operators tasked to action-the-objective. Instead, specialized transporation methods, such as are usually the case with sea, air, and even some land transporation mechanisms, greatly increases the necessity to include operators specifically dedicated to operating these transportation mechanisms. Assault airlift is no different, and actually serves to highlight the necessary inclusion of these specialized SOF operators into the mission assault force to most

[51] Each of these may have other more varied or practical descriptions. The ground assault force could be referred to as the strike team, operators, special forces, commandos, or assaulters, while the air assault force could be referred to as SOF air mobility, assault airlift, air commandos, or simply as operators. The actual designation is less important than acknowledging the functional difference in order to ascertain how best to employ each in order to accomplish the mission's objective and achieve the safe return of the mission force.

effecively utilize the capabilities their equipment, training, and risk mitigation techniques (to include authorization, tactics, techniques and procedures) bring to the fight.

4. *In Extremis* Cases: "One-Way" Missions

It may be accurately argued that many of the special operations direct-action missions analyzed by McRaven, as well as other historical examples, such as the Doolittle raid on Japan during World War II (discussed by David Tucker and Christopher J. Lamb in their 2007 book, *United States Special Operations Forces*; and the National WWII Museum's 2007 posting, "Turning Point: The Doolittle Raid") were forced into using one-way missions because of the need to focus all available resources on insertion and actions-on-the-objective.[52] Sufficient flexibility and resources did not remain to make a two-way mission possible, and yet the risks to undertake the missions remained warranted (see Figure 2).[53]

[52] David Tucker and Christopher J. Lamb, *United States Special Operations Forces* (Columbia University Press, 2007), 146; "Turning Point: The Doolittle Raid," National WWII Museum, accessed December 5, 2017, http://turningpoint1942.org/doolittle-raid.html; McRaven, *SPEC OPS*, 106, 109, 234.

[53] "Turning Point: The Doolittle Raid."

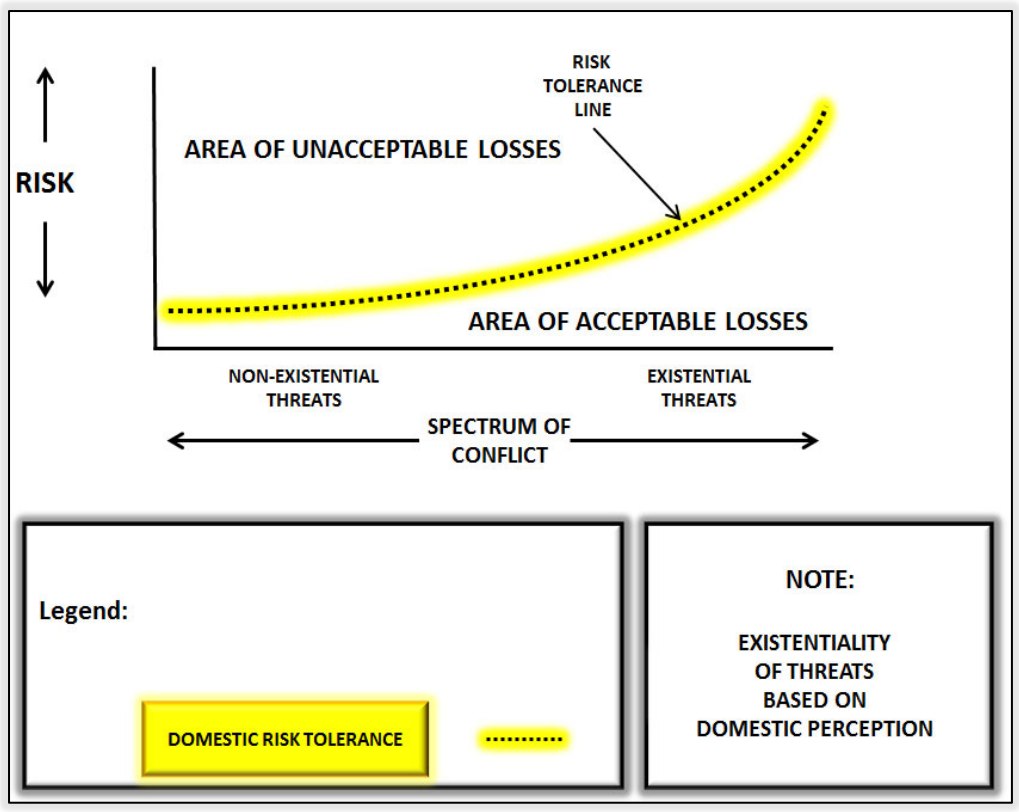

Figure 2. Domestic Risk Tolerance[54]

[54] It is possible to view the spectrum of conflict through other lenses, rather than between the polarities of existential and non-existential threats. One could delineate based on national security objective prioritization or perceived threat proximity. However, it is the spectrum of conflict polarized between existential and non-existential threats that best lends itself for the use of identifying when special operations forces conducting direct-action missions employing relative superiority are comparatively effective (and likely to be employed) versus conventional assets operating through attrition warfare strategies. This viewpoint is also helpful in determining the risks populations are willing to accept in comparison to the propensity to utilize special or conventional forces. Thus, the dual-use nature of this perspective makes it helpful in addressing the constructs of this research.

If one were to utilize a conflict spectrum based on the prioritization of national security interests, it would accurately depict risk tolerance, but it would not provide meaningful contributions for delineation of propensity or effectiveness of military strategy employment. Such a perspective does not significantly provide comparison between the strategic effectiveness of special operators wielding relative superiority versus conventional assets wielding attrition warfare. Both assets can be used to counter high or low priority national security interests. Their usefulness spans tactical and strategic interests. Their effectiveness and propensity for use is not based on the prioritization of the national security interest. However, the propensity for their use is conditional upon the perceived existentiality of the threat, and this also allows one to examine their latent potential strategic effectiveness. One could view the conflict spectrum in a multidimensional lens, with the z-axis representing the perceived importance of national security interests as a third axis in addition to the spectrum of existentiality of threats and the risks populations are willing to incur. However, this adds unnecessary complexity and is not necessary for this analysis.

In these extreme cases, when the nation faced an irrefutable and proximal existential threat, the potential benefits of the mission outweighed the costs involved. Sacrificing an assault force was justified under the encountered circumstances. It was worth potentially sacrificing the Doolittle raiders to show Japan that the United States could reach out and touch them, just as they had done to the United States at Pearl Harbor. It was also worth it to show the American people that their nation was capable of mounting a direct response to the bombing at Pearl Harbor. Bolstering of domestic political will and curtailing the enemy's will specifically warranted such an action, despite the elevated costs (see Figure 3).

One-way missions are often justified when facing existential threats. They were common in World War II, just as the six case studies of McRaven's from that era demonstrate.[55] Retired Army Lieutenant General Sam V. Wilson, a member of Merrill's Marauders and a founding father of Army Special Forces, reminds of these *in extremis* examples when he famously described (as quoted in SOFREP's 2016 posting "'Expendable' WWII Merrill's Marauders Survive into Their 100s") how the Marauders were used in the desperate battle for the survival of the modern Western way of life in World War II: "We were expendable."[56]

And one-way missions are not necessarily a thing of the past. Even today there could exist *in extremis* cases where one-way missions would be justified and required. SOF assault force members must always be prepared to face such odds. When such circumstances warrant, the courageous forces that have steadfastly defended America will once again step forward, if not into the light then to slip quietly into it to prosecute the defense of the nation, despite the costs.

One could also seek to define whether "existential" references the very lives of a nation's people or whether it is a more encompassing term, addressing their way of life or worldview. This work uses the latter, more encompassing meaning of the term. However, the definition one choses to prefer does not necessarily affect the outcome of the conclusions here within.

55 McRaven, *SPEC OPS*, 29–72, 46, 73–114, 75–77, 125, 115–162, 163–200, 178–181, 187, 201–244, 231, 245–286, 276, 287–331, 333–380.

56 "'Expendable' WWII Merrill's Marauders Survive into Their 100s," SOFREP News, August 26, 2016, https://sofrep.com/62510/expendable-wwii-merrills-marauders-survive-100s/.

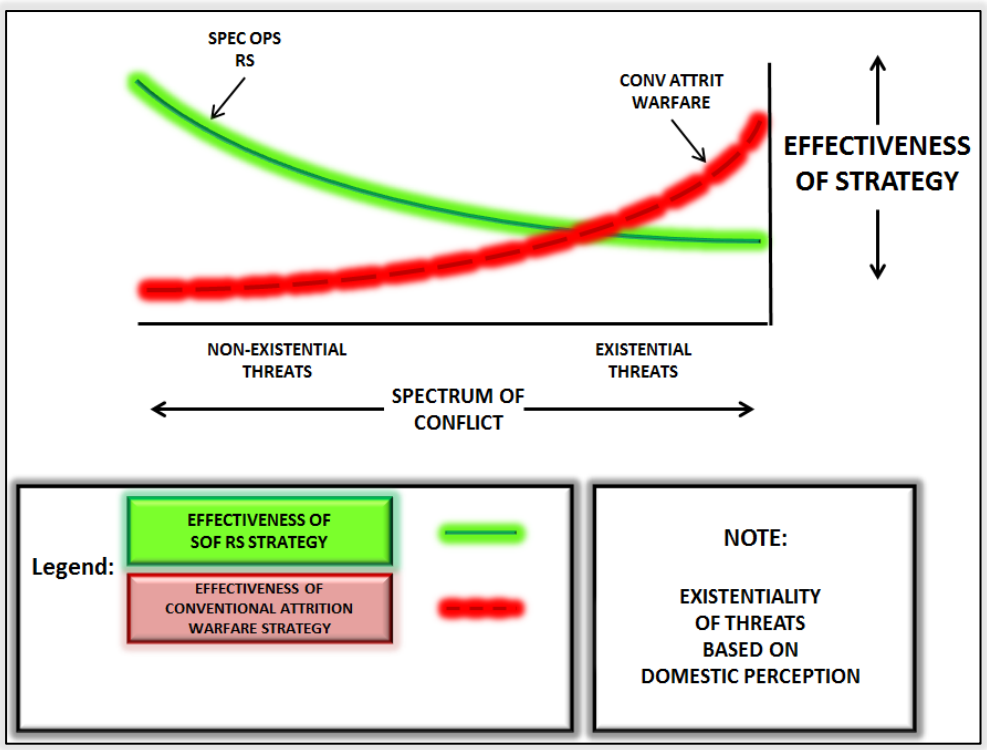

Figure 3. Effective Utility of Warfare Strategies

Fortunately, this level of sacrifice is not required or warranted under most conditions where non-existential threats are countered by SOF direct-action measures. It can even be avoided if the advantage to the assault force is sufficiently bolstered. And this is where the role of assault airlift comes into play. Even when things go wrong, adequate assault airlift can provide a means of extracting an assault force, allowing it to survive to fight another day on behalf of the nation.

The one-way mission model is less than acceptable in today's highly politicized environment, more so than ever before.[57] In the most extreme of circumstances, such as those faced during World War II, when an all-out open war requires conventional forces to mitigate an existential threat to the nation itself, domestic public support is capable of weighing the costs and benefits expressed by executive leadership and can therefore be made capable of absorbing the loss of life necessitated to conduct one-way missions and

[57] Hyde, "Casualty Aversion," 17; Smith, "What Costs Will Democracies Bear?" 487–512.; Record, "Collapsed Countries, Casualty Dread, and The New American Way of War," 4–24.

achieve strategic victories.[58] However, in any scenario short of open war the domestic public tolerance for casualties will continue to diminish, increasing the political cost associated with mission losses.

The renowned combat expert and war theorist Carl Von Clausewitz refers to this relationship between political costs, political will, and the efforts a society and their leaders are willing to expend to accomplish military objectives in the first chapter of his foundational military strategy book *Vom Kriege (On War):*

> The … political object must … come forward. If the whole consideration is a calculation of probability based on definite persons and relations, then the political object, being the original motive, must be an essential factor in the product. The smaller the sacrifice we demand from our opponent, the smaller, it may be expected, will be the means of resistance which he will employ; but the smaller his preparation, the smaller will ours require to be. Further, *the smaller our political object, the less value shall we set upon it, and the more easily shall we be induced to give it up altogether* … [emphasis added].[59]

Here, Clausewitz identifies a direct link between the sacrifices a nation is willing to make and the criticality of the political objective it seeks to achieve. McRaven attempts to pin down this relationship throughout his case studies, by asking, "Were the objectives worth the risk … [to include the] loss of human lives [and the] … loss of military or political advantage."[60]

Special operations forces will continue to be called upon to counter non-existential threats because of their effectiveness at doing so, but this does not mean that domestic public support will accept their losses. Hugh Smith also relayed this concept in his 2005 article, "Casualty Aversion," where he stated, "Analysis of the data by RAND [Research and Development] researchers led to the conclusion that 'the public tends to be unwilling to tolerate anything more than minimal costs in limited war situations.'"[61] Smith's observation is focused on political objectives that fall short of existential threats.

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[58] Hyde, "Casualty Aversion," 17.

[59] Clausewitz and Graham, *On War,* 109–110.

[60] McRaven, *SPEC OPS*, 24–25.

[61] Smith, "What Costs Will Democracies Bear?" 487–512;

His finding accurately describes one end of the political spectrum of conflict. Other RAND studies bear similar results, such as those presented by Mark Lorell and Charles Kelley Jr., with Deborah Hensler, in their 1985 paper, *Casualties, Public Opinion, and Presidential Policy during the Vietnam War*.[62] Domestic political tolerance for casualties is directly tied to the perception of the importance of the mission objective, and that objective is only rarely considered valuable enough to warrant the loss of special operations forces when facing anything other than an existential threat (see Figure 4).

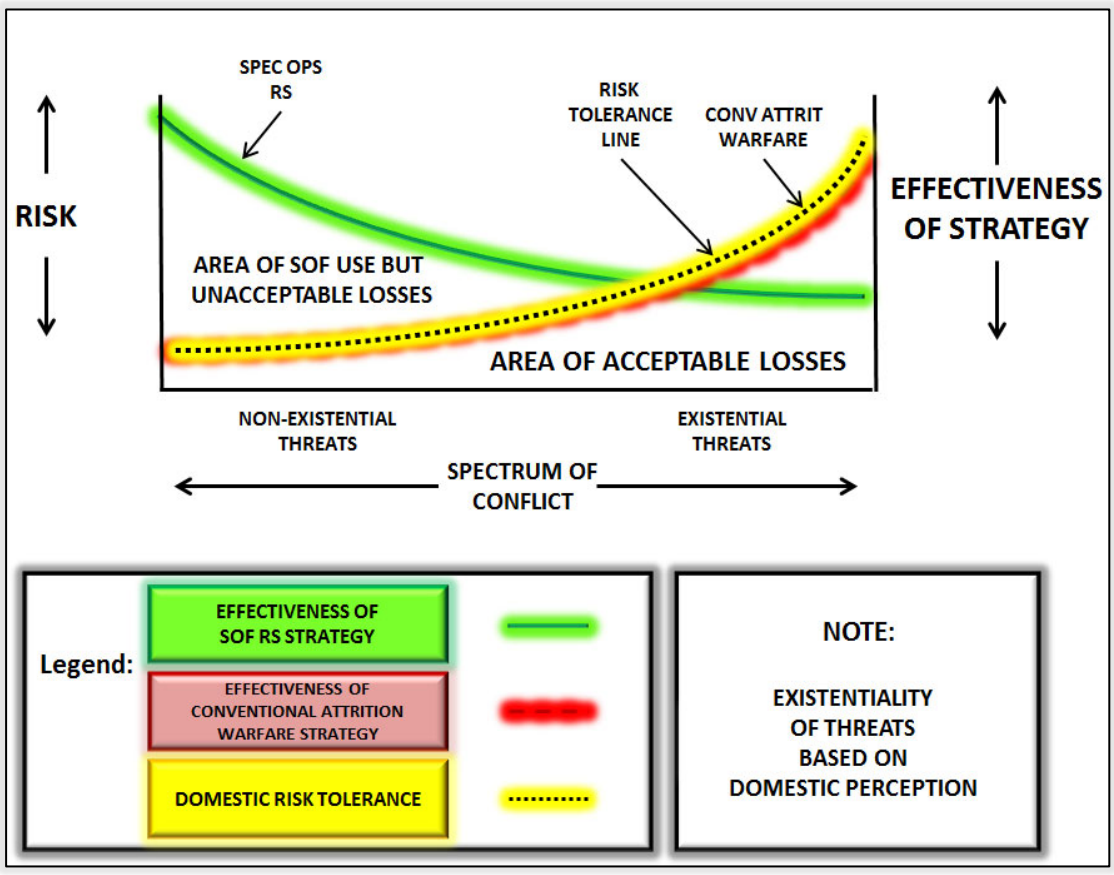

Figure 4. Maximized Utility of Warfare Strategies Compared to Domestic Risk Tolerance

[62] Mark Lorell and Charles Kelley Jr., with Deborah Hensler, *Casualties, Public Opinion, and Presidential Policy during the Vietnam War*, R-3060-AF, (Santa Monica, CA: RAND, 1985), 1–92.

Domestic political support will not tolerate unacceptable or unwarranted SOF losses even and especially when they are effectively employed against non-existential threats. Countering of non-existential threats remains a critical component of U.S. military strategy. It is necessary to avoid potential future existential threats and to protect national interests. R. W. Van de Velde explained the importance of dealing with non-existential threats in his 1962, "Instruments of Statecraft," when he said "it becomes the duty of the professional soldier to think professionally about the means by which any state … may be able to avoid war; and failing that, to make the war cost us as little as possible."[63] But due to the lack of proximity these future threats hold over a more immediate need, and thus a more visceral need, to avoid unnecessary risks, the effective area of conflict where SOF is most effectively employed also happens to be the area it is least acceptable to be lost within.

This phenomenon has grown to the extent that the ability to safely infiltrate and exfiltration one's assault force has become as paramount to mission success as achieving the actual mission objective itself. This was highlighted in the 2017 Yemen special operations direct-action raid to gather intelligence, where a single American SOF fatality was enough cause for elected officials to call the mission a "failure," despite the fact that the advertised mission objective of intelligence gathering was accomplished and the assault force was largely recovered intact.[64] The single death allowed the mission to be touted as a failure, while the survival of the rest of the assault force and the achievement of the mission objective allowed the Trump administration to declare the mission a "success."[65] Situations like this highlight the importance of the mission force's survival to overall mission success. It is at least as important as achieving the mission objective itself.

Existing literature and the current theory of special operations do not adequately account for mission force survival as a prerequisite to mission success, nor do they

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[63] R. W. Van de Velde, "Instruments of Statecraft," *Army* 13, no. 5, 1962: 1–6.

[64] Vanden Brook and Korte, "Three Probes Opened into SEAL's Death in Controversial Yemen Raid."

[65] Vanden Brook and Korte.

acknowledge adequate transportation throughout all stages of mission execution as a necessary condition required for mission success in all but the most extreme cases. As such, they do not provide comprehensive guidance to senior leaders and mission planners seeking to achieve SOF direct-action mission success. This is where this work will endeavor to proceed.

D. BUILDING AN INTEGRATED SOF DIRECT-ACTION MISSION ASSAULT FORCE MODEL

1. Willing and Able: A Simple Concept

To build a more comprehensive model of an integrated SOF direct-action mission assault force, this research will start with a simple concept: To do anything at all, one must be both willing and able. One of these alone is not sufficient to achieve impact. Both must be wielded in tandem. It is not enough to be only willing to act, because if one lacks the capability to act then willingness alone merely stands as a testament to wishful thinking. Likewise, ability by itself is not sufficient to achieve an objective. Retaining ability without the willpower to execute that ability towards a given target only ensures the resources at one's disposal remain unspent. The objective itself remains unachieved. Successful action has not been taken.

A simple metaphor suffices to demonstration this reality. Suppose Mr. Poor sees a charity in need of financial support. Mr. Poor may be willing to help the charity, but he may not have any money to give. In this case, Mr. Poor has the will, but not the ability to act. Conversely, Mrs. Wealthy sees the charity and although she has ample funds to assist, she finds the charity to be unworthy of her funds or attention. Mrs. Wealthy has the ability to act, but the will to do so is not present. Both will and ability are prerequisites for action to be taken. In and of themselves, they do not ensure the success of any given action, but no action is taken without both will and ability being present.

Nation-states, elected leadership, domestic populations, animals, militaries, and even entire demographics societies are all subject to this simple concept. If they want to do something, they must be both willing and able to do it. Great deals of effort have been expended attempting to influence the desire and behavior of individuals by coercing them

into submission to that of another. Psychological operations seek "to influence the attitudes and behavior of foreign groups in a manner favorable to the achievement of [friendly] objectives," (as stated by Frank L. Goldstein and Daniel W. Jacobowitz in "Psychological Operations: An Introduction").[66] Deception, denial, and propaganda analyses are replete with examples of techniques on how best to manipulate or dissuade the will of an adversary.[67] Extensive campaigns have been waged and strategic books written to deteriorate the ability of an aggressor to act.[68] Almost all conventional wars aim to remove the ability of an enemy. The Carthaginians attempted to remove the ability of the Roman army, and vice versa, during the Punic Wars of 264 BC to 146 BC.[69] The allies attempted to remove the German ability to conquer during both World War I and World War II. But in all of these cases, the targets of choice to induce change or retain equilibrium are always will and ability.

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[66] Frank L. Goldstein and Daniel W. Jacobowitz, "Psychological Operations: An Introduction," in Psychological Operations: Principles and Case Studies, 1996.

[67] In addition to the other sources listed in the footnote, an excellent example of ongoing efforts to affect the will or ability of a people is John Steinbeck's book, *The Moon is Down*. Written as a means of preparing the United States for a potential Japanese invasion during World War II, his book attempts to instill in Americans the means and desire to resist occupation by laying out the roles and methods of resistance for a people who have long since forgotten any state but that of freedom. Unlike military might, which seeks to derail the ability of an enemy, Steinbeck's book seeks to influence the desire or will of a nation's people. The book is required reading in Dr. Sepp's Naval Postgraduate Course, "Psychological Warfare and Deception." John Steinbeck, *The Moon is Down*, with Introduction by Coers (n.p.: Penguin, 1995); Kalev I. Sepp, "Psychological Warfare and Deception," (Lecture, Naval Postgraduate School, Monterey, CA, 2017).

The following are all excellent sources that can be referenced regarding the use of deception, denial, and propaganda in warfare (as recommended by Dr. Sepp): Robert B. Cialdini, *Influence: The Psychology of Persuasion,* Revised edition (October 07, 2005) (n.p.: Collins, 1998); Goldstein and Jacobowitz, "Psychological Operations," 5–16; Lee Richards, "Political Warfare Executive: Meaning, Techniques, and Methods of Political Warfare," British National Archives, file ref. FO 898/101, 2005, accessed August 08, 2017, http://www.psywar.org/; Velde, "Instruments of Statecraft," 1–6; Martin F. Herz, "Some Psychological Lessons from Leaflet Propaganda in World War II," *Public Opinion Quarterly* 13, no. 3 (1949): 471–486; Steinbeck, *The Moon is Down*; Kalev I. Sepp, "Psychological Warfare and Deception: Deception Theory & Background - I," (Lecture, Naval Postgraduate School, Monterey, CA, August 02, 2017).

[68] Sun Tzu, *The Art of War: Complete and Unabridged* (East Bridgewater, MA: World Publications Group, Inc., 2013); Clausewitz and Graham, *On War*.

[69] Sepp, "Psychological Warfare and Deception: Deception Theory & Background - I."

2. Attrition Warfare

Ability is what traditional attrition warfare is all about: breaking the ability of an adversary whose goals are in conflict with one's own interests. It is what the great military strategist Carl Von Clausewitz wrote about in his renowned book *On War*.[70] Attrition warfare focuses on diminishing the ability of one's enemy to fight. The enemy's desire to cooperate is irrelevant, but instead their ability to act against one's wishes is the key. Attrition warfare seeks to attain dominance through the forceful employment of military resources to influence the behavior of an adversary's leadership, military forces, or population.

Success in attrition warfare is based on two primary factors: quantities of opposing forces and attrition rates, the most powerful of which is typically quantity. In attrition warfare, larger conventional forces will usually triumph over smaller conventional forces. This is true unless smaller forces are able to attrit their adversary at high enough rates to surmount the size disparity between the two opposing forces. Each of these principles can be examined in turn (see Figure 5).

[70] Clausewitz and Graham, *On War,* 109–110.

Figure 5. Attrition Warfare Model[71]

Although there are occasional exceptions to the norm, large conventional forces generally triumph over smaller conventional forces. One well-known historical example of this in attrition warfare is the 1836 battle for the Alamo (a battle elaborated on by History in "The Alamo").[72] During the 13-day battle, no more than 200 Texans and their allies stood against a 1,800 to 6,000 strong Mexican army commanded by General Antonio Lopez de Santa Anna at a besieged church near modern day San Antonio, Texas.[73] The Texans, skilled marksman, managed to attrit 600 to 1,600 of General Santa Anna's battle-hardened troops before the Alamo was eventually overrun. Almost all of

[71] Adapted from Clausewitz and Graham, *On War*; Joint Chiefs of Staff, *Joint Operations*, JP 3-0, (Joint Chiefs of Staff, 2014), A-1–A-4, http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf; McRaven, *SPEC OPS*, 11.

[72] "The Alamo," History, accessed August 09, 2017, http://www.history.com/topics/alamo.

[73] "The Alamo."

the 200 Alamo defenders were killed in the battle.[74] The example serves to illustrate the power of quantity in attrition warfare.

Another example of an extreme size disparity accounting for the defeat of a smaller force wielding a significant, yet ultimately insufficient, attrition rate is the Battle of Thermopylae in 480 BC (elaborated on by M. H. Q. in HistoryNet's 2006, "Battle of Thermopylae: Leonidas the Hero").[75] At Thermopylae, King Leonidas's 300 Spartans led 7,100 fellow Greeks to stand against 150,000 troops of the Persian army commanded by the Great King Xerxes, son of Darius.[76] Although the Spartans and Greeks were outnumbered nearly 20 to 1, they were able to kill over 20,000 Persians before they were eventually defeated. All but two Spartans were killed.[77] 4,000 of the Greeks died and the few that survived were forced to flee.[78] The Spartans, memorialized as "the most efficient killing machine in history," were eventually defeated due to the extremely high relative quantity of Persia's forces.[79] The example serves to illustrate the attrition warfare model and verifies the assertion that quantity is generally more powerful than attrition rates in the art of attrition warfare.

If two opposing forces are of comparable size but one is significantly more proficient at killing and thus able to attrit their adversary at a higher rate, then the force wielding the higher attrition rate to its advantage may well achieve victory, even against a larger force. This ability of attrition rates to mitigate numerical disadvantages is what Alexander the Great's victory at the Battle of Gaugamela in 331 BC is attributed to.[80] During the battle, Alexander led his Macedonian army, comprised of 40,000 troops, to triumph against a comparable but numerically superior 50,000 troop Persian army led by

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[74] "The Alamo."

[75] MHQ, "Battle of Thermopylae: Leonidas the Hero," HistoryNet, June 12, 2006, http://www.historynet.com/battle-of-thermopylae-leonidas-the-hero.htm.

[76] MHQ, "Battle of Thermopylae."

[77] MHQ, "Battle of Thermopylae."

[78] MHQ, "Battle of Thermopylae."

[79] MHQ, "Battle of Thermopylae."

[80] Donald L. Wasson, "The Battle of Gaugamela," Ancient History Encyclopedia, February 27, 2012, http://www.ancient.eu/Battle_of_Gaugamela/.

King Darius III. Despite the numerical disadvantage, Alexander was able to use technological and tactical prowess to increase the attrition rate his forces were able to produce, an effect that was strong enough to allow his dominance over the comparably sized Persian forces.[81] The Battle of Gaugamela showcases the ability of attrition rates to mitigate slight numerical disadvantages, but it should be noted that victory under such circumstances is the exception and not the norm in attrition warfare. In attrition warfare, the larger force usually wins.

The high cost associated with attrition warfare ensures that it is generally best suited for use to counter existential threats to a people.[82] As such, it seeks to protect or achieve multiple objectives (whether they are leadership, resources, or people) from the enemy's influence. Attrition warfare seeks to accomplish objective actions by forcefully employing ability and denying the ability of the enemy to action their own objectives. By placing large amounts of forces between precious objectives and an attacking force, a defensive force can deny the attacking force access to the defended objectives. These conventional forces locked in attrition warfare benefit from the full range of Clausewitzian principles, which cede a strategic advantage to defensive force, as portrayed Clausewitz himself wrote about in *On War* (see Figure 6).[83]

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[81] Estimates of the Persian forces, led by King Darius III, range from 50,000 to 1,000,000, while the Macedonian forces, led by Alexander the Great, were numbered at a significantly lower 40,000 troops. If the lower number of each is taken, the point made here still holds: rates of attrition can serve to mitigate numerical disadvantages during conventional attrition warfare. If the higher numerical estimates of the Persian force are used, the point is only reinforced. Wasson, "The Battle of Gaugamela."

[82] Recall that Clausewitz admonished, "the smaller our political object, the less value shall we set upon it, and the more easily shall we be induced to give it up altogether." The high cost of attrition warfare deems it useful in only extreme cases where the scale of conflict tends towards intolerable consequences, such as crises or events that threaten the very existence of a people. Clausewitz and Graham, *On War,* 109–110.

[83] McRaven, *SPEC OPS*, 3; Von Clausewitz, Carl, *On War,* trans. and eds. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press 1, 1976), xxx, 358.

Figure 6. Attrition Warfare Principles[84]

The defensive form of warfare is intrinsically stronger than the offensive. [It] contributes resisting power, the ability to preserve and protect oneself. Thus, the defense generally has a negative aim, that of resisting his enemy's will … if we are to mount an offensive to impose our will, we must develop enough force to overcome the inherent superiority of the enemy's defenses.[85]

What does this mean and why does it matter? It means that in attrition warfare an attacking force generally requires that it be advantaged by having a numerically larger force than the defensive force it seeks to attrit. An attacking force requires a larger size in order to achieve success against a defensive force in attrition warfare. The defensive

[84] Adapted from Clausewitz and Graham, *On War* Joint Chiefs of Staff, *Joint Operations*, A-1–A-4; McRaven, *SPEC OPS*, 11.

[85] McRaven, 3; Von Clausewitz, Carl, *On War*, xxx, 358.

force is likely to benefit from an increased ability to attrit the attacking force. The high attacking force losses at the Battle of Thermopylae and The Battle of the Alamo served to illustrate this purpose.[86]

So, in order to overcome this inherent disadvantage, the attacking force needs to be larger than the defending force. This offsets the defensive force's inherently superior rate of attrition. Other options are to find an advantage that either bolsters the attacking force's ability to attrit the defensive force or to find a way to mitigate the defensive force's advantage. Either of these could be achieved via a novel technological advantage, tactical prowess, or exploitation of a unique environmental characteristic, but each of these methods only seeks to change the balance of power by manipulating quantities and attrition rates.

Manipulation of quantities and attrition rates is achieved in attrition warfare through use of Clausewitzian principles of war.[87] Clausewitz's "theory of war" supposes that multiple objectives are achieved in traditional war through the use of understanding the aspects of war.[88] The United States Army had simplified these Clausewitzian aspects into nine principles when McRaven wrote his thesis: "objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, and simplicity."[89] Today, JP 3-0, *Joint Operations*, recognizes twelve principles contributing to joint operations in an attrition warfare environment: "objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, simplicity,… restraint,

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[86] "The Alamo;" MHQ, "Battle of Thermopylae."

[87] Clausewitz preferred to describe "aspects" of war, as opposed to "principles" for fear that a formulaic approach would miss the nuanced and complex synergistic relationships required to understand the phenomenon. Brian B. Ettrich, discusses this in his 2005 NPS master's thesis, "The Principles of War: Are They Still Applicable?" Brian B. Ettrich, "The Principles of War: Are They Still Applicable?" (master's thesis, Naval Postgraduate School, 2005), 12–13.

[88] Ettrich, "The Principles of War," 12–13; Von Clausewitz, *On War*.

[89] McRaven, *SPEC OPS*, 8.

perseverance, and legitimacy."[90] It has employed these principles quite successfully in a variety of situations throughout history.

Traditional attrition warfare is most successfully employed when existential threats are encountered. These threats threaten the existence of one side or the other and thus necessitate the utmost effort a nation can provide. This risk is what justifies the excessively high potential costs associated with traditional attrition warfare. A nation's very survival may be at stake. When Nazi Germany threatened the existence of the Allied Powers in World War II, a substantial force in both quantity and ability to attrit the enemy had to be mustered to dissuade Germany from conquering the known world. Had this force failed to confront Germany, the Western world as it was known would have ceased to exist. Thus, Germany posed and existential threat to the Allied forces and the populations they represented.

The high cost of attrition warfare demands alternatives be available for confrontation of non-existential threats. Less than existential threats rarely warrant the risks associated with conventional attrition warfare. Furthermore, alternatives to attrition warfare are required because attrition warfare is not always desired, practical, or possible.

"Even a fully mobilized nation-state cannot always force its opponents into annihilatory battle, especially when confronting the nonstate and sub-state forces empowered by the social and technological characteristics of the age," Peter Munson observes in his 2007 Naval Postgraduate School article, "The Return to Attrition: Warfare in the Late Nation-State Era," later published in the *Strategic Insight*.[91]

With the increase in civil wars and internal complications that seek to erode the fabric of the nation-state system, attrition warfare still has its place, but countering many of these demographically and not geographically defined actors requires and increasingly

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[90] The doctrine published by the Joint Chiefs of Staff states: "Principles of Joint Operations Joint doctrine recognizes the nine principles of war (objective, offensive, mass, maneuver, economy of force, unity of command, security, surprise, and simplicity). Experience gained in a variety of irregular warfare situations has reinforced the value of three additional principles—restraint, perseverance, and legitimacy." Joint Chiefs of Staff, *Joint Operations*, ix, A-1–A-4.

[91] Peter Munson, "The Return to Attrition: Warfare in the Late Nation-State Era," *Strategic Insights*, v. 6, issue 6 (December 2007): n.p.

modified solution. It is not always going to be desirable to invade a sovereign nation to eliminate a demographically segregated ideological dark network. It is not always feasible to simply send in a large force to action a hostage rescue. The consequences and collateral damage in either case could significantly increase the costs beyond that which domestic political will, elected officials, or senior military leaders care to stomach. A solution lies in the use of an alternative form of warfare: special operations forces empowered by relative superiority.

3. What Makes a Special Operations so "Special," Anyway?[92]

What makes special operations "special" is the impact their effects have to influence the will power of either friend or foe at a strategic level and their ability to be wielded across the spectrum of conflict intensity.[93] Special operations select direct-action targets not based on conventional military worth, but rather on the target's ability to either bolster friendly resolve or dishearten one's enemies.

Take, for example, the Doolittle Raid against Japan. These raiders flew a one-way mission to strike at the heart of Japan after the bombing of Pearl Harbor.[94] They flew this one-way mission knowing that a few bombs dropped on Japan could not possibly have a significant impact on the conventional capabilities of the Japanese military. No, the Doolittle Raid was intended to target morale, not conventional military might. The intent was to show the Japanese that the Americans were willing and able to reach out and touch them … that the Americans would undertake extreme efforts and risks in order to fight back against the Japanese. The bombing raid was intended to bolster American morale in the wake of the devastation the Japanese had inflicted at Pearl Harbor. It

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[92] Portions of this work include excerpts and revisions from previous work of the author: David J. Damron, "McRaven's Capstone: Getting There - How the Theory of Special Operations and Air Mobility brought down Osama bin Laden," a research article written as postgraduate student for "History of SOF," Naval Postgraduate School, Monterey, CA, 2016. The original work can be made available upon request: djdamron@nps.edu

[93] David A. Deptula, "Effects-Based Operations," *Air & Space Power Journal* 20, no. 1 (Spring 2006): 4–5, http://go.galegroup.com/ps/anonymous?id=GALE%7CA154817962&sid=googleScholar&v=2.1&it=r&linkaccess=fulltext&issn=1555385X&p=AONE&sw=w&authCount=1&isAnonymousEntry=true; Tucker and Lamb, *United States Special Operations Forces*," 87, 145–146.

[94] Tucker and Lamb, *United States Special Operations Forces*," 146.

provided the headlines and conversations to vector American domestic public support behind the President and his policy of involvement in a second world war.[95]

It is this ability to target the morale, or the will of a people, that allow special operations direct-action missions to successfully operate across the spectrum of conflict into areas where conventional attrition warfare strategies dare not tread. Of course special operations direct-action missions can be used to counter existential threats, as they were in World War II, but their use there does not infer their utility is maximized when used to target adversary capability. Just because an item is used regularly in a given way does not justify that this is the best way it should be used. Instead, special operations direct-action missions are most successfully employed when aimed at disrupting the will of an adversary and to bolster the morale of one's allies.

Operation NEPTUNE'S SPEAR, the UBL raid in Abbottabad, was executed for the same reason as the Doolittle raid: to strike at the morale of the enemy while bolstering resolve of domestic public support. There was no remaining existential threat to Americans at home. There had been no successful terror attacks on continental American soil since 9/11, and the Al Qaeda network responsible for 9/11 had largely been dismantled and minimized by the time the raid took place a decade later.

But terrorists around the world flocked to fight the Americans in Afghanistan and Iraq. They were inspired by the perspective that a single prince among them had foiled the imperialistic might of the technologically and resource advantaged Americans. UBL served to bolster their morale, and served as a beacon calling for those willing to fight to join comparable causes.

Furthermore, the UBL raid provided closure to the American populous for the wounds inflicted during the 9/11 attacks of 2001 and the subsequent global war against terrorist networks, for which UBL's Al Qaeda received credit for initiating.[96] The 9/11

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[95] Tucker and Lamb, 146.

[96] Bruce Hoffman corroborates the blame of 9/11 on UBL and examines the security posture of the United States in the context of a post 9/11 world in his journal article, "Rethinking Terrorism and Counterterrorism since 9/11," posted in *Studies in Conflict and Terrorism* in 2002. Bruce Hoffman, "Rethinking Terrorism and Counterterrorism since 9/11," *Studies in Conflict and Terrorism* 25, no. 5 (May 2002): 303–316, http://www.tandfonline.com/doi/abs/10.1080/105761002901223.

attacks announced an American reaction that came to be recognized as a global war against these terrorist networks, as described by Richard A Clarke in his 2008 book *Against All Enemies: Inside America's War on Terror*.[97] America's special mission units were directly pitted against the terrorist networks and enabling environments thought to be responsible for the terrorist attacks of 9/11. The war against terrorists included two decade-long wars in Iraq and Afghanistan: a cost of 8,289 American and coalition soldiers' lives; 1.3 million civilian casualties; and $1.778 trillion dollars.[98] These wars, along with the overarching war against terrorist networks, had dismantled the Al Qaeda network responsible for 9/11, but they retained no defined end-state or point of resolution.[99] Yet the American people were deeply invested with both blood and treasure in this global struggle, and they needed to understand what all of their sacrifices had been for. The dismantling of Al Qaeda had not satisfied their desire to seek vengeance upon UBL himself. The UBL raid provided the closure Americans needed so badly, but it did not counter an existential threat to the nation itself.

In McRaven's book, *SPEC OPS*, he asks of each case study, "*Were the objectives worth the risk*?"[100] Using his own rationale on the UBL raid, one would ask, "Was the UBL raid worth the risks involved?" The answer is a resounding "Yes." For all of the reasons described above, American morale demanded closure to the global conflict against those who had caused 9/11. The only real closure would be to directly confront and defeat the enemy who had brought this war against them. But disrupting the malignant network of Al Qaeda would be an unsatisfying venture. It did not provide the

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[97] Richard A. Clarke, *Against All Enemies: Inside America's War on Terror,* (n.p.: Simon and Schuster, 2008).

[98] Physicians for Social Responsibility, *Body Count: Casualty Figures after 10 Years of the "War on Terror"–Iraq, Afghanistan, Pakistan*, trans. Ali Fathollah-Nejad, Washington, DC, Berlin, and Ottawa: International Physicians for the Prevention of Nuclear War, 2015, http://www.psr.org/assets/pdfs/body-count.pdf; Lauren Carasik, "Americans Have Yet to Grasp the Horrific Magnitude of the 'War on Terror': New Report Documents Unspeakable Humanitarian and Political Toll," Al Jazeera, America, April 10, 2015, http://america.aljazeera.com/opinions/2015/4/americans-have-yet-to-grasp-the-horrific-magnitude-of-the-war-on-terror.html; Kimberly Amadeo, "War on Terror Facts, Costs and Timeline: Whose Wars Are More Expensive? Bush or Obama?" *Balance* (blog), October 9, 2016, https://www.thebalance.com/war-on-terror-facts-costs-timeline-3306300.

[99] Hoffman, "Rethinking Terrorism and Counterterrorism," 314.

[100] McRaven, *SPEC OPS*, 24, 56, 100, 143, 188, 230, 274, 319, 367.

necessary closure. UBL was the face and embodiment of this enemy and presented himself as an achievable goal. He represented a target that could be reached inside the demands of those who sought retribution. The mission was clearly justified, but it did not seek to dispose of a remaining existential threat to the America. It meant instead to dispose of an isolated man who had fallen from a position of power and influence, chased into hiding and isolation by those he had awakened with his actions.

4. What Are Special Operations?

In his model, McRaven defines a special operation as follows:

> ***Special Operation (McRaven)***:
>
> A special operation is conducted by forces specially trained, equipped, and supported for a specific target whose destruction, elimination, or rescue (in the case of hostages), is a political or military imperative.[101]

McRaven admits this definition is not in concert with the official definition, the current version of which is in JP 3-05, "*Special Operations*," which defines a special operation as:

> ***Special Operation (JP 3-05)***:
>
> Operations requiring unique modes of employment, tactical techniques, equipment and training often conducted in hostile, denied, or politically sensitive environments and characterized by one or more of the following: time sensitive, clandestine, low visibility, conducted with and/or through indigenous forces, requiring regional expertise, and/or a high degree of risk.[102]

McRaven's definition does not span the breadth of the official definition, which he addresses in the opening pages of his own book.[103]

JP 3-05 provides some clarification when it extrapolates on special operations:

> Special operations can be a single engagement, such as direct-action (DA) against a critical target; as a protracted operation or series of activities such as support to insurgent forces through unconventional warfare (UW)

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[101] McRaven, *SPEC OPS*, 2–3.

[102] Joint Chiefs of Staff, *Special Operations*, GL-11.

[103] McRaven, 2–3.

> or support to a [host nation] force through foreign internal defense … or security force assistance.[104]

JP 3-05 goes on to discuss the special operations core activities, where it states:

> The special operations core activities are: direct-action, special reconnaissance, countering weapons of mass destruction, counterterrorism, unconventional warfare (UW), foreign internal defense, security force assistance, hostage rescue and recovery, counterinsurgency, foreign humanitarian assistance, military information support operations, and civil affairs operations.[105]

When this list of SOF activities are combined with the previous definitions, it seems McRaven's use of the term special operations more closely aligns with direct-action as currently defined in JP 3-05. This can be verified by examining the JP 3-05 definition of direct-action:

> ***Direct-Action:***
>
> Direct-action entails short-duration strikes and other small-scale offensive actions conducted with specialized military capabilities to seize, destroy, capture, exploit, recover, or damage designated targets in hostile, denied, or diplomatically and/or politically sensitive environments.[106]

Given this scope, this work will confine its case studies to special operations direct-action missions as a means of examining the role of air mobility in attaining relative superiority and mission success.[107]

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104 Joint Chiefs of Staff, *Special Operations*, I-2.

105 Joint Chiefs of Staff, *Special Operations*, x.

106 Joint Chiefs of Staff, *Special Operations*, x.

107 Given this research's limited scope focusing on direct-action, it should be realized that modifications of these models may be required to achieve generalizability to other special operations core activities.

5. Significance of McRaven's Theory: Special Operations and Relative Superiority

McRaven's special operations theory confronts the conventional Clausewitz's assertion that troop numbers are decisive in battle by instead asserting that a smaller offensive force that achieves a decisive early advantage can overcome a larger defensive force by exploiting relative superiority.

McRaven seeks to provide an alternative to attrition warfare. McRaven theorizes that one need not utilize only quantity and attrition rates to achieve military objectives of strategic importance. Instead, McRaven derives from Clausewitz's many principles of war a mere six principles through which a smaller attacking force can be explained to have surmounted and overcome a larger defensive force. Instead of the nine principles the United States Army listed in 1993 or even the twelve JP 3-0 boils them down to today, McRaven uses only these six: "simplicity, security, repetition, surprise, speed, and purpose."[108] With these derived principles, McRaven defines a method of achieving military objectives that has been used since the times of the Trojan horse (as affirmed by Jon Latimer in his 2003 book, *Deception in War*), by Gideon of the Bible, and by Sun Tzu (as described in his foundational work, *The Art of War*): relative superiority (see Figure 8).[109]

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[108] In his introduction, McRaven states: "The six principles of special operations … were derived from an analysis of eight historical case studies.*" The asterisked note goes on to say:

> "Initially the cases were viewed in terms of the U.S. Army's principles of war as defined in the *Doctrine for Joint Special Operations*. After careful examination of these cases, some of the principles of war were eliminated or modified to more accurately reflect their relationship to a special operation. The army's principles include: objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, and simplicity." McRaven, *SPEC OPS,* 8.

Joint Chiefs of Staff, *Joint Operations*, A-1–A-4.

[109] Jon Latimer, *Deception in War: The Art of the Bluff, The Value of Deceit, and The Most Thrilling Episodes of Cunning in Military History, from the Trojan Horse to the Gulf War*, (n.p.: n.p., 2003), 6–36.

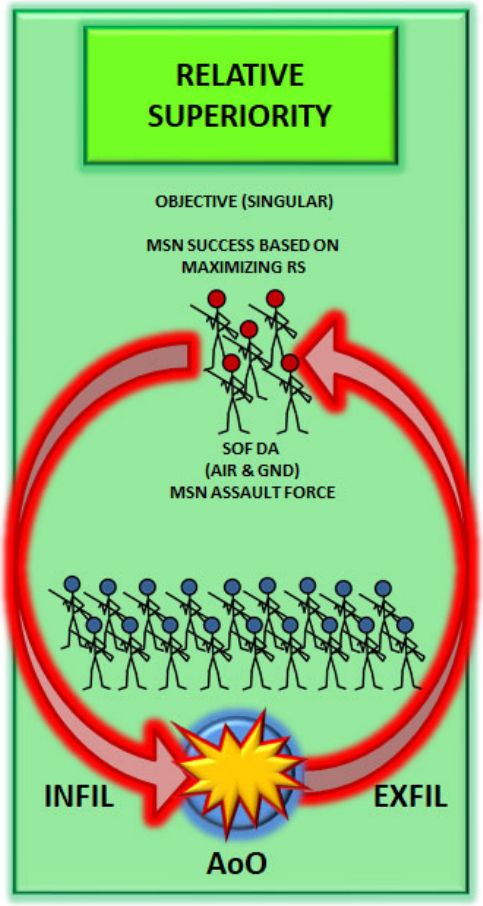

Figure 7. Relative Superiority (SOF) Warfare Model[110]

a. Relative Superiority and the Six Principles

Relative superiority exists when a smaller attacking force has the ability to execute a simple plan decisively, with violent speed and precision, to achieve a single objective against a surprised but larger defensive force. McRaven posits that relative superiority exists as an abstract concept that can be used as "a powerful tool to explain victory and defeat."[111] He defines is as follows:

110 Adapted from Clausewitz and Graham, *On War*; Joint Chiefs of Staff, *Joint Operations*, A-1–A-4; McRaven, *SPEC OPS*, 11.

111 McRaven, *SPEC OPS*, 25.

Relative Superiority:

> Relative superiority is a condition that exists when an attacking force, generally smaller, gains a decisive advantage over a larger or well-defended enemy.[112]

McRaven's theory acknowledges Clausewitz's assertion that the "defensive form of warfare is intrinsically stronger than the offense," and he recognizes troop sizes remain pertinent in conventional conflicts of attrition.[113] But McRaven believes relative superiority, a decisive advantage, can surmount the advantage differential normally obtained through size and defense.[114] McRaven uses case studies to demonstrate how a smaller attacking force can control six principles to achieve relative superiority over a larger defensive force: simplicity, security, repetition, surprise, speed, and purpose (see Figure 8).[115]

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[112] McRaven, *SPEC OPS*, 4.

[113] McRaven, 3–4.

[114] McRaven, 1, 3–8.

[115] McRaven, 8–11.

Figure 8. Principles of Relative Superiority[116]

McRaven posits that larger forces are more susceptible to the "negative effects of chance, uncertainty, and the enemy's will," collectively referred to as "the frictions of war."[117] McRaven hypothesizes that relative superiority, when attained and maintained, therefore favors a smaller attacking force, as opposed to the larger attacking forces favored in traditional attrition warfare. "Relative superiority favors small forces … Because of their size, it is difficult for large forces [to attain relative superiority].… At some point the span of command and control becomes too great for a large force to

116 Adapted from Clausewitz and Graham, *On War*; Joint Chiefs of Staff, *Joint Operations*, A-1–A-4; McRaven, *SPEC OPS*, 11.

117 McRaven, 9.

effectively blend the principles of special operations."[118] The point is made that relative superiority is best wielded by a smaller force, in contrast to traditional attrition warfare.

McRaven goes on to accurately observe operations as having three distinct phases: planning, preparation, and execution.[119] He distributes the six controlling principles across these phases to increase relative superiority of the attacking force. During the planning phase, a focus on simplicity is paramount.[120] Limiting objectives to only those vital for mission success is a standard he sets forth. Having only one primary target is ideal for increasing the likelihood that a SOF mission will succeed. This becomes a recurring theme throughout his case studies.[121] The preparation phase requires capitalization of security and repetition. This allows the timing and the method of the attack to remain secret while the plan and tactical prowess of the attacking force are refined.[122] Lastly, during the mission execution phase surprise, speed, and purpose must be present to take advantage of the defensive forces' lack of preparedness and to overcome the inevitable fog and friction of war (see Figure 9).[123]

> ***Fog and Frictions of War***:
>
> Unanticipated or inherent confusion, chaos, and challenges that complicate the achievement of tasks necessary to realize mission success.[124]

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[118] McRaven, *SPEC OPS*, 8.

[119] McRaven, 9–10.

[120] McRaven, 11–14.

[121] McRaven, 12.

[122] McRaven, 11, 14–16.

[123] McRaven, 11, 16–23.

[124] This term, as defined here, is designed to be comprehensive while limiting the variables that can be relegated to the fog and frictions of war.

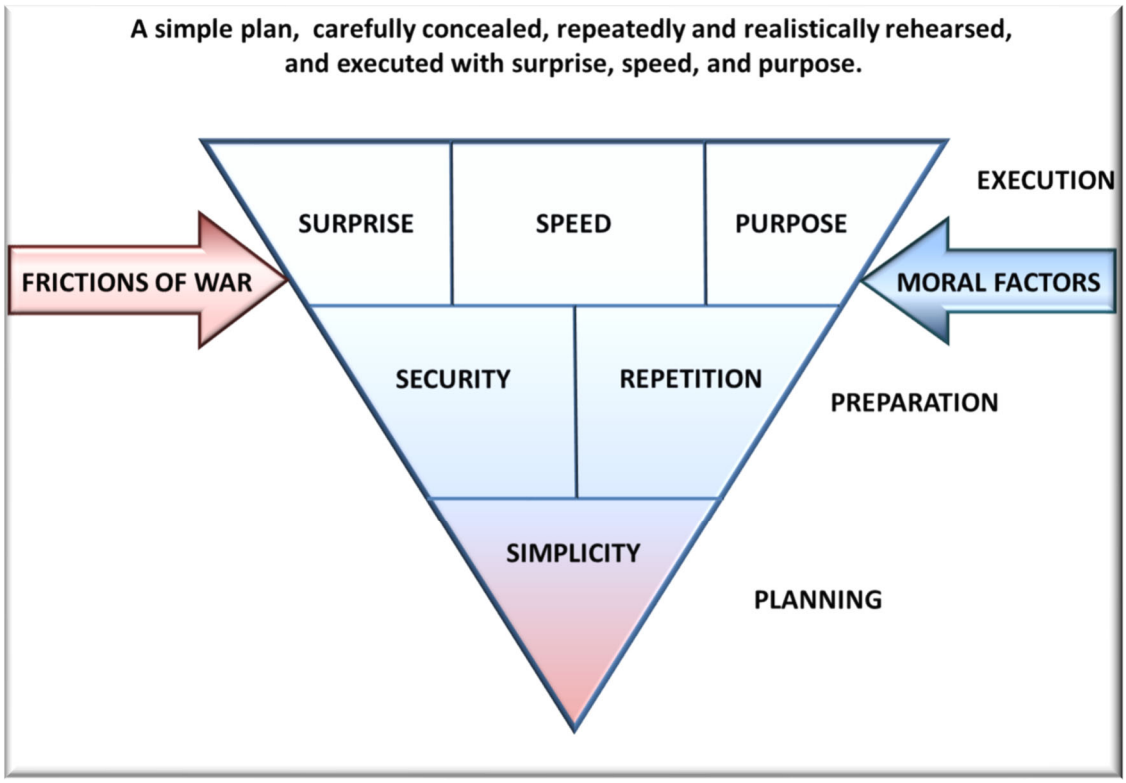

Figure 9. The Special Operations Model[125]

In order to achieve enough of an advantage to achieve relative superiority, McRaven focuses on the catalysts or moments contributing to the achievement of this advantage. He calls these moments of achievement pivotal moments.[126] He teaches that pivotal moments can come "before actual combat" but they usually occur early on in successful special operations.[127] It is the accomplishment of key events at decisive points that advantages the attacking force. These decisive moments must therefore be identified to portray the presence of relative superiority. This work will seek to portray these key events and the functional assault force contributors to them throughout the execution phase of special operations direct-action missions (see Figure 10).

[125] Adapted from McRaven, *SPEC OPS*, 11.

[126] McRaven, 4.

[127] McRaven, 4.

Obtaining relative superiority early and keeping it throughout the engagement is paramount to achieving the mission objective and thus mission success. Because of the size and inherent advantages of the defending conventional force, McRaven observes that, "If relative superiority is lost, it is difficult to regain."[128] It must therefore be attained early and maintained throughout the engagement to achieve mission success.

Once advantaged by relative superiority, it is the moral factors of the operators that help maintain relative superiority throughout the engagement.[129] McRaven does not distinguish between the functions of operators, but merely acknowledges that all operators in the assault force contribute to maintaining relative superiority. This work will seek to clarify granularity in this area.

Moral Factors:

> The ability to sustain relative superiority frequently requires the intervention of courage, intellect, boldness, and perseverance, or what Clausewitz calls the moral factors.[130]

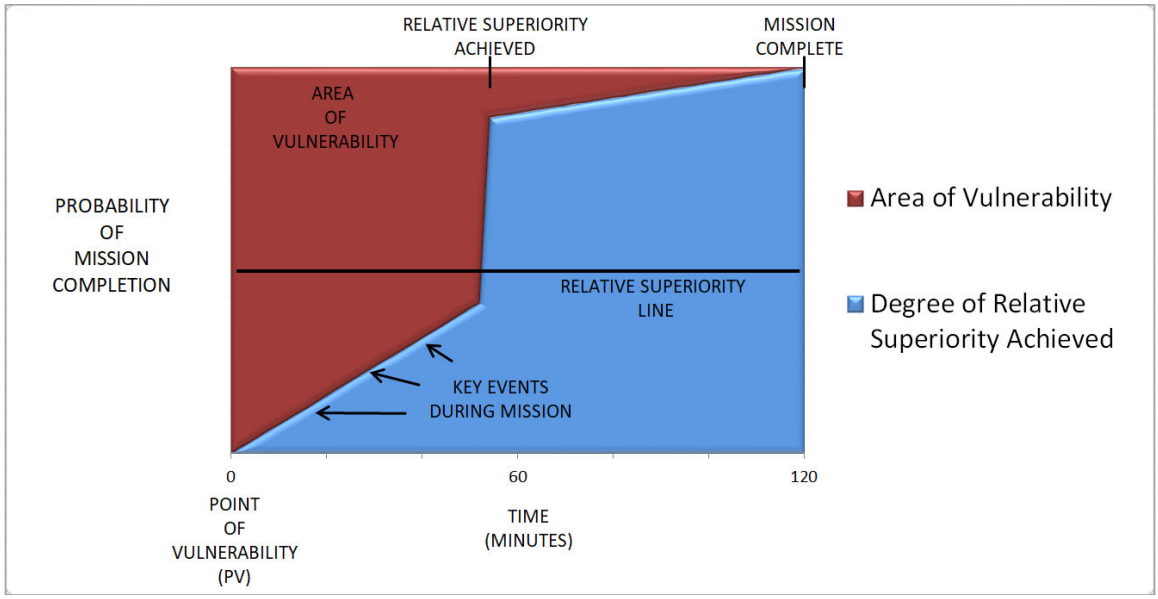

Figure 10. Sample of McRaven's Relative Superiority Graph[131]

[128] McRaven, *SPEC OPS*, 6.

[129] McRaven, 5.

[130] McRaven, 5.

According to McRaven, the point of vulnerability is where the "frictions of war (chance, uncertainty, and the will of the enemy) begin to impinge upon the success of the engagement."[132]

> ***Point of Vulnerability***:
> The point of vulnerability (PV) is when the assault force is first exposed to significant risks of detection, the environment, or battle.[133]

McRaven admits the point of vulnerability is an arbitrary point. To allow a more complete analysis of the components of an assault force and their contributions to relative superiority, this work will choose to define the point of vulnerability based on the beginning of mission execution, an event usually synonymous with the launch or departure of the mission assault force on the mission itself.[134]

McRaven explains that the point of vulnerability opens a window referred to as the area of vulnerability.[135] The area of vulnerability, he explains, is the period of time the mission assault force could be exposed to factors contributing to the direct disruption of the mission's success. The area of vulnerability is extended with the duration of the mission. It is expanded as a function of time. Longer missions therefore increase changes for mission failure.[136]

> ***Area of Vulnerability***:
> The time period during mission execution when the mission assault force is exposed to credible threats, to include environmental and adversarial threats, which portend to disrupt the achievement of mission success.[137]

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131 Adapted from McRaven, *SPEC OPS,* 7.

132 McRaven, 7.

133 This definition is modified from the original definition provided by McRaven. McRaven, 7.

134 McRaven, 7.

135 McRaven, *SPEC OPS,* 7–8.

136 McRaven, 8.

137 This definition is modified from the original definition provided by McRaven. McRaven, 8.

6. Attrition Warfare versus Relative Superiority

What has been covered in this section thus far, as a foundational building up to the assault airlift model, can be surmised for comparison and contrast fairly succinctly.

Traditional conventional warfare is based on attrition warfare. It is best employed against existential threats. It seeks to attain or protect multiple objectives. Attrition warfare targets ability over will. Quantity of troops and attrition rates are the enabling principles driving to surmount the ability of an enemy to fight. Eventually, when the cost becomes high enough, one side or the other will become unwilling or unable to fight. Attrition warfare strategy is predominantly designed with an emphasis on breaking the latter: the enemy's ability to wage warfare (see Figure 11).

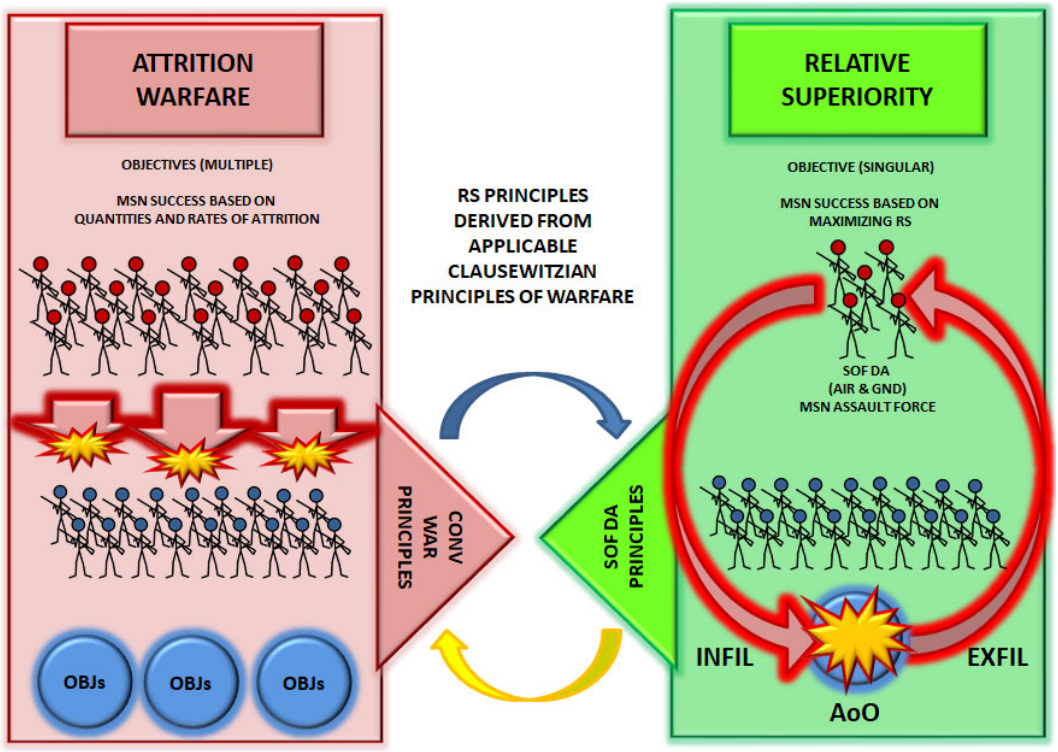

Figure 11. Concept of Attrition Warfare versus Relative Superiority[138]

138 Adapted from Clausewitz, *On War [Vom Kriege]*; Joint Chiefs of Staff, *Joint Operations*, A-1–A-4; McRaven, *SPEC OPS*, 11.

Special operations, on the other hand, target primarily the will of a given audience, as opposed to their ability.[139] Special operations direct-action missions rely upon a smaller attacking force to wield relative superiority to overcome a larger and inherently advantaged defending force. The goal is best limited to a singular objective. They can be used across the spectrum of conflict, but are most effectively utilized against non-existential threats. Losses in this region are less acceptable, demanding a "two-way mission" to achieve mission success.

Leadership would be wise to note the following warning: As long as an integrated mission assault force can maintain relative superiority, it can operate using the special operations strategy. However, if the smaller attacking force loses relative superiority, the conflict reverts back to attrition warfare and all of the principles of the stronger defensive force can be brought to bear against the smaller attacking force. McRaven concurs, "An inherent weakness in special forces is their lack of firepower relative to a large conventional force. Consequently, when they lose relative superiority, they lose the initiative, and the stronger form of warfare generally prevails," (see Figure 12).[140]

Figure 12. Relative Superiority Reversion Warning[141]

[139] In the case of nemesis zealots (enemies who cannot be convinced to subside in their adversarial actions), it is conceivable that "will" may only be broken through termination. But the termination of an enemy in this case is still a secondary repercussion of the main target, which remains their "will." Termination of a zealot eliminates both the will of the zealot as well as diminishing the will of potential future enemy actors (the undecided "marginal man" as described by Herz). Herz, "Some Psychological Lessons from Leaflet Propaganda in World War II," 471–486.

[140] McRaven, *SPEC OPS,* 6.

[141] Adapted from McRaven, 4–8.

JP 3-05 directly acknowledges this fact when it bluntly states, "SOF are not structured for attrition warfare."[142] This point is driven home when one examines the consequences of a smaller force that loses relative superiority while behind enemy lines: The Italian manned torpedo divers who were captured after their attack against the British ships anchored at Alexandria; the "failed attempt to land … commandos at the Old Mole and Old Entrance" during the British raid at Saint-Nazaire, resulting in significant casualties[143]; and even the Battle for Takur Ghar, where a naval sea, air, and land (SEAL) team and their would-be rescuing Quick Reaction Force were shot down and pinned down in an enemy kill-box, resulting in a terrible bloodbath (see Figure 13 and Figure 14).[144]

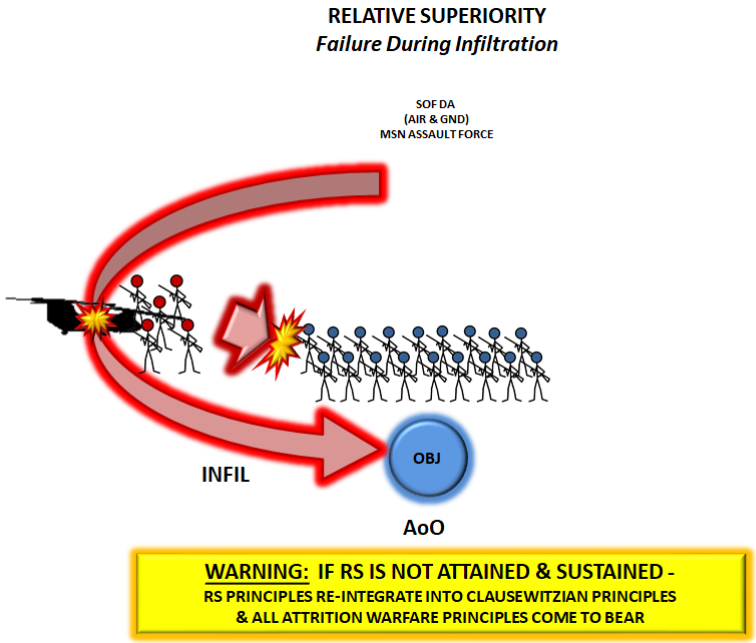

Figure 13. Loss of Relative Superiority on Infiltration Resulting in Reversion to Attrition Warfare and Possible Mission Failure[145]

142 Joint Chiefs of Staff, *Special Operations*, I-8.

143 McRaven, 73–114, 115–161.

144 Sean Naylor, *Not a Good Day to Die: The Untold Story of Operation ANACONDA* (New York: Berkley Books, 2005).

145 Adapted from McRaven, *SPEC OPS,* 4–8; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016.

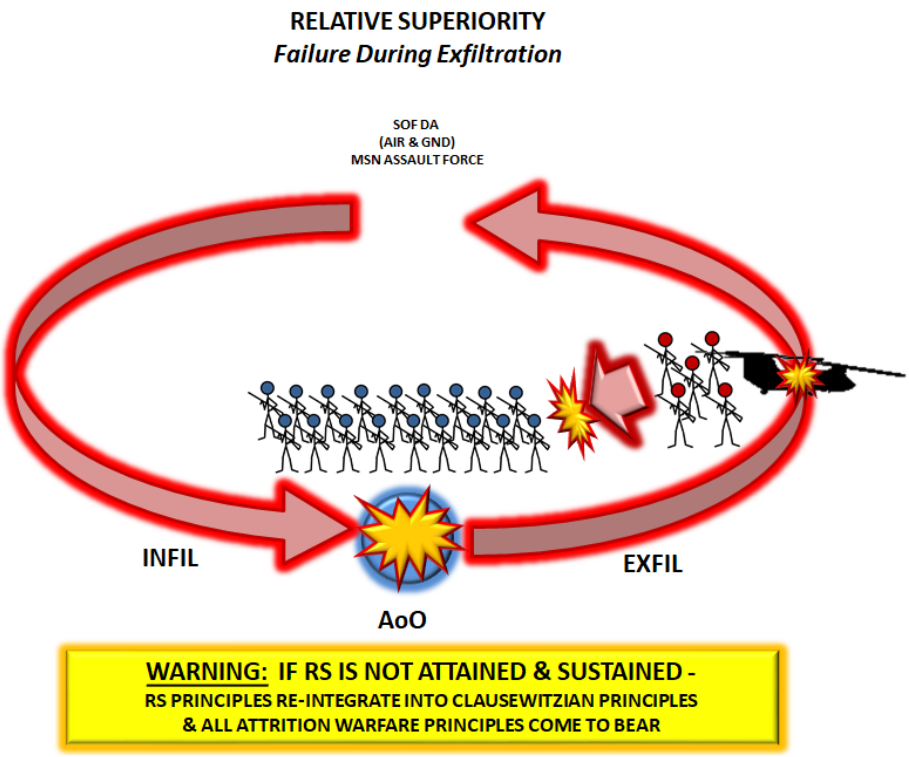

Figure 14. Loss of Relative Superiority on Exfiltration Resulting in Reversion to Attrition Warfare and Possible Mission Failure[146]

Of course, in practice, failure to achieve adequate relative superiority can be augmented by utilization of the support of more heavily armed conventional forces. Conventional or more heavily armed SOF can be brought to the aid of an attacking direct-action assault force to make up for the lack of relative superiority throughout a degenerating engagement. This concept was integrated into several well-known and studied operations: the German rescue of Mussolini in 1943[147]; the battle of Takur Ghar

146 Adapted from McRaven, *SPEC OPS,* 4–8; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016.

147 The Mussolini rescue (163–200) utilized a conventional parachute battalion from Rome to maintain relative superiority long enough to enact a tertiary exfiltration plan (180, 183, and 185). McRaven, 163–200, 180, 183, 185.

in 2002[148]; and even the Yemen raid of 2017.[149] In these cases, the survival of the SOF mission force was jeopardized by the lack of sufficient relative superiority.

Instead, their survival became contingent upon the performance of conventional assets reliant upon attrition warfare principles. In these cases, the conventional assets were not used in a deception or distraction role, as is often the case in successful special operations direct-action missions. Instead, such instances rely upon a reinforcing mechanism that draws upon the principles of attrition warfare to achieve survival of the SOF mission force.

While this method of augmenting insufficient relative superiority with conventional might is functional and may be advisable under certain circumstances, it should rarely, if ever, be instituted as a primary plan. A primary plan should include an inherent means of extraction for the assault force. Alternative, contingency, and emergency plans are advisable and necessary, but the primary plan should include all elements necessary to achieve mission success.

7. Defining Principles of Relative Superiority

McRaven and official doctrine have provided many adequate definitions, as already discussed above. Several other terms are required to be refined for this study. McRaven does a magnificent job of detailing his principles in his own work, so examples will not be provided here. Instead, the heart of his work will be reiterated to provide a

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[148] This is not in reference to the Quick Reaction Forces that were brought to the aid of the SEAL team at Takur Ghar. It is instead a reference to the conventional force brought in to secure Takur Ghar several days after the SOF effort failed. However, both serve to illustrate the point. Both represent a more heavily armed conventional asset brought in to bolster attrition warfare principles in the absence of relative superiority. These operations are described in the National Geographic documentary posted by Kyla Hammer to YouTube entitled, "Al Qaeda Ambush Battle of Takur Ghar full documentary HD National Gepgraphic [sic] 2015." Naylor, *Not a Good Day to Die*; "Al Qaeda Ambush Battle of Takur Ghar full documentary HD National Gepgraphic [sic] 2015," YouTube, 47:31, National Geographic documentary, posted by Kyla Hammer, July 14, 2015, https://www.youtube.com/watch?v=0SkbjZ2weis

[149] Many details of the Yemen raid remain uncovered at the time of this writing. Suffice it to say that a SOF operator was killed during an apparent data intelligence gathering mission. Thomas Gibbons-Neff and Missy Ryan provide their account of the raid and the strategic consequences of the loss of the operator in their article, "In Deadly Yemen Raid, a Lesson for Trump's National Security Team." Thomas Gibbons-Neff and Missy Ryan, "In Deadly Yemen Raid, a Lesson for Trump's National Security Team," *Washington Post*, January 31, 2017, https://www.washingtonpost.com/news/checkpoint/wp/2017/01/31/how-trumps-first-counter-terror-operation-in-yemen-turned-into-chaos/?utm_term=.f2ae74bbca9c.

foundation upon which this work will build. Official doctrine, specifically the JP series, provides a reference of where the United States military views these concepts today. These concepts have been heavily influenced by the organizations which define them, but it is still important to see how they are viewed by those who are most likely to employ them. Combined, these sources contribute the following valuable definitions:

> ***Simplicity***:
>
> There are three elements of simplicity critical to success: limiting the number of objectives, good intelligence, and innovation…. It is essential to limit the number of tactical objectives to only those that are vital…. Good intelligence simplifies a plan by reducing the unknown factors and the number of variables that must be considered…. Innovation simplifies a plan by helping to avoid or eliminate obstacles that would otherwise compromise surprise and/or complicate the rapid execution of the mission. Innovation is normally manifested in new technology, but it is also the application of unconventional tactics.[150]

> ***Speed***:
>
> Speed in a special operation [direct-action mission] is a function of time…. Relative superiority can be gained, despite the efforts of the enemy, primarily because the attacking force moves with such speed that the enemy's reaction is not an overriding factor.... Speed becomes essential when the attacker begins to lose relative superiority.[151]

Speed is simply getting "to your objective as fast as possible," spending the least amount of time possible actioning the objective, and in the case of a two-way missions it also includes getting the assault mission force back out as expeditiously as possible.[152]

> ***Surprise***:
>
> In a special operation surprise is gained through deception, timing, and taking advantage of the enemy's vulnerabilities.... Deception, when it works, either directs the enemy's attention away from the attacking force, or delays his response long enough for surprise to be gained at the crucial moment.... In special operations the enemy will be prepared; the question is, when will he be least prepared and what time of day most benefits the

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150 McRaven, *SPEC OPS,* 11, 12, 13.

151 McRaven, 21, 111.

152 McRaven, 19.

> attacking force?... Every defense has a weak point. Gaining surprise means exploiting this weakness.[153]

Assault airlift faces the operational challenge of visual, acoustic, and radar concealment, and these issues must be addressed during mission planning, preparation and execution.

> Many tacticians consider the principle of surprise to be the most important factor in a successful [direct-action] special operation. They mistakenly believe that it is surprise that gives them the decisive advantage over the enemy, as if merely catching the enemy unprepared would assure the attacking force of victory. This is not the case. Surprise is useless and indeed unachievable without the other principles. What good would it do to surprise the enemy, only to be ill equipped to fight him? Relative superiority is gained only through the correct application of all the principles. Surprise is essential, but it should not be viewed in isolation. It is only valuable as part of the complete pyramid of principles.[154]

Lee Richards addresses the criticality of surprise and mobility's direct role in its achievement in his 2005 document, "Political Warfare Executive: Meaning, Techniques, and Methods of Political Warfare," which can be accessed via the British National Archives. In it, he said the following regarding the element of surprise:

> In military operations, the element of surprise … is psychological warfare translated into field-tactics.… Surprise is achieved by artifice and stratagem; by secrecy and rapidity of preparation; by mystifying and misleading the enemy as to the objective…; **by daring to do what is difficult and therefore unexpected**; **by mobility**; and **by sudden use of new weapons or new methods of using existing weapons**…. "Surprise" might be summed up as "If three courses are open to you, take the fourth," [emphasis added throughout].[155]

McRaven also provides the following three principles which will be discussed less in this work: security, repetition, and purpose. Each of these principles is just as critical as ever to the successful employment of a SOF direct-action assault force. However, there are no tangible differences between their contributions as they apply to the operationalization of assault airlift as opposed to any other portion of a special operations direct-action mission

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153 McRaven, *SPEC OPS,* 17, 18.

154 McRaven, 19.

155 Richards, "Political Warfare Executive."

force. Nonetheless, they remain prerequisites for achieving relative superiority and their definitions are provided here for clarity when they are referenced in the evidences to follow:

> ***Security***:
>
> The purpose of tight security is to prevent the enemy from gaining an advantage through foreknowledge of the impending attack. However, the nature of special operations is to attack a fortified position. It naturally follows that, whether in war or peace, the enemy is prepared for an attack. Therefore, it is not so much the impending mission that must be concealed as the timing and, to a lesser degree, the means of insertion.[156]

With McRaven's guiding words, it becomes apparent that security is just as important to assault airlift as it is to any other portion of the military. Lack of operational security can compromise even the most carefully planned operations, and the inclusion of assault airlift does not provide any mitigating factors to inherently increase the security if a given operation.

> ***Repetition***:
>
> [Repetition eliminates potential] barriers to success.…[157] Repetition hones individual and unit skills, while full-dress rehearsals unmask weaknesses in the plan.[158]

Assault airlift requires adequate repetitions as much as any other military apparatus. The skills of the crews require refinement, the equipment requires verification of reliability in realistic operating environments, and the integration between the ground units and the air assets ensures potential "barriers to success" are identified early enough that they can be addressed.[159] Repetitions, and especially full-dress rehearsals, are absolutely critical to achieving adequate assault airlift. It is simply too much to assume that integration could otherwise manifest itself in the middle of the night on foreign soil and behind enemy lines between assets who have not experienced similar situations previously in training together, as the Desert One tragedy demonstrated. The middle of

156 McRaven, *SPEC OPS,* 15.

157 McRaven, 15.

158 McRaven, 16.

159 McRaven, 15.

the night behind enemy lines is one hell of a place to find out that additional equipment is required, that the environment is not suitable, or that the loading of a ground assault team vehicle will require lock-down chains that are not presently available. Nor is it the time and place to learn how to fly as low and fast as possible without hitting the ground using radar as one's guide.

No, assault airlift absolutely requires repetitions and full-dress rehearsals to reach enough maturity that it can augment the achievement of relative superiority. However, as McRaven points out, this is true of the ground assault force as well. This prerequisite to success is not unique to assault airlift, nor is it something specifically augmented by assault airlift. Rehearsals must be addressed to achieve relative superiority, but the presence of assault airlift in an operation does not somehow magically provide more realistic rehearsals. Realistic rehearsals must be achieved with or without assault airlift, and the presence of assault airlift in a SOF direct-action mission plan does not augment the assault force's ability to rehearse the mission.

> ***Purpose***:
>
> Purpose is understanding and then executing the prime objective of the mission regardless of emerging obstacles or opportunities.… The purpose of the mission must be thoroughly understood beforehand, and the men must be inspired with a sense of personal dedication that knows no limitations.[160]

Understanding a commander's intent is imperative for a force that may be geographically isolated and yet expected to press a mission without persistent guidance. The point to be made is that there is just as much an imperative to instill a sense of purpose into air commandos as there is for ground assault force operators. Examples such as the 1970 Son Tay raid, the 1945 Ranger raid on Cabanatuan, and the 1942 British raid on Saint-Nazaire demonstrate that it is even important to relay a sense of purpose to conventional assets requisitioned to support SOF direct-action missions.[161] But assault

[160] McRaven, *SPEC OPS,* 21–23.

[161] McRaven, *SPEC OPS,* 158, 265, 287–331.

airlift is not unique in its need for fortitude through purpose. All participants in an operation must have a strong sense of purpose.[162]

A lack of purpose can clearly lead to disintegration of a mission assault force's ability to achieve relative superiority. A lack of a sense of purpose within the air components of Operation EAGLE CLAW was one of the concern's the ground force commander, Colonel Charles Beckwith, expressed.[163] And his concerns may have well been founded on legitimate experiences from the Vietnam War and the lack of organizational support the air components received as they were constructed for the insertion and extraction of his newly formed Delta Force. Richard Whittle elaborated in his fascinating 2010 book, *The Dream Machine: The Untold History of the Notorious V-22 Osprey,* on the frictions Beckwith had with vertical lift assets, born from experiences in the Vietnam War.[164] Regardless of whether Beckwith's concerns were accurate, they were legitimate. Purpose is as much a prerequisite for adequate assault airlift as it is for any other component of the mission force seeking to achieve relative superiority.

8. What Assault Airlift Is … and What it Is Not

***What Assault Airlift Is Not*:** Now that the principles of relative superiority have been sufficiently addressed and a vocabulary established, attention can be turned the definition of the asset at hand: assault airlift. The first point will be the most difficult to grasp for many, but it is also the most important.

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[162] McRaven said of the Saint-Nazaire raid:

> "Where a sense of purpose was not instilled, the plan failed. The pilots, who for security reasons had not been advised of the plan, never developed a sense of purpose for the mission.… Had the Royal Air Force been informed about the raid and understood the need for air cover, there is no doubt that they would have gone to any lengths to support the commandos." McRaven, 158.

[163] Bowden, "The Desert One Debacle."

[164] Richard Whittle, *The Dream Machine: The Untold History of the Notorious V-22 Osprey* (New York, London, Toronto, and Sydney: Simon and Schuster, 2010), 59–69.

Assault airlift is not just having aircraft.[165] Let that sink in. ***Assault airlift is not just having aircraft.*** Assault airlift is not having airplanes and helicopters. It is not having aircraft or aircrews. It is not a concrete thing that you can hold in your hand. As Naval Postgraduate School Senior Lecturer Dr. Siamak Naficy is fond of saying about the concept of "culture," "It isn't something you can dig out of the ground a hundred years from now and say, 'Oh, look. Here it is.'"[166] Like culture, assault airlift is not a specific object or activity. It is not merely the transportation of military assets by air (see Figure 15).

Figure 15. "Having Aircraft" Is Not the Same as "Having Assault Airlift"[167]

Assault airlift is not the equivalent of going down to an airline ticket counter and ordering a commercial airline ticket to go from San Francisco to Denver. It is not the same as a soldier getting onto a military C-17 Globemaster to be transported from Ramstein, Germany to Bagram Air Base, Afghanistan. It is not merely being transported by air when and where a ground assault force requires movement. It is not even the ability to land under hostile fire to extract ground forces, but it is encompassing of many of these individual elements synergistically intertwined. These isolated activities fall far short of the requirements levied against tactical assault airlift. Tactical assault airlift is a unique subset of air mobility designed to attain and sustain relative superiority for an assault mission force that will need that relative superiority to survive behind enemy

[165] Dr. Hammond was the first to explicitly make this observation that having aircraft is not the same as having the abilities associated with assault airlift. Dr. Jesse Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

[166] Siamak Naficy, "The Anthropology of Conflict," (Lecture, Naval Postgraduate School, Monterey, CA, July 11, 2016).

[167] Adapted from Dr. Jesse Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

lines. Simply having planes and helicopters does not equate to having air mobility. This point cannot be stressed severely enough.

Failing to recognize the conceptual difference between the possession of an object and the abilities associated with its full exploitation is as faulty as assuming that the presence of a badge and a gun are the equivalent of law enforcement. Of themselves, the badge and the gun are just things. It is their methods and modes of employment that help them become the intangible asset known as law enforcement. It is the attitude, focus, perseverance, and dedication of the operator that ensure these objects achieve their intended purpose. It is their synergized integration with the officer, the command center, the communications net, and governmental supportive infrastructure that empower them.

Failing to recognize that planes themselves (or helicopters) do not equate to achievement of assault airlift can lead one to fall into the logical fallacy of blaming transportation problems on the involved air assault portion of the special operations direct-action mission force instead of on the inadequate synchronization and integration of those assets, as is principally the case. Such judgments are made hastily if they are made without understanding this difference.

***What Assault Airlift Is*:** Assault airlift, like relative superiority, is an abstract concept, not a tangible item or piece of equipment. Within the conversation of special operations direct-action, assault airlift is the synchronized employment of air assets in the pursuit of relative superiority for a SOF direct-action mission force.

JP 3-17, *Air Mobility Operations,* provides overarching broad doctrinal structure covering the movement of military assets via air, but it falls far short of identifying, defining, or codifying best practices with regard to assault airlift.[168] It does serve to confirm that assault airlift, as a tactical enabler of relative superiority, is not merely the global reach of transportation provided by air mobility:

168 Joint Chiefs of Staff, *Air Mobility Operations*, JP 3-17, (Joint Chiefs of Staff, 2013), 9, http://www.dtic.mil/doctrine/new_pubs/jp3_17.pdf

Air Mobility (JP 1-02):

> The rapid movement of personnel, materiel and forces to and from or within a theater by air. See also air refueling. (JP 3-17).[169]

Clearly air mobility has a broader scope than assault airlift. A C-17 pilot need not invest in a relationship with the passengers transported in the back of his or her aircraft. Such an intimate relationship is not required for the accomplishment of the mission. But the same cannot be said of assault airlift. The reference to air refueling is noted in the definition above, but the definition of air refueling is expectedly unsatisfying, as it, like air mobility, only describes a single aspect of the ability assault airlift represents:

Air Refueling (JP 1-02):

> The refueling of an aircraft in flight by another aircraft. Also called AR. (JP 3-17).[170]

Perhaps JP 3-17's definition of airlift comes closer to the mark more appropriate:

Airlift (JP 3-17):

> Airlift operations transport and deliver forces and materiel through the air in support of strategic, operational, and/or tactical objectives. Airlift offers its customers a high degree of speed, range, and flexibility. Airlift enables commanders to respond and operate in a wide variety of circumstances and time frames that would be impractical through other modes of transportation.[171]

This is closer still, but here it is shown that the concept of airlift is generally focused at a more extensive level, fixated on inter and intra theater movements of conventional forces, again with a focus on insertion above extraction. Airlift could be logistical movements in support of a conventional effort, never venturing behind enemy lines. The risks encountered, level of synchronization required, and integration with ground elements is far from being codified here. The concept of ensuring the

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169 Joint Chiefs of Staff, *Department of Defense Dictionary of Military and Associated Terms*, JP 1-02, (Joint Chiefs of Staff, November 08, 2010 (As Amended Through February 15, 2016)), 7, https://fas.org/irp/doddir/dod/jp1_02.pdf

170 Joint Chiefs of Staff, *Department of Defense Dictionary,* 9.

171 Joint Chiefs of Staff, *Air Mobility Operations*, IV-1.

survivability of a special operations direct-action mission force through extraction is not addressed.

No official definition of assault airlift exists in the JP series, a testament to its oversight as a contributor to the achievement of relative superiority, survivability of the mission force, and achievement of overall mission success. Its closes counterpart is airlift support to SOF, referenced in JP 3-17, *Air Mobility Operations:*

> ***Special Operations Support (JP 3-17)***:
>
> Specified airlift forces provide unique airland and airdrop support to SOF. Since there are a limited number of airlift assets dedicated to this mission, the principle of economy of force is particularly applicable. When performing special operations missions, highly trained airlift and AR crews normally act as an integral member of a larger joint package. Because these airlift missions routinely operate under adverse conditions in a hostile environment, extensive planning, coordination, and training are required to enhance mission success. Airlift and AR used in a special operations role provides commanders the capability to achieve specific campaign objectives, which may not be attainable through more conventional airlift practices.[172]

This is as close as any official definition has yet come. It acknowledges the importance of a SOF specific joint and integrated airlift. However, as a definition it is maladroitly constructed and hints at the conventionalist roots it springs from. It acknowledges the existence of assault airlift without understanding what it is. By its own admission it relegates those providing this product to a subordinate supporting role to any mission assault force. It does not recognize the synergistic integration required to achieve adequate assault airlift for direct-action. The necessity therefore exists to refine these doctrinal definitions to develop one appropriate to the concept at hand:

172 Joint Chiefs of Staff, *Air Mobility Operations*, IV–7.

Assault Airlift:

The synchronized integration of air assets into a SOF direct-action mission assault force utilizing relative superiority to achieve mission success through clandestinely penetration of denied or politically sensitive domains for rapid and precise infiltration and exfiltration.[173]

To refine understanding of assault airlift as a conceptual ability in the SOF domain as opposed to a more readily apparent conventional mindset, one can consider

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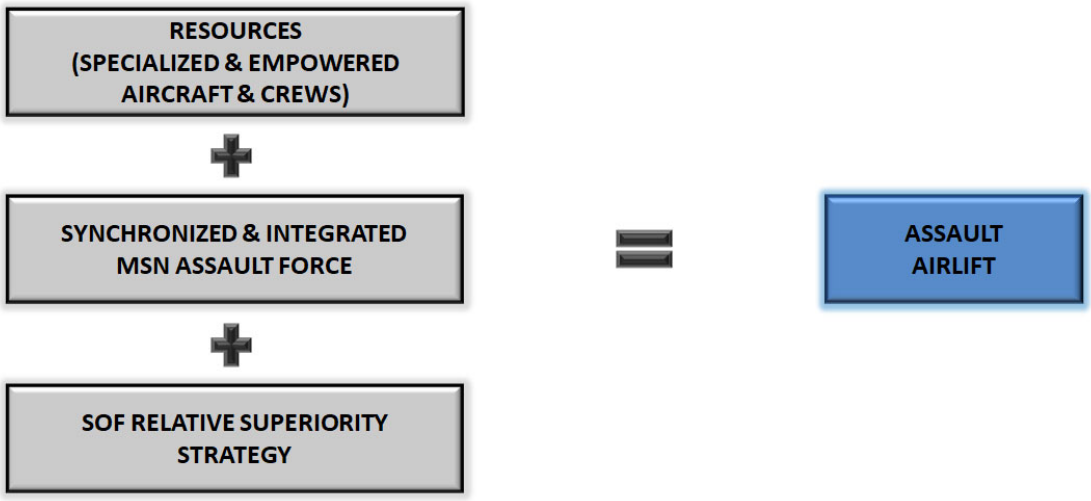
[173] This definition was constructed, in part, from the mission statements of the operational units who are most closely associated with assault airlift: Those of the 160th Special Operations Aviation Regiment (160th SOAR) and Air Force Special Operations Command (to include the 1st Special Operations Wing (1st SOW), the 27th SOW, the 352d SOW, and their subordinate units). Some of those mission statements are included here as a reference. Unit names are followed by their parent unit when applicable, then by their current assault airframes. The aircraft listed only represent the assault aircraft employed and are not all encompassing of the strike, reconnaissance, and unmanned aerial vehicles the Air Force Special Operations Wings employ: 160th SOAR (MH-47 Chinooks, MH-60 Black Hawks, and AH-6 Little Bird helicopters): "*The 160th Special Operations Aviation Regiment's mission is to organize, equip, train, resource and employ Army special operations aviation forces worldwide in support of contingency missions and combatant commanders*." 352d SOW (MC-130 Commando II and CV-22 Osprey): *"The 352d Special Operations Wing conducts infiltration, exfiltration, and resupply of Special Operations Forces in denied territory under night, adverse weather conditions in support of: counter-terrorism operations, direct-action, special reconnaissance, counter-proliferation, unconventional warfare, military information support operations, and personnel recovery,"* as written and directed by then Colonel William G. Holt, II, commander 352d SOW. 7th Special Operations Squadron (7th SOS), 352d SOW (CV-22 Osprey): *"The 7th Special Operations Squadron will conduct infiltration, exfiltration, and resupply of Special Operations Forces in hostile, denied or politically sensitive territory, at night and in adverse weather,"* as written and directed by then Lt Col Roy H. Oberhaus, commander 7th SOS. 9th SOS, 27th SOW (MC-130 Commando II): *"Commando II aircrews will plan, prepare, and execute missions to directly support special operations commanders through night low level infiltration/exfiltration, helicopter/tilt-rotor aerial refueling, and aerial delivery resupply of clandestine special operation forces."* 15th SOS, 1st SOW (MC-130 Combat Talon II): "*Specially modified to support unconventional warfare and special operations forces worldwide, the Combat Talon II is capable of penetrating a hostile environment at low altitudes and in inclement weather…. The mission of the aircraft involves a global, day and night, adverse weather capability to insert, extract and resupply special operations forces by low or high altitude airdrop or airland operations."* 20th SOS, 27th SOW (CV-22 Osprey): *"The primary mission of the 20 SOS is to conduct low-level penetration of hostile enemy territory to accomplish infiltration, exfiltration and resupply of special operations forces throughout the world."*

"U.S. Army Special Operations Command, 160th Special Operations Aviation Regiment (Airborne)," U.S. Army Special Operations Aviation Command (USASOAC), accessed July 21, 2017, http://www.soc.mil/USASOAC/160th.html; Hurlburt Field, Public Affairs Office, "8th Special Operations Squadron," 1 SOW, Hurlburt Field, March 28, 2017, http://www.hurlburt.af.mil/About-Us/Fact-Sheets/Fact-Sheets/Article/204532/8th-special-operations-squadron/; Hurlburt Field, Public Affairs Office, "15th Special Operations Squadron," 1 SOW, Hurlburt Field, 2017, accessed July 21, 2017, http://www.hurlburt.af.mil/About-Us/Fact-Sheets/Fact-Sheets/Article/204537/15th-special-operations-squadron/; Capt. Larry van der Oord, "20 SOS Green Hornets–When Only the Best Will Do," 27th Special Operations Wing, Public Affairs, May 11, 2012, http://www.afsoc.af.mil/News/Features/Display/Article/163740/20-sos-green-hornets-when-only-the-best-will-do/; U.S. Air Force, "9th Special Operations Squadron–U.S. Air Force Fact Sheet," USAF, 2017, accessed July 21, 2017, http://www.cannon.af.mil/Portals/85/documents/9th%20SOS%20Factsheet.pdf?ver=2016-05-05-114236-577; "352d Special Operations Wing-About Us," 352d Special Operations Wing, accessed December 04, 2016, http://www.352sow.af.mil/About-Us/Mission-Vision-and-Priorities/; 7th Special Operations Wing, 352d Special Operations Wing, RAF Mildenhall, 2016.

past operations. There are plenty of historical cases where one could easily suppose air mobility was present simply because the assault force had vertical lift or fixed-wing assets at their disposal: Operation EAGLE CLAW, Cabanatuan, or Operation ANACONDA. But the presence of air assets does not itself constitute assault airlift. None of these operations attained assault airlift to any meaningful degree.

Assault airlift is the culminating effect of combining specialized and authoritatively empowered air assets into a mission assault force wielding relative superiority as its military strategy to achieve mission success. Assault airlift is the result of synchronized organizations equipped, manned, and trained in the art of relative superiority. Assault airlift is the ability to clandestinely penetrate denied or politically sensitive airspace to precisely deliver or retrieve the mission assault force (see Figure 16).



Assault Airlift is the culminating effect of combining specialized and authoritatively empowered air assets into a mission assault force wielding relative superiority as its military strategy to achieve mission success.

Figure 16. Assault Airlift[174]

174 Adapted from Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

9. What Can Assault Airlift Do?

Assault airlift enables the simplicity, speed, and surprise necessary to successfully conduct special operations direct-action missions and makes feasible the expectation of the "two-way mission" as a standard mission model in special operations direct-action missions.[175] This is an increasingly relevant aspect to consider when relating McRaven's model to current and future direct-action raid missions which exist in the contextual landscape of today's narrative driven environment, where failures of special operations can have increasingly negative strategic impacts.[176]

Assault airlift can contribute to a higher degree of special operations direct-action mission success, independent of the achievement of the mission objectives, by bolstering the likelihood that SOF mission forces can return home safely. In today's highly charged casualty-sensitive political environment even if everything goes to hell, if you can get your forces in and back out safely again, tactical and strategic mission success can be achieved.[177]

America's domestic social and political sensitivity to casualties continues to rise, as evidenced in the news regarding the Yemen raid of early 2017.[178] Likewise, President Obama acknowledged that the ability to safely extract the assault force was a primary consideration in the "go-ahead" for the Usama bin Laden raid, as reported by Bergen.[179] Other case studies bear the same result. Yet our current theory of special operations primarily focuses on successfully executing actions-on-the-objective and falls short of

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[175] As opposed to a "one-way mission," a "two-way mission" implies the attacking force will be extracted instead of captured or killed. According to McRaven, one-way special operations missions "have their drawbacks for the individual operators, but from a mission accomplishment standpoint they improve the possibility of success by reducing the extraction variables." McRaven, *SPEC OPS,* 106.

[176] Chua Lu Fong and L. T. A. Chua, "Operation EAGLE CLAW, 1980: A Case Study in Crisis Management and Military Planning," *Journal of The Singapore Armed Forces* 28 (n.d. 2002): n.d., https://masterkan.wordpress.com/2014/06/15/operation-eagle-claw-1980-years-ago-col-beckwith-nd-i-exchanged-emails/.

[177] It is possible that overall mission success can be achieved even if the primary mission's objective is not accomplished, although this represents the exception and not the rule. Such was the case with the Son Tay raid, and this has become increasingly important in today's casualty-sensitive political environment.

[178] Vanden Brook and Korte, "Three Probes Opened into SEAL's Death in Controversial Yemen Raid;" BBC News, "US Raid on al-Qaeda in Yemen."

[179] Bergen, "Architect of bin Laden Raid."

identifying this critical component necessary for overall mission success in all but the most *in extremis* cases—reliable two-way transportation. The demand for a "two-way mission" can be satisfied by using assault airlift to capitalize on McRaven's theory of relative superiority via the principles of simplicity, speed, and surprise (see Figure 17).

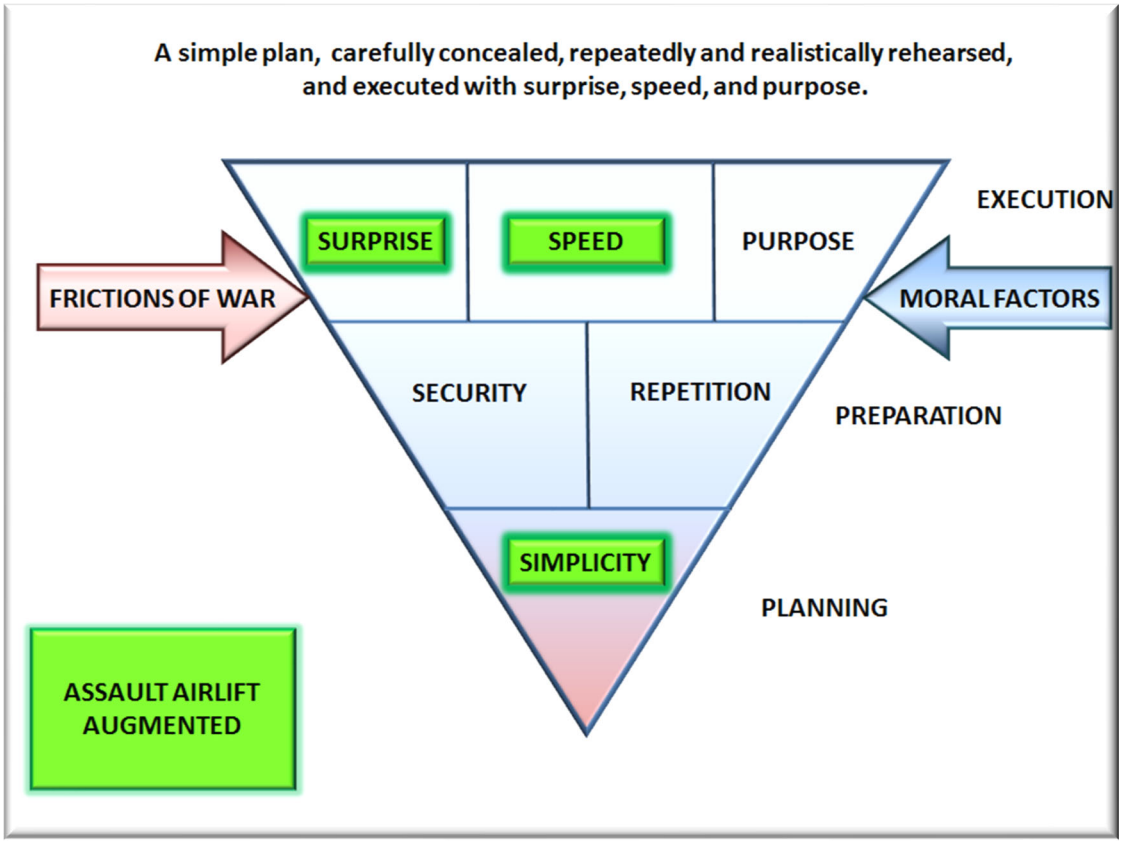
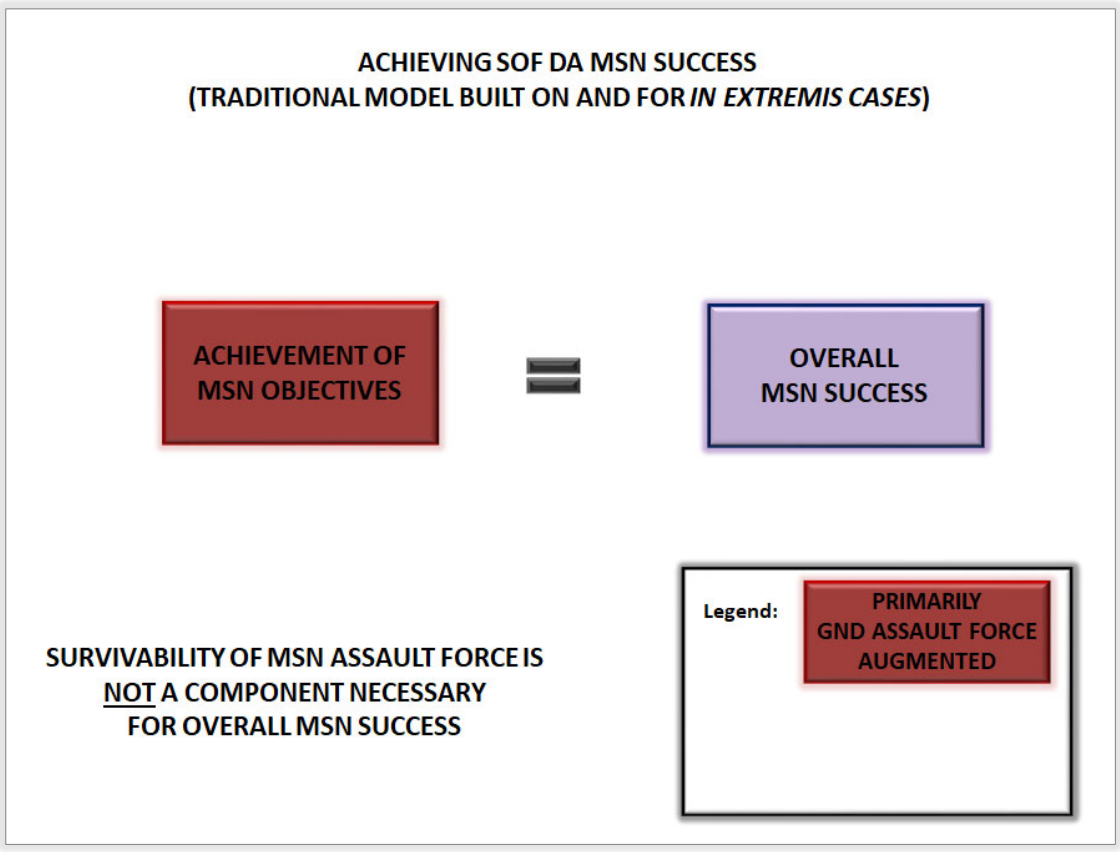


Figure 17. Assault Airlift Contributions to Relative Superiority[180]

Assault airlift can increase the probability of achieving overall mission success by increasing the survivability of the mission assault force. McRaven's theory of relative superiority acknowledges the importance of achieving mission objectives, but the inference exists that achieving mission objectives alone equates to overall mission success. This is essentially true when domestic political support is faced with the risks associated with countering existential threats, and in the light of the lessons learned from

180 Adapted from McRaven, *SPEC OPS,* 11.

such examples this "one-way mission" model has been a staple guide for how to build not only SOF missions but conventional missions as well. However, in the increasingly casualty-sensitive political environment special operations direct-action missions transpire within, and without the existence of the nation being directly threatened to justify losses to the mission assault force, this simple equation must be expanded for its usefulness to be retained (see Figure 18).

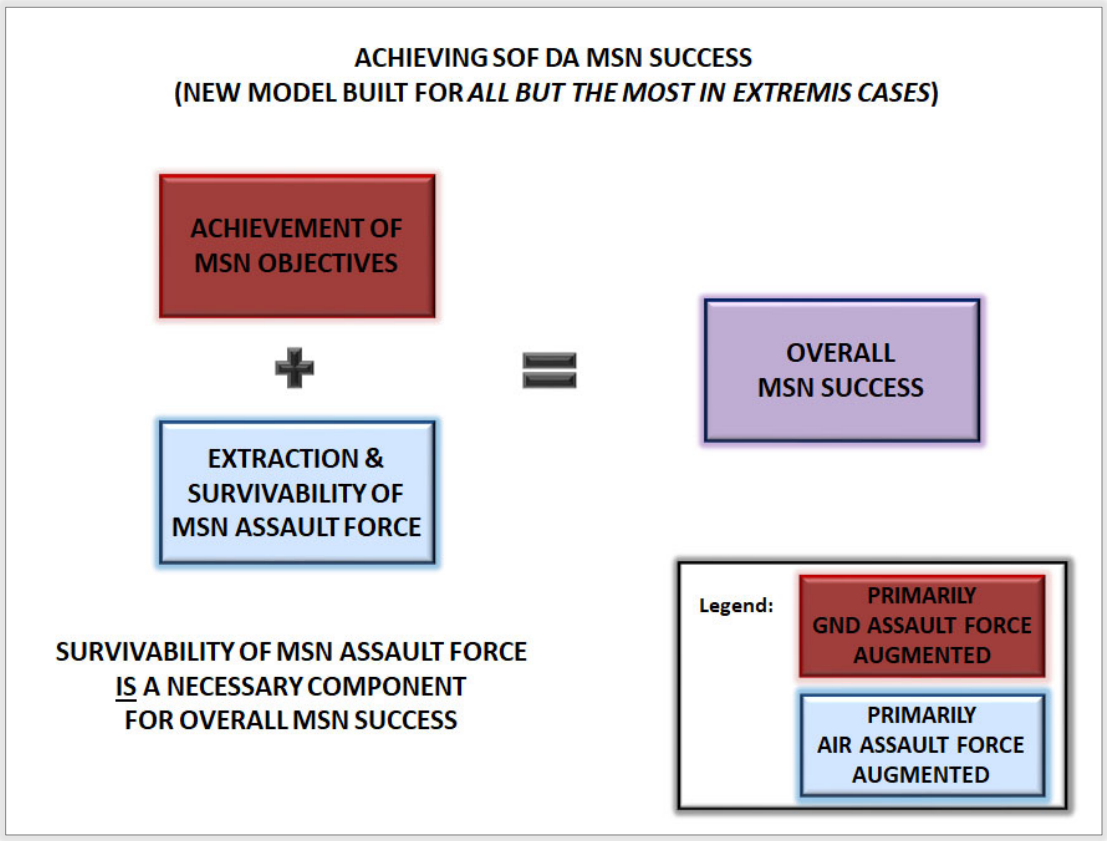


McRaven states that, "By defining mission completion as a one-way trip, the area of vulnerability was cut in half and the probability of mission completion significantly enhanced."

Figure 18. Traditional SOF Direct-Action Model[181]

181 Adapted from McRaven, *SPEC OPS,* 384.

In all but the most *in extremis* cases, where the existence of the nation is directly threatened, the survivability of the mission force must be weighted in as part of the equation required to generate overall mission success. However, the SOF direct-action mission template modeled off of the theory of special operations glaringly fails to take into account the need for the mission assault force to survive in the majority of cases, instead focusing on infiltration and completion of the mission objective. No doubt these portions of mission execution warrant attention, but exfiltration and survival remain prerequisites to nominal mission success (see Figure 19).



Here, the traditional model has been updated to include importance of extraction and survivability of mission force to overall mission success.

Figure 19. Augmented SOF Direct-Action Model[182]

182 Adapted from McRaven, *SPEC OPS,* 384.

McRaven himself acknowledges the need for this inclusion of the extraction and survival of the mission assault force in all but the most *in extremis* cases in the conclusion of his book. There, he admits that, "although ordering one-way missions is not palatable in today's environment, it certainly has its place during all-out war."[183] The evidence and experts clearly point to the need to extract a mission force to justify the costs of a mission when facing non-existential threats.

a. Completing Mission Objectives versus Achieving Mission Success

This work endeavors to demonstrate that under the preponderance of circumstances, there is a major difference between simply achieving mission objectives to reach mission completion and achieving those objectives but also achieving the exfiltration and survivability of the mission force to reach overall mission success. There is a minor nuance of terminology that warrants address. Achievement of mission objectives means accomplishing the tasks the mission was designed to accomplish: rescuing prisoners of war, gathering of intelligence, elimination of conventional strongholds, or destruction of weapons of mass destruction. Mission completion could be defined as synonymous with the achievement of mission objectives, as McRaven infers.[184] The theory of special operations posits that mission completion is a function of the accomplishment of the mission objectives. However, this definition fails to fully embrace the necessity for the mission assault force to infiltrate and exfiltrate the objective in order to successfully complete the mission.

It is counter argued that, taking an effects-based approach, that mission success entails the completion of mission objectives as well as the extraction and survivability of the mission assault force to fulfill the strategic demand necessitated by modern casualty-sensitivity. Completion of mission objectives is therefore not synonymous with mission success. Mission success encompasses both mission completion as well as the return of the assault force. Mission accomplishment is herein defined as not just the achievement of the mission's objective, but it is also contingent upon the survivability and extraction

[183] McRaven, *SPEC OPS,* 385.

[184] McRaven, 385.

of the mission assault force. A mission that fails to see the survival of the assault force, even if the mission objective is accomplishes, does not necessarily reach successful mission results. This is true under the majority of contexts. The mission assault force must survive through the exfiltration phase of the mission as well as accomplishing the mission objective to achieve mission success.

b. When to Use Assault Airlift

Assault airlift is best employed when time-sensitive actions require human actors on an objective area. It is best utilized when decisive and timely action are called for inside of denied areas that warrant a nation's strategic showcasing of its willingness to invest in the endeavor while simultaneously demonstrating its sovereign ability to produce subjectivity across a battlespace previously perceived to be impenetrable. It represent the psychological effects of showcasing that a nation is willing and able to put its forces into these high-risk environments with the resolute assuredness that it will also be able to extract them with impunity. These effects diminish enemy morale at all levels, while bolstering domestic and allied confidence.

Assault airlift powerfully provides the tactical advantages of speed, surprise, and simplicity that are most effective when employed on military raids. These principles are invaluably critical when facing the time, distance, and terrain associated with perceptually impenetrable physical enemy domains for a raiding force. But unmanned assets are capable of performing these functions. Drones and missiles can provide penetration of denied physical domains as easily, or even more easily, than assault airlift. But unmanned assets have limitations. They are not always able to action an objective with the granularity, dexterity, and versatility that human actors can. Nor do drones and missiles represent the investment on the part of a nation in the same way that manned assets do.

Assault airlift is most useful during military raids that demand a human presence at the objective area for the limited timeframe these styles of raids encompass. This demand may be driven by politics, demanding a higher degree of investment by the part of the populace in an executively determined nationally strategic objective. The demand

for a human presence may be couched in the perceptions associated with an endeavor, where drone strikes or missile launches would be ill-suited to demonstrate a nation's willingness to invest in the continued disruption of a given adversarial effort or agenda. Or, the human presence could simply be required by the complexities required to action-the-objective itself. Hostage rescues and delicately nuanced culturally specific human interactions are, as of yet, still beyond the reach of modern technologies.

Assault airlift is best used when time-sensitive objectives need only be actioned for a brief moment. Temporally limited objectives lend themselves to being suitable for the employment of assault airlift. Denied areas are not occupied by special operations direct-action forces but for a brief moment in time. The goal is not an occupation. The goal is not permanent air superiority or sustained control of terrain.[185] Instead, the goal is to attain superiority for a brief moment in time: to accomplish an objective and then get out. The principles of relative superiority do not provide the "staying power" required for conventional operations or long-term support-to-resistance operations (also known as unconventional warfare). Instead, these principles, and the associated key considerations of assault airlift, have been designed to provide a temporary advantage, a fleeting moment that can be used to capitalize on an enemy's weaknesses and achieve a singular objective. This concept is what McRaven's theory of special operations is all about.

Assault airlift represents a nation's willingness and ability to produce and project subjectivity onto adversarial controlled domains. There are many circumstances where strikes or raids by unmanned assets may allow successful accomplishment of mission objectives, and even potentially extraction of precious cargoes, without the use of manned assault airlift platforms, but there will always remain, for political, perceptual, or operational complexity reasons, situations which warrant having human actors on the objective area itself. Manned forces more powerfully represent the manifestation of a nation's sovereignty than the launch of unmanned assets.

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[185] These goals are more readily associated with conventional force objectives. Under the command of conventional forces, special operations forces may be used to penetrate denied battlespaces for the purpose of creating a foothold that will then be expanded by conventional follow-on forces. However, this does not represent the primary driver behind direct-action missions. It represents, instead, a subjugation of SOF to support conventional strategies, an endeavor outside the scope of this work.

Sending people into harm's way represents levels of power, sovereignty, and capability that are not necessarily expressed with unmanned missions. Having people, actual members of one's society, in combat represents an investment on the part of a nation into an endeavor in a way that drone strikes and missile launches do not. It represents an unyielding investment into an endeavor that shows its prominence in ways that connect with the human actors on both sides of the conflict. If a nation sends its own people, then they are inherently invested in the outcome of the mission. Sending people demonstrates that the mission matters. Assault airlift represents the sovereign ability of a nation to produce subjectivity while invest itself in the action it undertakes. Assault airlift represents a sovereign nation's willingness to have "skin in the game." It represents a higher level of commitment to both the endeavor and the consequences. This commitment representation has strategically reaching affects, and its presence is often necessitated to attain these affects through a single action.

Assault airlift requires the contextual employment environment be suitable for the radar, visual, and acoustic signatures associated with modern platforms. JP 3-05 provides the following guidance regarding how transportation will be determined for any given SOF direct-action mission:

> The nature of the target, enemy and friendly situation, and environmental characteristics of the operational area are key planning factors. They will dictate the size, composition, and capabilities of the mission force, the nature of the tactics, techniques, and procedures used, and the methods of infiltration and exfiltration.[186]

This official guidance is sound and broadly all-encompassing of the reality surrounding the muddled conflicts SOF are required to operate in today. There are many cases that may not be suitable for assault airlift. The acoustic signature may not be appropriate. The visual signature may be unwelcomed. The radar signature may be too overt for operationalization. Some operations may warrant even smaller forces, potentially as small as single human actors, cloaked in secrecy and shrouded in plausible deniability. Such

[186] Joint Chiefs of Staff, *Special Operations*, III-3.

operations may indeed exist, but they require time and non-violent insertion methods that are not always compatible with executive desires for timely and decisive action.

When time-sensitivity demands nearly immediate action; when acoustic, visual, and radar signatures can be feasibly mitigated; assault airlift offers options that are extremely advantageous to the achievement of relative superiority in ways not always achievable by other means.

Part of this concept is very simplistic. Most target objectives reside on land. Access by sea can take time and requires a follow-on land component. Infiltration by land alone can require directly penetrating the large defensive conventional forces of an adversary, resulting in pitted attrition combat. Assault airlift provides a means of bypassing these threats that is simply not feasible utilizing other insertion and extraction means. Recall JP 3-17's guidance, "Airlift enables commanders to respond and operate in a wide variety of circumstances and time frames that would be impractical through other modes of transportation."[187]

JP 3-17 again sheds some wisdom, albeit from a larger scope, stating that:

> Airlift can also be employed to reduce the need for ground convoy operations that are vulnerable to enemy attack. The combination of their speed and tactics also enhances their survivability, while their range generally allows them to be based in relatively secure and logistically easier-to-support rear areas.[188]

In this case, SOF can take a lesson from conventional forces. Assault airlift can be used to reduce the need for other forms of mobility. It can enhance survivability by bypassing enemy defenses, and can allow a range and penetration capability that increases the impact of surprise.[189]

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[187] Joint Chiefs of Staff, *Air Mobility Operations*, IV-1.

[188] Joint Chiefs of Staff, IV-26.

[189] JP 3-17 does go on to list logistical limitations of supporting airlift platforms. These limitations are largely addressed at the scope of larger conventional platforms and are only partially relevant to SOF assault airlift. SOF assault airlift logistical constraints are addressed separately herein. Joint Chiefs of Staff, *Air Mobility Operations*, IV-26.

For these reasons, among others, air transportation is increasingly utilized for direct-action missions over other forms of insertion: land, sea, subterranean, or space insertion methods, the latter of which is technologically challenging at current but may eventually prove to be a more feasible solution in future affairs. Assault airlift remains a weapon of choice when enemies demand the timely delivery of violence with precision across great distances and behind enemy lines (see Figure 20).[190]

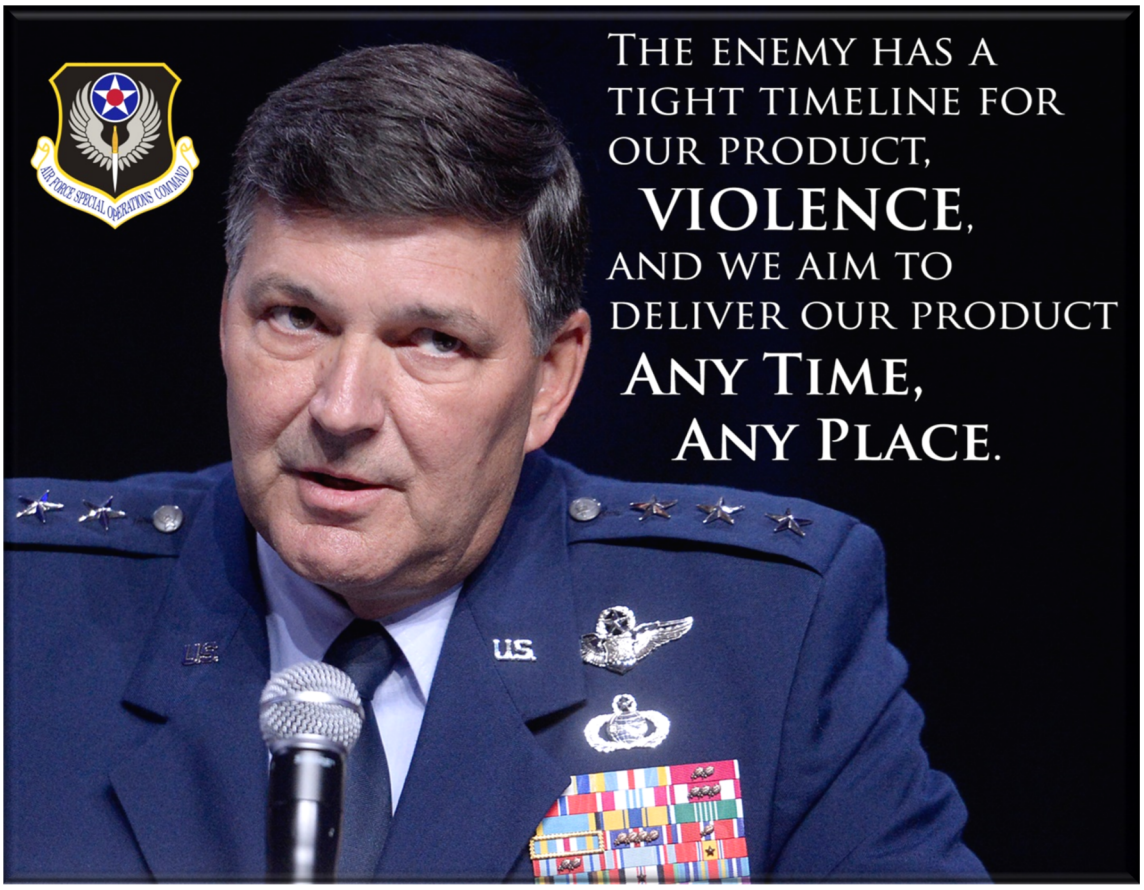

Figure 20. Lieutenant General Bradley A. Heithold, Commander, Air Force Special Operations Command, Hurlburt Field, Florida, 2015[191]

[190] Lieutenant General Bradley A. Heithold, Commander, Air Force Special Operations Command, Hurlburt Field, Florida, 2015.

[191] Adapted from Headquarters, Air Force Special Operations Command, Hurlburt Field, Florida, 2015.

As long as SOF direct-action missions require long-range and time-sensitive insertions, and until technological advancements allow additional options, air will continue to dominate the transportation medium. It is in the best interest of the operators and the senior military commanders who empower these forces to understand their maximized utility in achieving mission success.

10. Tenets of Assault Airlift

Assault airlift is not a tangible object. Like the relative superiority it helps to achieve, it is an abstract concept. But assault airlift does exhibit certain characteristics that can be measured, referred to here as the tenets of assault airlift. Just as an athlete's abilities are not tangible, they do produce predictable characteristics that can be measured to note the presence of ability. A runner's time can be captured. A weight-lifter's weights can be tallied. A jumper's distance can be marked. Ability is not tangible, but its effects are. In the same way, assault airlift's characteristics can be noted and their manifestation can signify its presence. These tenets represent key considerations that must be addressed for successful employment of assault airlift.

The ***tenets of assault airlift*** are as follows: **clandestine bypass of enemy defenses**; **precise direct-o- offset delivery and extraction**; **suppressive fire**; **versatility, flexibility, and maneuver**; **securely integrated long-range communications**; **environmental and adversarial threat intelligence**; and **aerial refueling**. Each of these tenets represents a key consideration when utilizing airlift in SOF direct-action as well as an ability that assault airlift should be bringing to the fight (see Figure 21).

Each of these tenets is present when assault airlift is being utilized to its fullest extent. They represent the maximized utility of assault airlift. Their presence signifies the achievement of utilizing assault airlift as efficiently and effectively as possible. The presence of one tenet alone does not signify assault airlift, but a higher presence of these characteristics represents a more significant magnitude of the presence of assault airlift. By examining these tenets and ensuring their inclusion and achievement, executive leaders, senior military commanders, and mission planners can better ensure the success

of special operations direct-action assault missions. These tenets therefore represent key considerations for the successful employment of assault airlift.

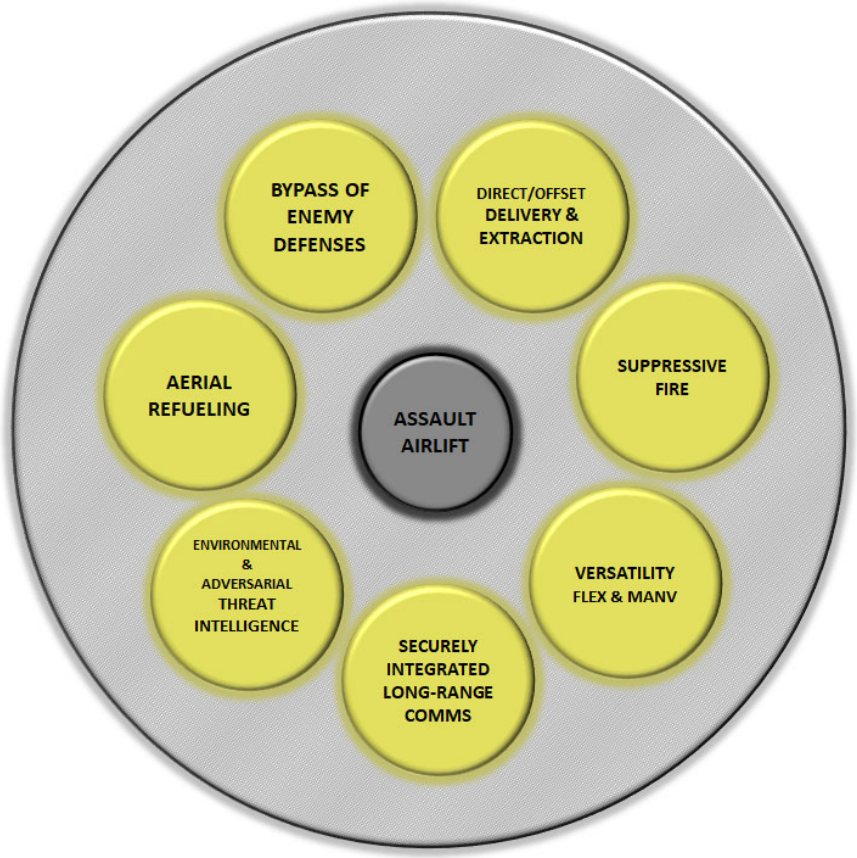

Figure 21. Tenets of Assault Airlift

Like the principles supporting relative superiority, it is possible for a single element to be missing and still achieve successful assault airlift.[192] McRaven explained this phenomenon when speaking of the lack of rehearsals leading up to the Cabanatuan raid: "This deviation from the model shows how the other principles can sometimes compensate for a missing block in the special operations model."[193] However, a complete existence of these tenets represents the definitive achievement of assault airlift, and the maximization of each represents the maximization of assault airlift as a

[192] McRaven, *SPEC OPS,* 273.

[193] McRaven, 273.

contributing mechanism towards relative superiority and the probable survival of the mission force.

Each of these tenets enables assault airlift contribute to the surprise, speed, and simplicity required to achieve relative superiority. Their presence does not ensure mission success, but bolsters the ability of assault airlift which fulfills the necessary prerequisite of adequate transportation that is required to achieve mission success. Each of these tenets can be examined in turn.

a. Clandestine Bypass of Enemy Defenses

Assault airlift allows a mission assault force to bypass significant conventional enemy defenses and environmental threats that would otherwise result in attrition warfare. Rather than penetrating land, sea, or costal defenses, a mission assault force can simply fly over and past these otherwise inherently powerful defenses. This tenet allows airlift to mitigate significant threats by avoiding confrontation with them. Time, distance, and terrain can serve as allies of assault airlift in this regard. Walls, mountain ranges, artillery pieces, checkpoints, and even oceans, all of which normally act as defensive mechanisms empowering an entrenched force, can be bypassed by assault airlift in this manner. These same obstacles must then be circumvented for the enemy to reach the now distant assault airlift force. This is an ideal fit for a special operations force reliant upon relative superiority rather than troop size or attrition rates to achieve mission success. This allows for mission simplification while doing so in a timely manner, thus maximizing the impact of the element of surprise by manifesting an assault force deep within presumably secure enemy territory.

Bypassing enemy defenses and environmental threats greatly simplifies an operation. It allows simplified planning and preparation by diminishing the factors that most assault force members will contend with. Planners need not develop mechanisms for coping with the myriad of events that inevitably transpire as a force encounters each defensive parameter en route to the objective area. They need not worry about each individual checkpoint, wall, barricade, or barrier. Instead, they simply need to know the

aerial threat environment and whether or not the assault airlift assets are feasibly capable of surmounting these threats.

The air commandos, like all special operators, are trained in the art of operating their equipment to execute their will, with skills honed to the level that the equipment becomes an extension of their body, ready and willing to execute their willpower on command. The threats that can be confronted while airborne, though significant, are generally known and trained against. And these threats are limited in scope. There are far less variables in the sky than there are on the surface. Less people, less threats, less complicated.

Bypassing threats en route especially simplifies the mission for the ground assault force. Get on the aircraft, trust your air commandos, and focus on your part of the mission coming up during the actions-on-the-objective. Do not worry about the multiple layers of defense that the aircrew will confront, but instead trust them to do their job and focus on ensuring your team has the most accurate and latest intelligence regarding the objective area. This functional separation is ideal for SOF, and allows a mission assault force member to focus on their job and its accomplishment as it relates to mission success.

Assault airlift increases the speed of mission execution by quickening the pace of infiltration and exfiltration beyond the capabilities of comparable transportation forms, while also eliminating the time that would be spent encountering and mitigating enemy defense using other transportation methods. Not only do aircraft fly at incredible speeds relative to land or sea options, they also actively mitigate threats in their own domain while continuing onward toward the objective area. They do not pull-over and stop to deal with threats along the way. Instead, they mitigate threats while continuing onward with speed. It is in fact this very speed that allows aircraft to transit many threat envelopes before acquisition and firing can occur. This means that no significant amount of time is lost during transit during the defeat of threats, a boast not so easily made by other transportation methods. This, again, makes assault airlift a preferred mode of transportation for special operators on direct-action missions.

Assault airlift maximizes the impact of surprise against a defended position. It allows operators to manifest themselves deep behind enemy lines into areas supposed by the adversary to be secure. Their presence at such a location is the most likely to be unanticipated, and the most likely to be unprepared for. The evidence is apparent when one considers that U.S. bases in America do not allow their soldiers to be armed while on base unless it is in their job description. Although they are trained to use weapons, soldiers are disarmed at the gate to avoid accidental discharges while on installation. The threat of accident is thought to outweigh that of enemy action on the installation. There is no anticipation of an air assault reaching so deep into American territory so as to allow an installation in Florida or Georgia or New Mexico to come under direct attack. This lack of expectation, especially when coupled with a lack of preparedness, allows for impact of surprise to strike the enemy with maximum effect.

Of course, bypassing enemy defenses does not independently represent a lack of threat to the assault force. Assault airlift assets are exposed to both environmental and enemy threats in their own domain. Assault "aircraft are vulnerable to surface-to-surface, surface-to-air, and air-to-air threats," JP 3-17 warns.[194] Planners must include members whose expertise on the details of acoustic, visual, and radar signatures of assault airlift assets. This is necessary to address detailed nuances that cannot be adequately addressed by cursory education. It is an imperative that these threats be understood in detail. JP 3-17 helps by acknowledging this for conventional air mobility, and their observation can be translated and modified for applicability to assault airlift:

> Planning must begin with threat analysis and threat avoidance.… Threat mitigation … may require significant integration with … air and ground combat forces for force protection during planning and execution. Planners must address the unique aspects of airborne, ground, [and] electromagnetic … threats to air mobility operations.[195]

Although the details of these signatures cannot be understood in an unclassified and truncated medium such as this, the importance of their understanding can be relayed.

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[194] Joint Chiefs of Staff, *Air Mobility Operations*, III-8.

[195] Joint Chiefs of Staff, III-8.

Aircraft exude acoustic signatures. Fixed-wing propeller driven aircraft normally have moderate acoustic signatures. Vertical lift assault airlift aircraft generally have large acoustic signatures.[196] Larger aircraft are more easily picked up on radar, while "smaller fixed-wing airlift aircraft and helicopters have lower radar cross sections."[197] Visual signatures are relatively easy to understand: if an adversary can look up, see, and identify an unwanted aircraft, they may be able to confront or report it. It is for this reason, among many others, that many SOF missions are prosecuted at night.

All of these signatures vary based on the altitude of employment and the mode of collection. Distance from an observer or having terrain in-between the observer and the aircraft directly affect the effectiveness of observation methods.

Analysis required to identify and counter such threats will require adequate environmental and adversarial threat intelligence, as will be addressed shortly. SOF reactions to threat avoidance and mitigation are comparable to conventional air mobility, with minor modifications:

> Threat avoidance is the preferred defensive tactic [and includes] … over-flight, alternate routing, operating at night or in adverse weather … using the most up-to-date intelligence … to identify potential threat locations is key to mission planning.
>
> When avoidance is not possible, threat mitigation is the next preferred option. Planners can mitigate [threats to aircraft] by using a variety of active and passive measures. Active protective measures include fighter escort, ground support forces employing measures that deny potential threats from interdicting air routes, antiaircraft defenses, ballistic missile defenses and tactical lasers for airfield defense, and [suppression of enemy air defenses]. Passive measures include such things as … route and altitude selection, reduced ground times … and self-defense systems including the use of onboard warning receivers, flare/chafe dispensers, and [various threat] detection devices.[198]

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196 Tiltrotor aircraft follow this same trend. Tiltrotors produce larger acoustic signatures in helicopter mode than they do in airplane mode.

197 Joint Chiefs of Staff, *Air Mobility Operations*, III-8.

198 Joint Chiefs of Staff, III-10.

Unmentioned here are the uses of deception in distracting the observer or masking the signature of the assault airlift assets.

Therefore, let it now suffice to say that clandestine bypass of enemy defenses is a tenet of assault airlift that enhances the relative superiority of an assault force through augmentation of the principles of simplicity, surprise, and speed. Detection avoidance, threat engagement avoidance, threat suppression, and defeating threats are sequentially preferential towards this end.

b. Precise Direct or Offset Delivery and Extraction

Precise delivery of the ground assault force, whether directly to the objective area (known as going to the "X") or if preferentially selected to an offset site (known as going to the "Y"), greatly simplifies the assault force's achievement of the mission objectives in a timely manner while bolstering the impact of surprise. It can be equated to having a navigation device guide a traveler to their final destination after a long flight on a commercial aircraft. The speed and ease of the long haul (bypassing enemy defenses) is not as effective if one becomes lost in the final stages of finding one's destination (precise delivery). The two are related, but they are not synonymous. Being able to precisely deliver the assault force anytime or anyplace means the plan can call for a delivery and pickup location that is best for the achievement of mission objectives based on the objective area study and maximizes the chances of survival for the assault force. It also means the execution of the mission can be prosecuted with maximized speed, as time is not wasted transiting unnecessary distances between insertion locations and objective areas. This increases the impact of surprise by ensuring the expectations of the defending force are exploited by depositing the assault force to the exact location that is either least expected or most preferential.

Precise delivery of the ground assault force allows the plan to be simplified by allowing an assault force to fully exploit the terrain and enemy defense weaknesses during their insertion. It allows direct deposit of mass onto the objective area. It allows direct recovery of the assault force for exfiltration rather than requiring a transit to a secondary extraction location. During the Son Tay raid, the HH-3, BANANA, was directly

flown into the compound, simplifying the problem of surmounting the compound wall.[199]

Precise offset delivery and extraction can maximize the element of surprise. An attacking force can arrive to the point in space and time where they are best able to exploit the element of surprise to capitalize on an enemy's weakness, even if that point is not collocated with the objective area. An offset infiltration can allow for a more clandestine operational ingress. A ground assault force may choose to be infiltrated into a sparsely populated area where the signature of the aircraft will not be observable, only to then quietly sneak into the objective area. This allows the element of surprise to be exploited at will, or for the assault force to remain concealed throughout the attack, as was the case at the Vemork heavy water plant raid in Norway during World War II. There, the assault force was challenged with interrupting the production of heavy water at a Norwegian plant that could presumably be used by the Germans for the production of nuclear weapons. The ground assault force was infiltrated a distance from the objective area. They snuck in, completed the mission objectives, and then snuck out without the defending German forces ever even knowing they were present.[200] Vemork is an excellent example of indirect infiltration being used to maximize the element of surprise. By the time the attack was discovered, the assault force had already departed the area.

Precise delivery, in particular, maximizes the critical element of speed during mission execution. In the case of the Son Tay raid, the assault force had less than a single minute to reach the prisoners of war before they anticipated the guards would execute them. McRaven specifically credits the ability and decision to land inside the compound as a primary contributor to the speed of the operation during execution: "The decision to land … inside the POW compound instead of outside showed that the planners had a thorough understanding of the need to move quickly on the target."[201]

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199 McRaven, *SPEC OPS,* 328.

200 Kalev I. Sepp, "History of Special Operations Forces: Special Mission Units - The Norway Heavy Water Raids of WWII," (Lecture, Naval Postgraduate School, Monterey, CA, August 17, 2016); "1943: The Heroes of Telemark," Norsk Hydro ASA, 2016, http://www.hydro.com/en/about-hydro/our-history/1929---1945/1943-the-heroes-of-telemark/.

201 McRaven, *SPEC OPS,* 287–331.

There are aspects to precise direct and offset delivery that must be planned for. Landing zones (austere landing areas for assault aircraft, also known as "LZs") and drop zones (austere parachute insertion areas for ground assault forces, also known as "DZs") are not usually as robust as airfields and primary bases. As such, there are air-centric requirements that must be addressed to ensure the effectiveness of their use.

JP 3-17 provides the following guidance regarding landing zones and drop zones that can be modified for pertinence here:

> **Landing Zone:**
>
> An LZ is any specified zone used for the landing of aircraft. LZs are usually less sophisticated than airfields, with facilities meeting only the minimum requirements of anticipated operations by specific aircraft. They may vary from isolated dirt strips with no off-runway aircraft-handling areas to hard surface airfields with limited support infrastructure. The main advantage of LZs is that in many cases it is possible to find or construct them near the operating area … A close-by, but less sophisticated LZ may offer fewer delays in providing … forward-deployed troops or assistance to … operations. Due to their isolation and possible proximity to threats, operating at these terminals requires significant planning.[202]
>
> **Drop Zone:**
>
> A DZ is a specific area upon which airborne troops, equipment, or supplies are airdropped. Although DZs are normally on relatively open, flat terrain, they may be situated on almost any site (including water) suited in size and shape for intact delivery and recovery of airdropped personnel and materiel.… The main advantage of a DZ is the ability to deliver forces or materiel when an LZ or airfield cannot be constructed or used because of expense, time constraints, security risks, political sensitivities, or terrain. Similar to LZs, their isolation and possible proximity to threats makes security more difficult. Operations at DZs require significant planning because of limited on-ground support and likely threats to the aircraft and support personnel.[203]

[202] Joint Chiefs of Staff, *Air Mobility Operations*, I-17–I-18.

[203] Joint Chiefs of Staff, I-17–I-18.

Therefore, precise direct or offset delivery can "significantly increase[s] the efficiency of [SOF] operations" at the expense of increased risk to the assault aircraft.[204] This is one of the defining parameters of assault airlift that separates it from a more conventional air mobility platform. Assault airlift operators go behind enemy lines with their counterparts, and on direct-action missions countering non-existential threats to the nation, they remain behind enemy lines, in harm's way, until the ground assault force is ready for extraction. They go in and they come out together. This is an integration depth that is unlike conventional delivery platforms that frequently depart after delivery of their cargo and personnel.

JP 3-17 addresses direct deliver for conventional forces, pointing out some of the advantages and limitations that can be modified for relevance to SOF direct-action missions:

> **Direct Delivery:**
>
> Direct delivery involves airlifting personnel and materiel from ports of embarkation to forward-operating locations in the theater. By bypassing intermediary operating bases and the transshipment of payloads typically associated with hub and spoke operations … direct delivery typically shortens in-transit time.… Direct delivery can use airland or airdrop delivery methods. For example, personnel can be airlifted from [the continental United States] and delivered directly to the theater by airlanding [sic] or airdropping them at a forward operating location. Direct delivery is often the quickest method for delivery.… While these operations are more complex, they can significantly reduce the [insert "mission assault force"] footprint by eliminating transshipping operations, reducing the number of diplomatic clearances required and, in most cases, decreasing closure time.[205]

It will be shown, through case study analysis, that assault airlift thus bolsters the elements of simplicity, surprise, and speed for direct-action missions by simplifying tactically effective insertions and extractions. Direct insertion and extraction can be used to minimize the time span of an operation, while offset infiltration and extraction can be used in a manner that capitalizes on the element of surprise.

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[204] Joint Chiefs of Staff, *Air Mobility Operations*, V-5.

[205] Joint Chiefs of Staff, IV-13.

c. Suppressive Fire

It is imperative that assault airlift platforms provide enough adequate suppressive fire to counter direct enemy threats to the assault force. Without suppressive fire, the resiliency of assault airlift, as well as its ability to contribute towards the speed and surprise of an operation, diminishes. Although relative superiority and attrition warfare operate as competing strategies, they both remain military strategies. As military strategies, they rely on a level of force to attain their goals. Adequate suppressive fire to mitigate enemy forces must be available during the actions-on-the-objective and exfiltration phases of the operation, and is advisable to retain as an option during infiltration. Assault airlift is a vital part of providing this capability to the mission assault force.

The inclusion of suppressive fire in this model of assault airlift tenets is gleaned from various examples where its presence enabled relative superiority or its absence significantly detracted from the principles supporting relative superiority. These examples include, but are not limited to the case studies examined here: Operation KINGPIN (elaborated on by McRaven in *SPEC OPS*)[206]; Operation EAGLE CLAW (examined by Richard Radvanyi in his 2002 Marine Corps Command and Staff College master's thesis, "Operation EAGLE CLAW-Lessons Learned")[207]; Operation ANACONDA (examined in Malcolm MacPherson's 2002 book, *Roberts Ridge: A Story of Courage and Sacrifice on Takur Ghar Mountain, Afghanistan*)[208]; and Operation NEPTUNE'S SPEAR. Suppressive fire was jointly composed by both ground and air assault elements during both Operation KINGPIN and Operation NEPTUNE'S SPEAR, the two tactically successful missions from the list above.

The fire from an assault airlift platform can provide suppression during all phases of an operation, but is especially helpful in exploiting surprise for accomplishing actions-

206 McRaven, *SPEC OPS,* 287–331.

207 Richard A. Radvanyi, "Operation EAGLE CLAW-Lessons Learned," master's thesis (Marine Corps Command and Staff College, 2002), http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA402471.

208 Malcolm MacPherson, *Roberts Ridge: A Story of Courage and Sacrifice on Takur Ghar Mountain, Afghanistan*, (Dell Publishing Company, 2006): 334.

on-the-objective and enabling exfiltration through speed. Most frequently, suppressive fire is not required during SOF infiltrations. Infiltrations are usually characterized by stealth and clandestine penetrations. Instead, suppressive fire is more useful when the element of surprise is used: at the point where the mission assault force is discovered or revealed. At this moment and in the moments that follow, the operational timeline draws out, significantly increasing the probability that the area of vulnerability will expand and erode relative superiority as the enemy brings conventional attrition warfare firepower to bear against the attacking special operators. It is during these moments, when the assault force is exposed, that suppressive fire helps eliminate or mitigate direct threats to the assault force, increasing the impact of surprise and the speed with which the operation moves toward conclusion.

It is too often taken for granted that assault airlift platforms, as military instruments, possess adequate firepower to support themselves and the mission assault force they are a part of. This is, unfortunately, a mistaken assumption. There are a number of infiltration and exfiltration platforms that retain only nominal suppressive fire capabilities. The CV-22 Osprey is not equipped with a forward-firing weapon.[209] None of the assault airlift platforms that are so equipped can provide comparable speed and range to the CV-22. This required provision remains unaddressed. Adequate suppressive fire must be incorporated, planned for, and integrated to maximize the ability of assault airlift to attain and sustain relative superiority.

Adequate suppressive fire can be achieved through adequate synchronization of the air and ground assault force elements, as was the case during the Son Tay raid.[210] There, ground assault force members aboard the assault helicopters provided suppressive fire against the target compound's guard towers during the initial run-in, as John Gargus described in his 2010 book, *The Son Tay Raid: American POWs in Vietnam Were Not*

[209] The Osprey is equipped with a rearward firing capability and primarily relies upon speed, agility, and mode transition to mitigate close proximity threats during the takeoff and landing phases of flight in objective areas.

[210] McRaven, *SPEC OPS,* 287–331.

Forgotten.[211] This coordination of providing accurate and effective suppressive fire from an assault platform during the critical and dynamic terminal phase of flight proved to be one of the more difficult tasks the operation accomplished. Such a level of integration is impressive, and only achievable through seamless integration of the air and ground assault force elements. The result was adequate suppressive fire. This capability for defending oneself during prosecution of mission objectives and during extraction should be an expected portion of any forceful military operation.

It is relevant to acknowledge that strike aircraft, to some degree, can supplement this role, although they are generally inadequate at providing the persistent and direct supporting fire. Exceptions may be made for dedicated persistent gunships, such as the AC-130. However, even with these protecting assets overhead, there remains a necessity to retain adequate suppressive firepower onboard infiltration and exfiltration platforms for defensive and offensive purposes. Proceeding otherwise is the equivalent of asking a swordsman on the front line not to carry his sword because the bowman behind him is armed. Both strike and assault aircraft must therefore be adequately armed to perform their roles in protecting a mission assault force as it prosecutes its mission. These are, after all, military aircraft. But regardless of the presence of dedicated strike assets, assault airlift platforms should be armed for direct offensive and defensive purposes to mitigate the inevitable vulnerability the aircraft will be exposed to, especially during action-on-the-objective and even more so during exfiltration.

d. Versatility, Flexibility, and Maneuver

The inherent versatility, flexibility, and maneuver of assault airlift can be directly translated to the mission assault force, bolstering its ability to simplify the dynamic environment it is exposed to with speed and ease. Assault airlift is incredibly flexible, allowing it to adapt to changing battlefield conditions in ways that are simply impossible for other transportation platforms to accommodate. At the cost of a degree of flexibility, assault airlift can further augment relative superiority and the needs of the mission assault

[211] John Gargus, *The Son Tay Raid: American POWs in Vietnam Were Not Forgotten* (Texas: Texas A&M University Press, 2010), 25–27, 81–82.

force by exercising its inherent versatility to fill roles that might be impractical for other transportation mechanisms. Finally, assault airlift's intrinsic ability to provide maneuver, especially with regard to rotary-wing assets and tilt-rotor platforms, allows it to provide tactical maneuvering for the assault force during critical phases of mission execution, augmenting speed and possibly surprise. These effects culminate to allow assault airlift to mitigate the changing environmental and mission parameters the assault force may be exposed to during mission execution.

JP 3-17 acknowledges the inherent "speed, range, flexibility, and versatility," of air mobility.[212] These qualities are engrained in assault airlift platforms, to varying degrees. Flexibility and versatility can be exchanged for one another, within the design parameters of a given airframe, but the exchange must not compromise assault airlift's maneuver, as this characteristic is a critical component provided to the mission assault force.

JP 3-17 provides the following assessment of these abilities as they relate to SOF assault airlift platforms:

> The Services and United States Special Operations Command … operate rotary-wing and tiltrotor aircraft, such as the UH-1, H-60, V-22, CV-22, CH-46, CH-47, and CH-53, which possess intrinsic intratheater airlift capabilities. Rotary-wing and tiltrotor aircraft can be useful for intratheater purposes for the following reasons:
>
> (a) Their ability to operate at smaller undeveloped LZs increases their flexibility and often reduces ground-transit times for their loads;
>
> (b) Their ability to transport personnel and materiel to and from forward deployed ships [insert: or forward operating bases] increases expeditionary flexibility.[213]

Flexibility refers to the ease with which a platform can be utilized. Versatility refers to the ability of a platform to fulfill different functional roles. The two are easily confusable but are not synonymous. In many cases, one can be exchanged for the other.

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212 Joint Chiefs of Staff, *Air Mobility Operations*, viii.

213 Joint Chiefs of Staff, IV-26.

Versatility is a change in function. Flexibility is the ease with which change is made. An asset may be functionally specific, making it flexible only within that narrow functional range. Alternatively, an asset may be functionally generic, making it very versatile but at the cost of flexibility within certain functional ranges.

Versatility is the ability to fill a functional role or meet a different kind of need at the cost of a varying degree of flexibility. Examples of versatility would be choosing to add door guns to an assault airlift helicopter at the expense of sacrificing two assault force team members to accommodate the weight of the guns and ammunition. Adding the guns comes at the cost of maneuver flexibility: the aircraft can now lift less cargo and passenger weight because of the weaponry onboard. It has sacrificed a degree of flexibility to achieve versatility. However, it can now act as a functional gunship providing suppressive forward fire during infiltration. In this role, it is not as nimble and flexible as a dedicated gunship, but it also retains the ability to functionally transport personnel during the exfiltration phase, something a dedicated gunship platform may not be able to do.

Aircraft are not always designed to be as versatile as possible. Some platforms are designed to operate as gunships, such as the Apache helicopter. Apache helicopter are excellent gunships, but they make very poor mobility platforms. They are good at transporting various types of firepower, but not troops or cargo. The specificity in design diminishes overall versatility. The Apache aircraft is a very nimble, mobile, and flexible gunship, but its design does not leave it enough flexibility to also act as a mobility platform. Versatility has been exchanged for flexibility.

Flexibility allows change and adaptation to an encountered force or situation without tarnishing the resilience of the asset. Assault airlift platforms provide flexibility by allowing their use as best suited, which is especially important during actions-on-the-objective. A delivery platform may be used for infiltration. It may then be evacuate to an off-site location to standby on-call exfiltration. This act protects the asset from damage during the actions-on-the objective, retaining its abilities for exfiltration. It also diminishes the activity signature associated with the objective area. But this is not the only way this asset can be employed. Because of its flexibility, it can easily switch

functional roles. It could instead be used to provide overhead watch, relaying adversarial developments to the ground assault force, such as the movement of enemies on the objective area or the approach of conventional reinforcements. The same asset could instead be used for casualty evacuation, to provide suppressive fire, or to distract enemy forces by creating activity at a specified alternative location. All of these examples represent the flexibility assault airlift can provide during actions-on-the-objective.[214]

Why are flexibility and versatility so important? McRaven reminds us:

> Von Moltke observed that no plan survives contact with the enemy. In war uncertainty is the only thing that can be guaranteed with any certainty, and flexibility (itself a principle of war) is of particular importance to any plan, whether operational or deceptive.[215]

There are limits to the ranges of versatility and flexibility that can be achieved based on a platform's original design specifications. Even platforms designed with wide versatility capacities and high flexibility rates eventually reach the limits of exploiting these characteristics.

JP 3-17 partially addresses this versatility and flexibility range limitation when it observes that, "the inherent aerodynamic inefficiencies of rotary-wing aircraft sharply

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[214] Automobiles provide an excellent opportunity to contrast versatility with flexibility. Take a sport utility vehicle (SUV) versus a sports car. The SUV is very versatile. It can function to transport people or cargo, to go on or off road, for work or for pleasure. Compared to a sports car, the SUV is more versatile. It can, by design, fulfill a wider variety of functions. The breadth of its usefulness surpasses that of the sports car. In some areas, the SUV is therefore more flexible than the sports car. The SUV can hold two or five people, whereas the sports car is limited to less. The SUV can carry more cargo than the sports car. It can go to more remote locations. In these functional roles, the SUV's flexibility surpasses that of the sports car. However, the versatility of the SUV comes at a cost. At highway speeds and in traffic, the SUV is less maneuverable than the sports car. The sports car has greater flexibility in its ability to accelerate and decelerate. The SUV has sacrificed flexibility in highway performance to attain higher versatility, and thus additional flexibility in other functional roles. Now, imagine that the owner of the SUV has mounted a bike rack onto its trailer hitch which blocks the rear door, rendering the rear-door non-functional while the bike rack is installed. The versatility of the SUV has been modified. It can now carry several bikes with relative ease, something that was not feasible before. However, it is no longer as flexible at loading cargo. Cargo flexibility has been lost with the addition of the bike rack and the associated rear-door inoperability. The bike rack will have to be removed before the rear door can be used: a process that is bound to take some time and tools to accomplish. The SUV has gained versatility in the role of carrying bikes, but is less flexible at switching to the role of carrying cargo. This difficulty transferring from one functional role to another represents a loss of versatility. Flexibility in one functional capacity has diminished versatility in switching to another.

[215] Latimer, *Deception in War,* 60–70.

restrict payload and range capabilities."[216] The correction to be applied here is this: the aerodynamic inefficiencies are not limited to rotary-wing assault airlift assets, but are intrinsically present with the additional modifications inherent to all special operations assault force platforms. Modifications for versatility limit flexibility in other capacities. The MC-130H Combat Talon II weighs several thousand pounds more than a conventional C-130 Hercules. This difference in weight equates to a diminished lift capacity for the MC-130H, but at the benefit of an increased penetration capability. Modifications generally equate to inefficiencies relative to the original aircraft design. This tradeoff is obviously something that not only mission planners and leadership but acquisition specialist should keep in mind when selecting the appropriate platforms for special operators in the future.

JP 3-0 says of maneuver:

> The purpose of maneuver is to place the enemy in a position of disadvantage through the flexible application of combat power. Maneuver is the movement of forces in relation to the enemy to secure or retain positional advantage, usually in order to deliver—or threaten delivery of—the direct and indirect fires of the maneuvering force. Effective maneuver keeps the enemy off balance and thus also protects the friendly force. It contributes materially in exploiting successes, preserving freedom-of-action, and reducing vulnerability by continually posing new problems for the enemy.[217]

Assault airlift's ability to provide tactical maneuvering during mission execution allows the assault force to alter its geographic location with ease right in the moments when it matters the most. It allows the assault force to adapt to the conditions changing around them. Maneuver helps ensures ground assault force members are able to continue to focus on the achievement of mission objectives without reckless disregard for their own survival, irrespective of changing battlefield conditions. It helps ensure members are not left behind or cutoff from extraction. It enables the assault force mitigate dynamic enemy and environmental threats as they develop, countering them in a timely and effective fashion.

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[216] Joint Chiefs of Staff, *Air Mobility Operations*, IV-25.

[217] Joint Chiefs of Staff, *Joint Operations*, A-2.

Tactical maneuver is what allowed the air assault force, which had mistakenly inserted one of the ground assault force elements to the wrong compound during the Son Tay raid, to recover the misplaced members and redeposit them at the correct location.[218] Maneuver is what made this dynamic correction feasible.

e. Securely Integrated Long-Range Communications

Securely integrated long-range communications augment relative superiority for direct-action missions by allowing near-instantaneous sharing of critical information (simplicity), synchronization of dispersed efforts (speed), dynamic adaptation to changing battlefield conditions (surprise and speed), and maximize the ability to exploit weaknesses associated with an enemy's expectations (surprise). While securely integrated long-range communications is not unique to the contributions of assault airlift, assault airlift platforms are particularly in a position best suited to fulfil the provision of this need, above any other mission assault force components.

Communications benefit simplicity by making it easier to relay messages to counterparts during a mission. Communications stitch the assault force components into a single, cohesive, focused intellectual network, and link that network to command and intelligence assets abroad. Instead of requiring potentially ambiguous signaling mechanisms or relying upon meetings at predetermined places and times, communications simplify complex situations by allowing assault force elements to communicate and adapt in real-time to a changing situation. It keeps otherwise isolated assault force elements "in the know." Communications simplify otherwise complex plans that are composed of many moving parts … parts that can otherwise individualistically desynchronize to create situations that allow no feasible solutions toward the achievement of mission success.

Communications increase the speed of an operation by eliminating time and efforts wasted when assault force members have an incomplete picture of the operational environment. The faster new information can be relayed, the more efficient and effective are the preciously limited assault force efforts. This was noticeable in Operation KINGPIN

[218] McRaven, *SPEC OPS,* 287–331.

when one of the assault force helicopters landed at the wrong compound. Almost immediately the error was identified and an alternative course of action put into effect.[219] The communication was, in fact, so efficient that the main effort continued without even a pause, and the misplaced ground force was able to prosecute the erroneous compound and then proceeded to rejoin the main assault force effort at the correct location.[220] This would not have been possible without integrated communications.

Secure communications allow an assault force to prepare and action an objective without the enemy being able to anticipate their actions. Secure communications allow an assault force to adapt to their environment without exposing their plans to larger and entrenched enemy defensive forces that represent a potential threat if made aware of the assault force's presence or intentions. Communications retain the ability to bolster the element of surprise by provide a SOF direct-action mission force covert communications relaying precisely the most accurate and updated information available, even up to and including mission execution. Securely integrated communications can allow the assault force to retain full versatility and flexibility of the air assault force to fully capitalize the element of surprise in ways most favor to the assault force. Communications can allow the air element the opportunity to avoid a catastrophic exposure during infiltration that could otherwise pit the relatively small mission force against the full brutality of the scrutiny provided by an alert and prepared defensive force. It also allows the precise insertion of the ground assault force around the changing locations of enemy forces, which may not conveniently be aligned with predetermined patterns of life estimations.

An easy alternative to secure communications is radio silence; a method commonly utilized in military operations when communication security or detection is not feasible, but this option heavily negates the flexibility and versatility advantaged to the attacking force through the use of assault airlift. A more credible approach is to capitalize on secure and integrated communications to enable a SOF direct-action mission force to fully utilize the capabilities provided to it by its air assault elements.

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219 Gargus, *The Son Tay Raid*, 286.

220 McRaven, *SPEC OPS,* 313.

Secure communications is particularly essential in the infiltration phase for a mission force utilizing assault airlift. The lack of secure communications can mean exposure of both the timing and the "means of insertion" of the assault force, leading to an ambush rather than an actioned objective.[221] Secure communications can be achieved at a variety of technical levels, through something as sophisticated as satellite communications or as basic as hand motions. Assault force operators should be prepared to deal with any extreme of eventualities. But the assault force's preparedness to face less-than-ideal circumstances should not prevent it from maximizing the utility of the technology that is available to them the preponderance of the time.[222]

Securely integrated long-range communications also allow command centers the luxury afforded to Roman commanders as far back as the Punic wars: the ability to see where their forces and the enemy's forces are in relation to the battlespace, an observation pointed out by Dr. Sepp in one of his NPS lectures.[223] It is true that seeing an enemy's position is not the equivalent of being familiar with the tactics they intend to employ, but it is impossible to gather the latter without the first. Long-range communications to command and intelligence assets increase the informational and coordination resources available to an otherwise isolated mission assault force.

JP 3-17 talks about the importance of integrating communication capabilities within a mission force. It describes the need for:

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221 McRaven, *SPEC OPS,* 14.

222 A metaphor can assist one's understand of the importance of secure and integrated C4ISR for an assault force. Imagine a woman who owns a pistol for home defense. She goes to the range and she practices firing with her iron sights to make sure she can hit what she aims at. Under low light conditions, as might be expected during a home invasion, she has a 60 percent success rate hitting a target using the iron sights, with an average firing-time (time from aiming to firing) of two seconds. Knowing that her very life might be on the line if she is ever forced to use this weapon, she seeks to obtain a higher success rate. She purchases a laser sight for her pistol. Using the laser sight, her success rate jumps to 90 percent with an aiming time of only 0.5 seconds. The performance with the laser sight is far superior to that of the iron sight. Just point and shoot. Wherever the red dot goes, the bullet will follow. However, the possibility exists that the battery or mechanism of the laser sight could fail. If this happens, she knows that this could leave her reliant on only her basic iron sight skillset for survival. Recognizing this risk, she takes the following actions: she trains with and maintains the laser sight on her pistol, but she also continues to spend a great deal of time practicing under low-light conditions with her iron sights. In this way, she is best prepared to be able to take timely an accurate action with the technological advantage of the laser sights, but she is also prepared to continue to prosecute her objective should the technological advantage fail in the moment of truth.

223 Sepp, "Psychological Warfare and Deception: Deception Theory & Background - I."

> en route communications procedures and automated information systems to support movement reporting; call words or call signs, frequencies, communications equipment, and supplies to be delivered; the sequence of their delivery; and code words for significant events.[224]

JP 3-17 warns of the importance of developing and maintaining a communications net for "operations in the objective area."[225] It warns of the need to maintain secure and integrated long-range communications not only for mission force integrity, but also for command and control oversight. It warns of the importance of integrated computers to allow for the formulation, publishing, and distribution of operating instructions, intelligence, and changes to mission objectives.[226]

A common military term when speaking of secure and integrated long-range communications is C4ISR. C4ISR is an amalgamation of Joint military terms and stands for "command, control, communications, computers,… intelligence, surveillance, [target acquisition,] and reconnaissance" capabilities.[227] These are capabilities that secure and integrated long-range communications can help provide. If that sounds like a lot, well, it is. It is the integrated data distribution and presentation enabled through the use of fielded combat computer network systems. The C4ISR domain may be one of the most important and one of the most neglected of all of assault airlift's contributions to relative superiority.

Computer systems have become an integral part of planning for missions, and their inclusion during the execution phase, particularly during a lengthy ingress, to allow the mission assault force the ability to obtain and adapt to the most recent battlefield conditions is a critical component on the assault force's ability to adapt and react in a

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[224] Joint Chiefs of Staff, *Air Mobility Operations*, JP 3-17, (Joint Chiefs of Staff, 2013), III-10–III-11, http://www.dtic.mil/doctrine/new_pubs/jp3_17.pdf.

[225] Joint Chiefs of Staff, *Air Mobility Operations*, III-10–III-11.

[226] Joint Chiefs of Staff, III-10–III-11.

[227] JP 1-02 provides the following terms used to construct this definition of C4ISR:

> "**C4I** command, control, communications, computers, and intelligence"
> "**ISR** intelligence, surveillance, and reconnaissance"
> "**RISTA** reconnaissance, intelligence, surveillance, and target acquisition"

Joint Chiefs of Staff, *Department of Defense Dictionary of Military and Associated Terms*, A-23, A-88, A-158.

timely manner. Communications is a vital tool in ensuring assets are appropriately vectored to simplify dynamic environments, to target actions with focus and speed, and to coordinate geographically dispersed forces to ensure synchronized actions.

JP 3-17's guidance for the use of computers for conventional assets can, as in previous examples, be modified for application to assault airlift platforms:

> Various computer and communications systems along with their associated databases and peripheral equipment are included … and … used when planning and executing [assault airlift] operations. Use of these systems for [direct-action] operations is highly encouraged to facilitate the flow of critical information between operational components.[228]

The need for integrated communications is not unique to the air component of an assault force, but the air assault force is most well suited to provide this requirement. The orbiting or laagering aircraft provide excellent communications transceiver stations. They can provide the antennas, charging points, network access, and on-scene computing power necessary to achieve an integrated mission assault force communications architecture.

Assault airlift platforms not only offer the ability to directly contribute to these communications needs, but they also provide a platform that can be used to indirectly support communications systems. Assault aircraft can act as a relay station, integrating peripheral assault force communications. They provide a network capable of connecting individual members of the ground assault force while they are on the objective area. Assault aircraft borne communications can also provide a link between individual elements of the ground force on the objective area and command centers a world away. They provide the ability for national level intelligence assets to feed vital intelligence directly to the operators who need it across vast distances that would otherwise represent communications blackout zones.

With each layer of operational complexity, additional communication is needed to overcome and simplify efforts. Integrated communications is something each individual component of an assault force inherently brings to the table. Air players have integrated

228 Joint Chiefs of Staff, *Air Mobility Operations*, III-10–III-11.

communications with air players. Ground players have integrated communications with ground players. However, integrated communications between these partners is a challenge during almost every major military exercise or operation. Information does not naturally freely-flow between joint counterparts. Discrete focus on communication integration must be achieved in order to deliver the benefits of a truly synergized mission assault force.

Unfortunately, there is little tribute paid to the need or provision of integrated air-ground communications networks. Because of this neglect, individual assault force components, coming from conventionally aligned organizational structures, rarely choose to invest in the architecture required to create a fully integrated mission assault force communications medium. This neglect means forces do not train with the equipment they may eventually use on a mission. It also makes analysis of integrated communications more difficult. However, analysis is still possible. The lack of securely integrated long-range communications should be able to explain the attenuation of relative superiority, or at least the attenuation of potential relative superiority, throughout the given case studies.

Integrated communications during an operation allow the flexibility, versatility, and maneuver of assault airlift to place assault force assets wherever and whenever they can best serve the needs of the assault force. The individual means by which these communications are achieved is almost irrelevant. It could be that the assault force shares information on a mobile cellular network whose individual phones, carried by each assault force member, communicate through cellular antennas mounted aboard the aircraft. It could be that the aircraft provide wireless network access to classified and unclassified information systems to allow the assault force to gather intelligence and conduct en route mission planning. It could be that the aircraft provide Ethernet connections and power plugs to keep ground assault force communications gear charged and updated until the moment they depart the aircraft. It could be that airborne networks could serve as command and control relays for augmentation-drones in the target area. The details of employment mechanisms are negotiable. The fact remains that integrated communications is a primary enabler of the speed and precision direct-action assault forces require in order to prosecute their targets with violent precision.

JP 3-17 again allows wisdom to be gleaned from within its pages when it addresses "force visibility," the need command has to retain visibility on its fielded force, a concept that can be adapted for application to direct-action assault:

> Force visibility shows the current and accurate status of forces … Force visibility provides information on the location,… assets, and … requirements of a force as part of an overall capability.… [It] integrates operations and logistics information … and enhances the capability of the entire joint planning and execution community … to adapt rapidly to unforeseen events to respond and ensure capability delivery. Force visibility enhances situational awareness and is required to support force … allocation,… force position,… and forecasting for future force requirements.[229]

f. Threat Intelligence: Environmental and Adversarial

Adequate threat intelligence makes the application of assault airlift relevant in achieving the simplicity, surprise, and speed required to attain relative superiority. This includes both enemy and environmental factors, collectively referred to as threat intelligence. Threat intelligence is generally encompassing of the adversarial components that may represent a danger to the mission force, but often neglected, though disproportionately critical to the employment of assault airlift, are the environmental factors that must be reconnoitered and considered.

Threat intelligence is thus broken down into these two primary categories: environmental intelligence and adversarial intelligence. While the later has a definite effect on the ability of assault airlift to perform its role in direct-action, it is a consideration that current intelligence assets are predisposed to address for any given operation. More subtle is the need to address the former. Current and adequate environmental intelligence is just as pertinent to the employment of assault airlift assets as the adversarial threats they face. Because of the unforgiving nature of the flight domain, environmental threats can pose just as significant a hazard to airlift assets as adversarial threats. Both warrant exceptional consideration when employing assault airlift assets.

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[229] Joint Chiefs of Staff, *Air Mobility Operations*, I-15.

Environmental Intelligence: Environmental intelligence includes aspects of the physical terrain such as: the topography of the land, the density of the air, the weather, the temperature, the mechanical turbulence of the topography, climatology, lunar cycles, details about the area surrounding the objective area, the layout of the objective area itself, and a host of other relevant factors ingrained within the environment. Environmental intelligence simplifies a plan by enabling assault airlift assets to penetrate the environment, rather than to be mired within it. Adequate environmental intelligence ensures this penetration is complete. It allows the air assault force to speed by terrestrial threats rather than facing them or to penetrate otherwise hostile contextual hazards in a given domain.

Adversarial Intelligence: Closely reliant on securely integrated long-range communications for applicability during the execution phase, but spanning the breadth of the operational phases, is the need for the collection of adequate adversarial threat intelligence. Adversarial intelligence includes information on the adversary's forces and on the indigenous human terrain: the placement of enemy forces, the mindset and focus of those forces, the armaments of enemy defenses, lines of communication such as rivers or roads, population centers that may pose detection hazards, detection methods utilized by the enemy, information about the objective's defenses, the overarching level of latent hostility in the indigenous population, information about en route weapons systems that may pose a threat to the mission force. Often, dynamics in the human domain require real-time updates to remain relevant. The relevance of adversarial intelligence can diminish over time; just as weather intelligence is most useful when it is immediately available (no one ever seems to ask for a weather radar shot of the storm that passed yesterday). Securely integrated long-range communications becomes a critical component in the relay of this information to, from, and within a mission assault force.

Accurate and current intelligence during mission execution is what ensures the assault airlift platforms are used to surprise the enemy and conquer the domain's medium, and not the other way around. Having threat intelligence, to include enemy threat installation locations, capabilities, planetary topography, and weather norms and anomalies, are critical to the employment of assault airlift. These intelligence factors

represent limitations placed on the employment of assault airlift. They represent altitudes and lateral constraints it must remain inside of or cannot operate above or below. They represent radar corridor weaknesses in enemy integrated air defense networks. They represent temperature and pressure altitude atmospherics that assault airlift platforms must operate within, parameters which directly affect the performance of these assets in significant and relevant ways. Increases in temperature translate into diminished carrying capacity, in either the form of armaments, passengers, cargo, or fuel. Increases in altitude employment represent fuel savings, but at the cost of climb fuel and potential exposure to enemy detection assets, both visually and with radar. Higher altitudes represent a diminished but more widely dispersed acoustic signature. Decreases in altitude during employment represent an increase in fuel consumption, with a decreased radar signature and visual exposure over a distance, but with an increased localized acoustic signature and a momentary increase in visual signature. These effects may require a deeper penetration of aerial refueling platforms to ensure vertical lift assets remain fueled for mission execution. Expert employment of assault airlift assets in these environments require they be selected based on capabilities that allow enough versatility to capitalize on the environments these assets will be operated against. It also encompasses the requirement that penetration defensive systems be developed and acquired that enable clandestine and forceful employment based on the environmental and adversarial threat intelligence gained in order to operationalize these assets with impunity rather than haphazardly employing them and hoping for the best.

Having adequate intelligence is crucial to assault airlift's ability to support relative superiority, but the information required for the utilization of assault airlift is more encompassing than the intelligence requirements to action an objective area. If an assault force desires to integrate assault airlift, it must be willing to invest to gain the environmental intelligence necessary to achieve the benefits of assault airlift. At the same time, assault airlift has the capacity to serve as adversarial threat intelligence gathering sources during mission execution. In this way, threat intelligence, apart from the aforementioned tenets of assault airlift, is both a requirement and a provision of assault airlift. Assault airlift needs distinctive environmental intelligences to plan and prepare for

a mission, but it also can serve to provide critical intelligence for the entire assault force during mission execution. Assault airlift can be used to disseminate critically acquired intelligence gathered by either the assault force itself or disparate alternative intelligence sources linked in through the command structure.

JP 3-17 highlights the impact of environmental intelligence, specifically weather, as it relates to conventional forces. It highlights this additional assessment requirement atop nominal threat intelligence analysis typical of military operation. Weather remains an environmental circumstance that mission assault forces must contend with, and JP 3-17's guidance can be modified for relevancy here:

> ***Weather Planning:***
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> The anticipation of weather effects on operations mitigated through planning provides invaluable dividends in efficiencies [and effectiveness in the realm of SOF direct-action] on … mobility. Incorporation of weather considerations into mission planning is essential to mitigate risk, identify opportunity, select ideal environmental conditions, and to optimize routing and [drop zone and landing zone] selection.[230]

Inadequate weather intelligence may specifically decimate the effectiveness of a special operations direct-action mission. Because conventional operations span larger swaths of time, mission losses associated with weather merely represent lost efficiencies. Because of the limited temporal span of special operations direct-action missions, these "inefficiencies" can manifest themselves in the form of mission delay, cancelations, or even failure. The unrecoverable expenditure of resources required to execute the mission may be uselessly expended if the relevant weather parameters are not identified and adhered to.

JP 3-17 goes on to provide adversarial threat intelligence advice that can be useful once separated from the conventional chaff:

> ***Adversarial Threats:***
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> Aircraft are vulnerable to air and surface attacks.… [Assault airlift] can operate in higher threat environments by using aircraft equipped with defensive systems, by using other assets to protect them, or by accepting a

[230] Joint Chiefs of Staff, *Air Mobility Operations*, III-16.

possible combination of operational risk, higher loss rates, and reduced efficiency.[231]

Slightly more targeted "SOF-centric" JP 3-17 guidance aimed at assault airlift assets describes how the "terrain-hugging flight capabilities" of SOF platforms "enhance their survivability in certain threat situations."[232]

This is, of course, exactly how assault airlift is operationalized and separates itself from conventional air mobility. Because of the designated missions SOF are required to accomplish (clandestine penetration behind enemy lines in high-threat environments), they are equipped with the equipment and training to mitigate all unnecessary risk, and they are authorized to accept that risk which remains. Unlike the perception that SOF are "cowboys" merely shooting from the hip along the way, instead the reality dons that SOF mission sets demand confrontation of threats that represent significant risks. These risks are mitigated through the use of specialized equipment, training, tactics, techniques, and procedures.[233]

JP 3-17 goes on to say, "Mission planning must include a thorough analysis of vulnerabilities requirements throughout all phases of flight and ground operations."[234] This analysis is impossible to accurately perform without sufficiently detailed and current environmental and adversarial threat intelligence.

In the end, it becomes apparent that adequate environmental and adversarial threat intelligence are vital requirements for assault airlift: requirements not unlike those required by the ground assault force, but requirements that must be tailored to fulfill the specific needs of airlift assets. Once operationalized, assault airlift platforms may be able to then serve as additional intelligence collection and dissemination nodes; a possibility

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231 Joint Chiefs of Staff, *Air Mobility Operations*, I-13.

232 Joint Chiefs of Staff, IV-26–IV-27.

233 To be clear, each of the nouns in this sentence could be ascribed the adjective "specialized." It could also be accurately written as, "These risks are mitigated through the use of specialized equipment, specialized training, specialized tactics, specialized techniques, and specialized procedures." For the sake of redundancy avoidance, readability, and due to the apparent grammatical correctness of the initial statement, it is left as it is.

234 Joint Chiefs of Staff, *Air Mobility Operations*, III-8.

whose usefulness is amplified with the incorporation of the aforementioned tenet of securely integrated long-range communications networks.

g. Aerial Refueling

Aerial refueling simplifies a direct-assault mission infiltration and exfiltration by removing the need for layover stops for refueling or logistical purposes. It contributes to the speed of the operation by allowing aircraft to refuel while they are continuing to transit toward or from their objective area. Aerial refueling enables the deep penetration often required by direct-action forces to exceed enemy expectations, contributing to the element of surprise.

Aerial refueling is unique among the tenets of assault airlift because both its requirement and the satisfaction of that requirement both stem from the use of air as a mobility method. Aerial refueling would not be required were assault airlift not utilized as the transportation method, but given that air is the chose transportation method, aerial refueling becomes an indispensable part of the ability for assault airlift to deeply penetrate enemy battlespace with speed and flexibility.

Aerial refueling allows an assault force to avoid one of the most perilous operations that it would otherwise be forced to undertake: ground refueling behind enemy lines. During such operations, assault airlift platforms, as well as the ground assault personnel they carry, are nearly completely exposed to the will of the enemy and the intrinsic threats of the environment. Aircraft engaged in ground refueling are incapable of escaping in a timely manner. If they come under attack, they are "caught with their britches down." Reliant on the air assault force for exfiltration, the ground assault force is in no better position. Such a gross exposure of the entire mission assault force to so many unnecessary threats is unthinkable from an air planner, senior military leadership, elected official, or domestic public support perspective. There are few, if any, reasons that would warrant such a blatant abandon of relative superiority were any other options to present themselves. Aerial refueling provides an alternative that eliminates these unnecessary risks associated with ground refueling.

JP 3-17 reiterates this concern when it directs, "Maximize the productivity and survivability of the airlift fleet by minimizing aircraft ground times at forward locations."[235] This point should be taken and incorporated into primary and alternate direct-action mission plans.

Why does fuel matter so much to assault airlift, anyway? Even for novice pilots and aircrew the answer is clear: Having fuel means having options. Fuel can be exchanged for time, lift capacity, or distance. It can be used to remove an asset from an unfriendly environment or provide the violence, speed, and precision necessary to penetrate one. It can be used to circumvent a dangerous threat or to go over it. Fuel can be exchanged for altitude, or directly translated into speed. Its weight can be exchanged for cargo or personnel, and its presence can mean the resources necessary to ensure their extraction. Having fuel equates to options and flexibility for assault airlift platforms; flexibility that directly translates into options for the entire mission force when otherwise isolated behind enemy lines.

The importance of fuel to the flexibility, speed, range, and maneuverability of assault airlift platforms requires that the crew and onboard systems constantly monitor aircraft fuel states to ensure the proper amount is present to provide the appropriate level of capabilities for the moment at hand, while also planning to change the fuel states to meet the demands of future execution needs, to include extraction. JP 3-17 notes, "Assessments must be conducted continuously during air mobility operations."[236] This means monitoring resource availability during mission execution: fuel loads on receivers and tankers, planning for when and where refueling should occur, and ensuring fuel-overloads that would interfere with extraction capabilities are not compromised. In the cases of less-defensible tanker platforms, it means planning to ensure extraction platforms have the lifting capacity to bring out ground assault forces without sacrificing the ability to extend the receiver's range beyond the threat envelope the tanker airframe is unable to penetrate.

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[235] Joint Chiefs of Staff, *Air Mobility Operations*, IV-25.

[236] Joint Chiefs of Staff, IV-14.

Given the constant assault airlift thirst for fuel and the dangers associated with ground refueling, the need for aerial refueling has become indispensable to deeply penetrating direct-action missions. JP 3-17 bluntly acknowledges the need for aerial refueling for conventional operations, and the guidance is sound for direct-action as well: "Most direct delivery operations will require … [aerial refueling] support."[237]

Delivering an assault force to an objective area requires refueling of some sort, and aerial refueling is the most practical, feasible, and the tactically preferable option if tanker aircraft are properly modified to accompany insertion and extraction platforms into medium-to-high threat-level penetrations.

JP 3-17 describes the advantages of aerial refueling over ground refueling behind enemy lines, a description that lends itself easily to modification for application to assault airlift platforms:

> [Aerial refueling] can mitigate operational risk for [assault force] aircraft by decreasing reliance on … forward basing locations. [Aerial Refueling] is key to [the] ability to rapidly strike targets in distant locations and recover to safe areas. The ability to perform long-range strike missions … is particularly crucial.[238]

JP 3-17 not only endorses the use of aerial refueling, but it also catalogs the disadvantages of ground refueling that aerial refueling helps to avoid, observations that are again partially applicable to assault airlift and can be modified for incorporation here:

> [Assault airlift assets] are vulnerable to attack during all phases of theater and international flight operations, at home station, … en route locations, … and forward airfields. Mission planning must include a thorough analysis of vulnerabilities requirements throughout all phases of flight and ground operations.… Force protection specialists will work to ensure that all air mobility vulnerabilities are considered.[239]

Consideration of the types of threats addressed by JP 3-17 requires a specific focus on ground threats, an analysis which leads to the inference that assault airlift assets should

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[237] Joint Chiefs of Staff, *Air Mobility Operations*, IV-13.

[238] Joint Chiefs of Staff, V-5.

[239] Joint Chiefs of Staff, III-8.

not be landed behind enemy lines during infiltration and exfiltration, accept for cases of absolute necessity:

> Air mobility aircraft, aircrews, and support personnel are particularly vulnerable during ground activities. On/offload operations offer large, stationary targets for adversary direct-fire and stand-off weapons. Commanders and their staffs should consider the employment of expedited ground operations (e.g., engine-running offload and combat offload/onload) to reduce vulnerability to ground threats. Perimeter and other security measures should be planned and coordinated with those responsible for the area outside the base/airfield compound.[240]

Unfortunately for direct-action missions, the substantial addition of security forces required to secure an area the size of an airfield drives an assault force's numbers into the hundreds. This, in turn, drives up the number of minimum required aircraft, requiring a larger perimeter, and the cycle continues until several hundred personnel comprise the ground assault force and any hope of a light footprint have evaporated with the inclusion of the en route stop.

These incongruences between the offerings of ground refueling points and direct-action missions requirements does not necessarily contradict the advantages of utilizing ground refueling points for other types of mission sets. It is even, in fact, possible to accomplish SOF direct-action missions across smaller distances rather than larger ones, using ground refueling points positioned behind friendly lines and outside of enemy striking range. This, however, is the exception for direct-action, not the rule.

It is common for such setups to be utilized in the support conventional warfare operations. Forward Arming and Refueling Points (or FARP sites) are frequently used in support of modern conventional campaigns seeking to take and control terrain in an effort to counter enemy forces across shifting forward lines of battle. FARP sites may work great for conventional warfare when the goal is to take terrain: it provides a reusable and reliable location that can operate from a position of defensive advantage, diminishing the overall threat to conventional air assets during their vulnerable ground refueling operations. These operations are usually more closely aligned with conventional

[240] Joint Chiefs of Staff, *Air Mobility Operations*, III-8–III-9.

strategies designed to achieve territorial control. In almost every instance of their use there is a substantially large force being prepositioned, albeit behind enemy lines, to confront an opposing force in some blend of attrition warfare. These operations do not represent the singularly focused capacity of direct-action missions, and survive in a broader SOF or conventional scope.

It may even possible to successfully utilize ground refueling sites in the support of supply to resistance forces, or unconventional warfare operations. Such operations face additional constraints regarding the feasibility of discovery and repeated operations from a potentially discoverable and therefore potentially vulnerable site inside an adversarial controlled domain. But the goal of this work, here, is not to find ways to justify the use of ground refueling points in these capacities, but rather to discourage their use for deep penetration direct-action missions.

Specialized SOF direct-action assault forces are a low-density, high-demand asset. By their very nature they are unlikely to be prepositioned at all points of potential need simultaneously. Instead, they must be prepared to launch from a few singular locations across great distances to reach their objectives. This is particularly why the ability to aerial refuel is so critical and incorporated into the air commando culture. MC-130s and other C-130 variants, such as the HC-130, have for decades been able to provide aerial refueling to their assault force companions.

Tankers face their own threats. If a preference for aerial refueling is acknowledged, then the protection of tankers must shortly follow as an appropriate concern. JP 3-17 acknowledges potential threats to tanker aircraft, under the assumption that they are not duly equipped or trained to confront significant threat levels where they may be compelled to penetrate in support of mission assault force needs. JP 3-17's warning can be modified to accommodate assault airlift's refueling needs, specifically:

> Missions may require operations over hostile territory and in contested airspace…. [This] may place tankers in an extremely vulnerable position and should be limited … when possible.[241]

241 Joint Chiefs of Staff, *Air Mobility Operations*, V-3.

Of course, rather than keeping tankers out of the fight, the SOF preference would simply be to harden their defenses and increase the capabilities these platforms bring to the fight. Doing so could capitalize on the tanker platform's presence in support of the mission force at or near the objective area. It could allow tankers to fulfil both their primary role of fueling vertical lift asses as well as secondary roles of transporting specific cargoes and capabilities. Such capabilities could range from those required to create diversionary actions, timely shows of force, air-launched strike drones, or intelligence reporting. Any of these could be preferable, but are contingent upon the ability of the tanker platform to penetrate the necessary domain in both a threat avoidance and threat mitigation capacity.

h. An Additional Consideration: Redundancy and Logistics

Although not included as a tenet of assault airlift, redundancy and logistics are commonly under-recognized considerations of air assets that can become impairments to mission success when their address is not fully vetted. However, the need for redundancy in equipment and planning as well as logistical support are not a phenomenon unique to assault airlift. It is true that redundancy and logistics are pertinent to the success of assault airlift in direct-action, but no more so than they are to any other aspect of military action. Redundancy and logistical support are just as pertinent to the ground assault force as they are to the air assault force. Redundancy and logistics are required in both attrition warfare and special operations. One must bring enough resources and adequate supplies for any venture. Assault airlift remains subject to this constraint, but is not unique in this regard.

However, redundancy and logistics do retain significant implications for assault airlift. They represent a requirement for assault airlift during the initial stages of a mission, and their expenditure during a mission represents additional flexibility, versatility, and maneuver on the part of participating assault airlift platforms: qualities that are then transferred to the larger assault force as a whole. Redundancy and logistics' main worth is that it enables simplicity. Advantages to either speed or surprise derived from redundancy are merely manifestations of capabilities already present in the assault force that are retained, despite their potential loss due to the elimination of otherwise

"required" mission force assets and key execution goals. Logistical support is not unique to assault airlift, but the quantity and quality of logistical support required to adequately operate through the unforgiving flight regime require special attention to ensure the consequences of their neglect are not experienced.

Redundancy comes in two primary forms: redundancy of assets and redundancy of plans. Redundancy of assets means having enough equipment, people, fuel, bullets, and beans in place to contend with the inevitable attrition these resources will experience during the short but critical duration of a direct-action mission. Redundancy of plans refers to the need to plan for not only the best case scenario, but for alternate scenarios that are possible, plausible, and/or likely to occur.

Redundancy of assets simplifies a mission by providing adequate resources above and beyond the minimum required for mission accomplishment, in anticipation that some assets will become unserviceable through the course of mission execution. When mission required resources succumb to the fog and frictions of war, redundancy ensures adequate resources remain to successfully complete mission execution. It means having eight helicopters when you anticipate needing five. It means having three knives when you only need to cut one rope. It means having two guns when you only plan on using one. It means having extra bullets, food, and time. These same concepts must be translated into the air domain and planned for, but they must be planned for with the attention required to address air-centric concerns.

The reliability of airframes in specific operating environments must be understood and anticipated. The inevitably higher failure rates of rotary-wing platforms must be contended with in mission planning and preparation or it will rear its ugly head during mission execution. Aircraft, like cars, come in many different flavors. It is impossible to tell that a car will be reliable just because if comes from a specific company, country, or time. All companies produce both good models and bad. Knowing the difference may require a more detailed approach than relying upon hear-say, impressions, or belief. Quantitative analysis comparisons of maintenance requirements and mission-ready rates may be warranted.

Primary, alternate, contingency, and alternative courses of action are as critical to the proper employment of assault airlift as they are for the "no-fail" mission mentality brought forward by SOF ground assaulters, but the development of these plans requires an integrated approach. This integrated approach must incorporate air limitations and capabilities, as well as the requirements of the ground assault force. These plans must include plausible scenarios that the force may encounter, such as the loss of an air asset and its accompanying ground assets while en route, due to maintenance, the environment, or the enemy. These plans should include possible scenarios that represent "show stoppers:" the presence of superior defensive systems that mitigate the ability to clandestinely penetrate and environment, the detection of the assault force at various points along the way during insertion, even unacceptable changes in the predicted weather patterns. These plans must also take into account situations that are likely to occur, such as encountering of weather phenomenon en route, the lack of suitability concept-fabrication and logistical re-organization sites for forces to stopover and use mid-mission execution, the encountering of armed forces at the objective area itself, or the need for immediate extraction under fire.

"Flying isn't inherently dangerous, but it is incredibly unforgiving," Colonel Matthew A. Powell, Vice Commander, 352d Special Operations Wing, and an MC-130H Combat Talon II pilot has been heard to say.[242] One of the ways to reduce the likelihood of encountering the consequences of an unforgiving environment is to plan to avoid those consequences.

Logistical support is required by all mechanized military assets. It is not a phenomenon unique to assault airlift. However, the quantity and quality of logistical support for assault airlift, like other air assets, requires special attention to ensure consequences of neglect are not experienced. Consequences for maintenance failures when utilizing assault airlift platforms can be more devastating than comparable failures experienced on the land or even at sea. Humans are not capable of surviving in the realms

[242] Colonel Matthew A. Powell, Vice Commander, 352d Special Operations Wing, RAF Mildenhall, 2016.

of flight without mechanical assistance, not even for a few minutes at a time. Humans can walk or swim if their vehicles and ships fail them, if even for a limited stretch. But it is far harder to step out of the side of an aircraft and remove oneself from the environment it has immersed one in without mechanical assistance. Mechanical failures in flight, failures that are nominally predictable and proactively preventable when properly logistically supported, can be avoided altogether or mitigated by asset redundancy.

JP 3-17 forecasts the importance of logistical support, albeit focus at a conventional level: "[Aerial refueling] and airlift forces have finite maintenance and regeneration cycles, which may quickly be exceeded."[243] Of course, cycles and regulations can always be waived for high priority missions, but they exist for a reason. Aircraft require maintenance to maintain their effectiveness and combat-ready status.

In a similar vein and worthy of attention is the fact that helicopters, who along with and tiltrotor platforms comprise the backbone of direct-action assault airlift, require even more maintenance than their fixed-wing counterparts. JP 3-17 says of these rotary-wing platforms:

> Their mechanical characteristics give them a high ratio of support-man-hours to flight-hours. Consequently, rotary-winged assets:
>
> (a) Usually are not suited to sustained airlift operations beyond about 50–100 nautical miles from a refueling point;
>
> (b) Usually require more maintenance hours per hour of flight time; and
>
> (c) Are usually based at LZs not well suited to large-scale, sustained fixed-wing airlift operations.[244]

The adaptation of these observations for an accurate reflection of assault airlift are as follows: It is true that rotary-wing platforms (and tiltrotor platforms) require higher levels of maintenance, but these maintenance rates can be overcome by the use of additional

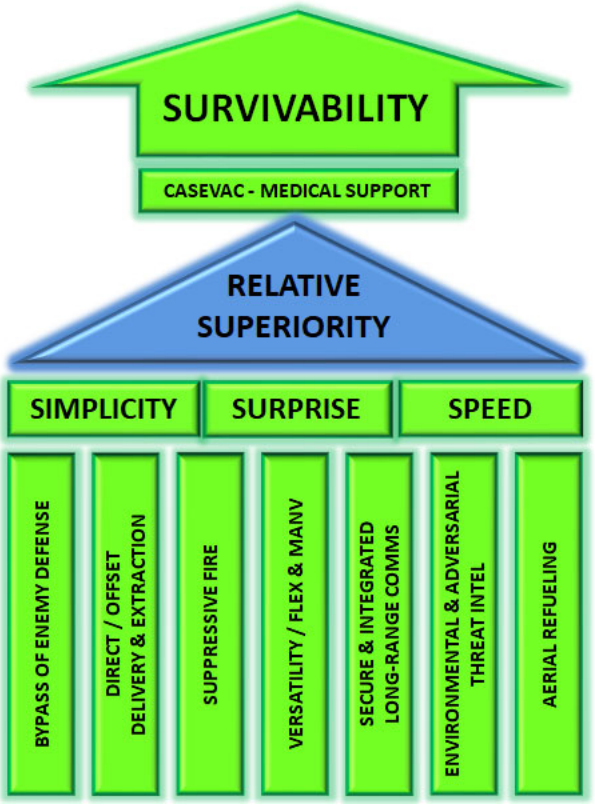
[243] Joint Chiefs of Staff, *Air Mobility Operations*, IV-13.

[244] Joint Chiefs of Staff, IV-26–IV-27.

superfluous platforms during critical high-stakes missions. Furthermore, the "usual" part of limiting operations to 100 miles from a refueling point can be mitigated via aerial refueling. Lastly, basing of assault airlift platforms at austere marshalling locations is a relevant dynamic to consider when seeking to mitigate logistical constraints, which is another reason why deep-penetration via aerial refueling is preferable to forward deployment or ground refueling of transiting assault airlift assets.

11. The End Game

In the end, the contributions of assault airlift to relative superiority culminate to mean one thing: increased probability of survival for the mission assault force. Displays of a nation's sovereignty and power mean little if an assault force is destroyed or taken hostage behind enemy lines. The physical, psychological, and political effects of such an event can be devastating. While each of the contributions of assault airlift increases relative superiority to a greater degree, the accumulating goal is to create enough relative superiority for a portion of it to be expended not solely in pursuit of mission objective, but to ensure the survivability of the mission force. This is how assault airlift directly contributes to mission success in today's casualty-sensitive environment (see Figure 22).



The concept of relative superiority and the identification of the supporting principles of simplicity, speed, and surprise, are attributed to McRaven.

Figure 22. Tenets of Assault Airlift Support the Principles of Relative Superiority, Resulting in Increased Survivability of the Mission Force[245]

More and more often the survivability of SOF direct-action mission forces can be used to explain mission success. The examples of Yemen in 2017 and Iran in 1980 serve as bleak reminders.[246]

Retired Colonel and author Andrew J. Bacevich addresses the irrefutable incorporation of survivability into modern mission success when describing the expansion of executive powers in his 2016 book, *America's War for the Greater Middle*

[245] Adapted from McRaven, *SPEC OPS,* 1–23.

[246] Vanden Brook and Korte, "Three Probes Opened into SEAL's Death in Controversial Yemen Raid;" BBC News, "US Raid on al-Qaeda in Yemen;" Bowden, "The Desert One Debacle."

East.[247] He describes of the most recent administrations that "presidents could do pretty much whatever they wanted … as long as no Americans were killed – few questions were asked."[248] Clearly the degree of casualty-sensitivity leaders must contend with has risen to a nonpareil level. It is one of the sole factors restraining senior leaders' power to act. The point here is not to attack or defend executive power or its constraint, but rather to use this example as an illustration of the indispensability of force survival in achieving mission success. In doing so, elected officials and senior military leaders may uncover a new means of employing special operations direct-action in a more strategically effective manner.

Sounding like something that fell right out of Clausewitz, Bacevich continues: "For senior commanders, accurately gauging the political environment in which they operate is at least as important as understanding enemy capabilities and intentions."[249] Bacevich is demanding that leadership must recognize the modern casualty-sensitivity as an increased appreciation for mortal life, a value recognizable in the very fabric of American culture. Commanders and elected leaders who ignore this phenomenon and the preceding advice invite the risks and consequences of failed SOF direct-action missions due to an unjustifiable expense of their carefully crafted and hard-to-replace SOF operators. Such failures pose "the prospect of a sudden collapse of political support" for the measures being taken and those who authorize them.[250]

The goal is not to diminish leadership's courage to accept risk, but empower them to take it appropriately. Taking risks is part of being a great leader. McRaven espoused at a commencement address (quoted by Bill Murphy, Jr., in his article, "Want to Be a Great Leader? A Navy SEAL Commander Says You Must Adopt This 1 Key Habit"):

> If you take some risks, step up when the times are toughest, face down the bullies, lift up the downtrodden, and never, ever give up … the

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[247] Andrew J. Bacevich, *America's War for the Greater Middle East: A Military History* (n.p.: Random House Trade Paperbacks, 2017).

[248] Bacevich, *America's War for the Greater Middle East*, 143.

[249] Bacevich, 159.

[250] Bacevich, 160.

> generations that follow will live in a world far better than the one we have today.[251]

The purpose here is rather to show how leadership can manage risks by maximizing the effectiveness of assault airlift in every possible way so that no unnecessary-risks are taken and those risks that are necessarily endured are mitigated and justified. Dangerous missions, especially those single actions whose goals are broad strategic effects, will necessarily demand high risks. But sending teams into harm's way with a diminished hope of survival based on inadequate operationalization of available assets is hardly justified. It may even work against the strategic success of a given mission if the public perception of the risk is not warranted. Instead, SOF direct-action assets should be integrated and synchronized to such a degree that relative superiority dominates an enemy's environment in the moments it is exercised. Such dominance of relative superiority makes possible the survival of the mission force and therefore overall mission success.

Before moving on, it must be reiterated that simplicity, surprise, and speed alone are not enough to achieve relative superiority. The principles of purpose, security, and repetition remain vital to the manifestation of adequate assault airlift and the achievement of relative superiority. The lack of these principles can dismantle relative superiority if they are not embraced and supported by the leaders and organizations mission assault forces are assembled from. However, these three principles are not as uniquely affected by the presence of assault airlift. All components, air and ground, of a mission assault force require a sense of purpose, an understanding and adequate implementation of operational security, and the need for accurate individual and full-scale rehearsals. These principles are not unique to the needs or contributions of assault airlift to the degree that the principles of simplicity, surprise, and speed are.

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[251] Bill Murphy, Jr., "Want to Be a Great Leader? A Navy SEAL Commander Says You Must Adopt This 1 Key Habit," Inc.5000, accessed December 05, 2017, https://www.inc.com/bill-murphy-jr/navy-seal-mcraven-success-failure-life.html.

The discussion now pivots to focus on operationalizing these concepts. How does knowing that assault airlift's tenets bolster relative superiority through the three germane principles help one utilize it more effectively during mission execution?

12. Operationalizing Assault Airlift Contributions to Relative Superiority

The three stages of mission execution can be delineated based on functional assault force components and their latent potential to contribute to relative superiority during each of these stages. Assault airlift's greatest contribution potential to relative superiority occurs during the stages of execution dominated by transportation: infiltration and exfiltration. Exfiltration represents the most difficult stage to achieve relative superiority and therefore the stage offering the highest "bang for the buck" from assault airlift. The logical progression leading to this declaration follows.

Inherently, ground assault force elements are most effective at contributing to relative superiority during the infiltration and actions-on-the-objective stages of mission execution. Air assault force elements are inherently more effective during the stages of exfiltration dominated by transportation. This makes assault airlift assets most powerful during the final stage of execution, exfiltration, when the area of vulnerability and the frictions of war have taken the largest toll on the assault force. It is during exfiltration that the investment in assault airlift pays off to most significantly ensure the survival of the mission force. The concept of an expanding area of vulnerability and the recognized difficulty associated with accomplishing "two-way missions" are attributed to McRaven (see Figure 23).[252]

[252] McRaven, *SPEC OPS,* 384.

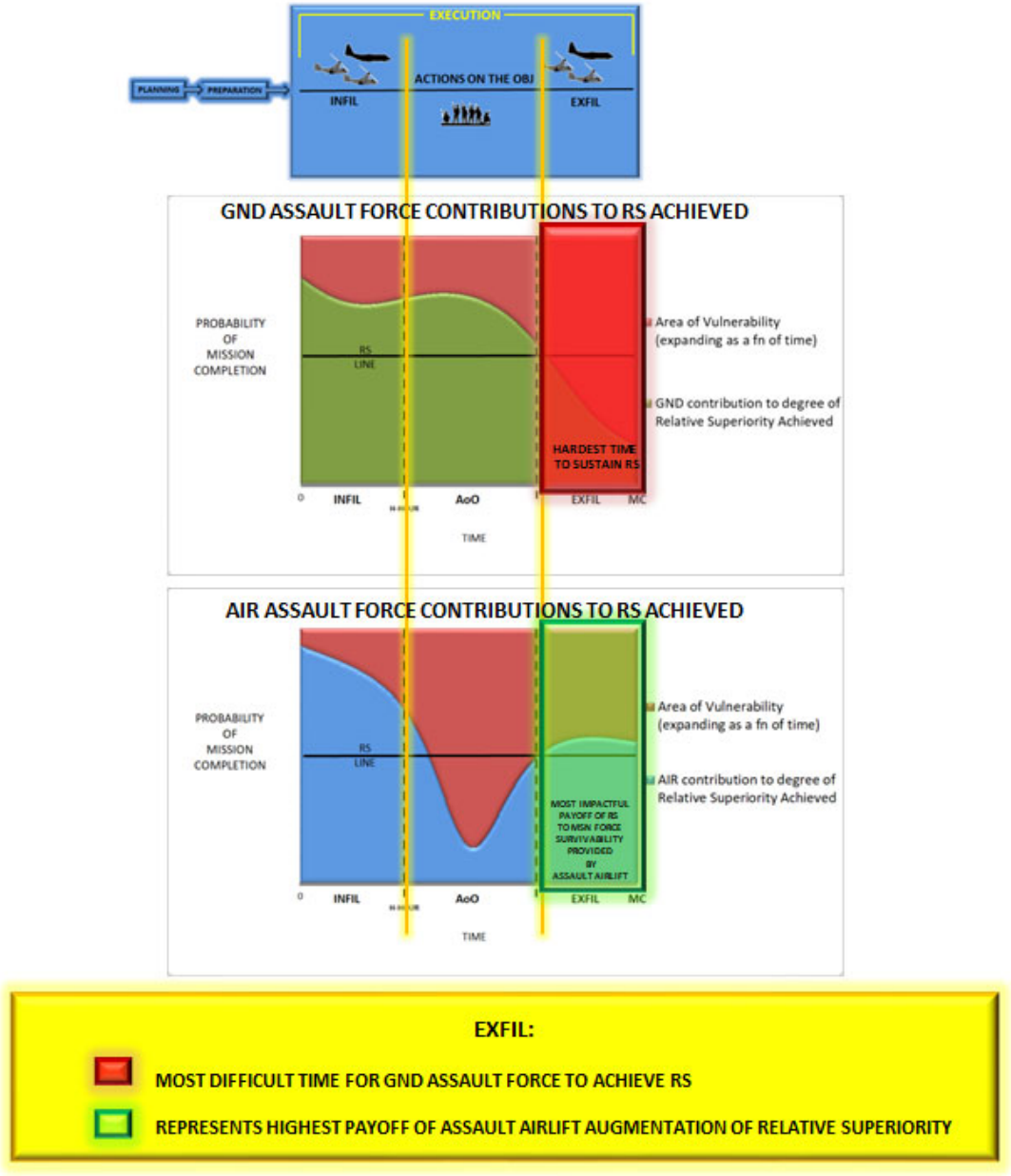

Figure 23. Mission Execution Stages Aligned with Latent Potential of Assault Force Components to Contribute to Relative Superiority[253]

253 Some of the conceptual ideas of the demand for relative superiority and the contributing forces meeting the dynamic supply required throughout the stages of mission execution were derived after studying the supply and demand relationships expanded upon by the renowned economist Milton Friedman in his legendary book, *Capitalism and Freedom.* Adapted from Milton Friedman, *Capitalism and Freedom* (Chicago, IL: University of Chicago Press, 2009); Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

Typically, ground assault force elements are most effective at contributing to the attainment and sustainment of relative superiority during the infiltration and actions-on-the-objective stages of the execution phase, with their highest contributions being during the actions-on-the-objective. This is the point at which they retain the highest latent potential to contribute to relative superiority. This stage of execution revolves around actioning the mission objective, a task the ground assault force is specifically trained, equipped, and prepared to accomplish (see Figure 24).

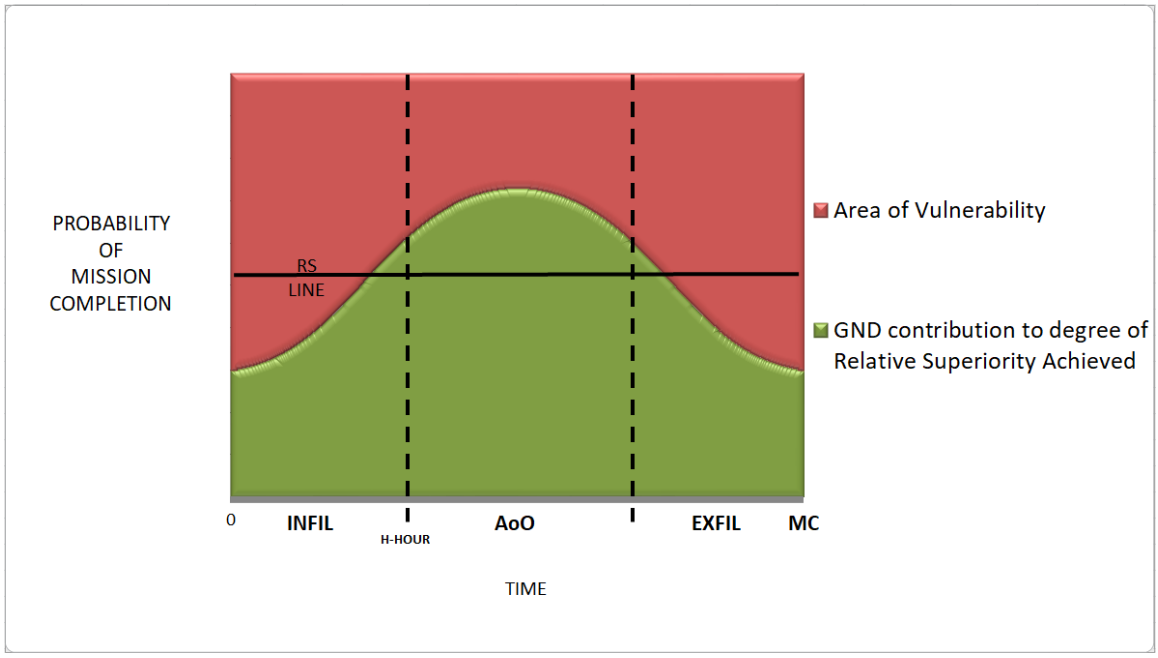

Figure 24. Ground Assault Force Latent Potential Effectiveness of Contributions to Relative Superiority[254]

254 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

This is one of the reasons the relative superiority graphs for the eight case studies in *SPEC OPS* maintain this general approach-up-the-bell-curve shape.[255] They are primarily focused on the achievement of the mission objective, an action that transpires during the actions-on-the-objective stage of mission execution: a timeframe dominated by the ground assault force contributions to relative superiority. This method of analysis is simplistic and was necessary to explain the basics of how special operations function, but it narrowly focuses upon the contributions to relative superiority during this single stage of mission execution. It heavily concentrates on the contributions of the ground assault force as they relate to relative superiority in pursuit of the mission objective and neglects to more comprehensively address the contributions of other assault force assets as they pertain to the other two stages of mission execution.

In contrast, air assault force elements are generally more effective at contributing to relative superiority during the stages of infiltration and exfiltration, as these stages are dominated by the transportation mechanisms of the mission force (see Figure 25).

[255] McRaven's relative superiority charts can be found on the following pages of his book for cross referencing: 7, 59, 103, 146, 148, 191, 233, 276, 322, 369, 383, 385, 386, and 387. McRaven, *SPEC OPS,* 7, 59, 103, 146, 148, 191, 233, 276, 322, 369, 383, 385, 386, and 387.

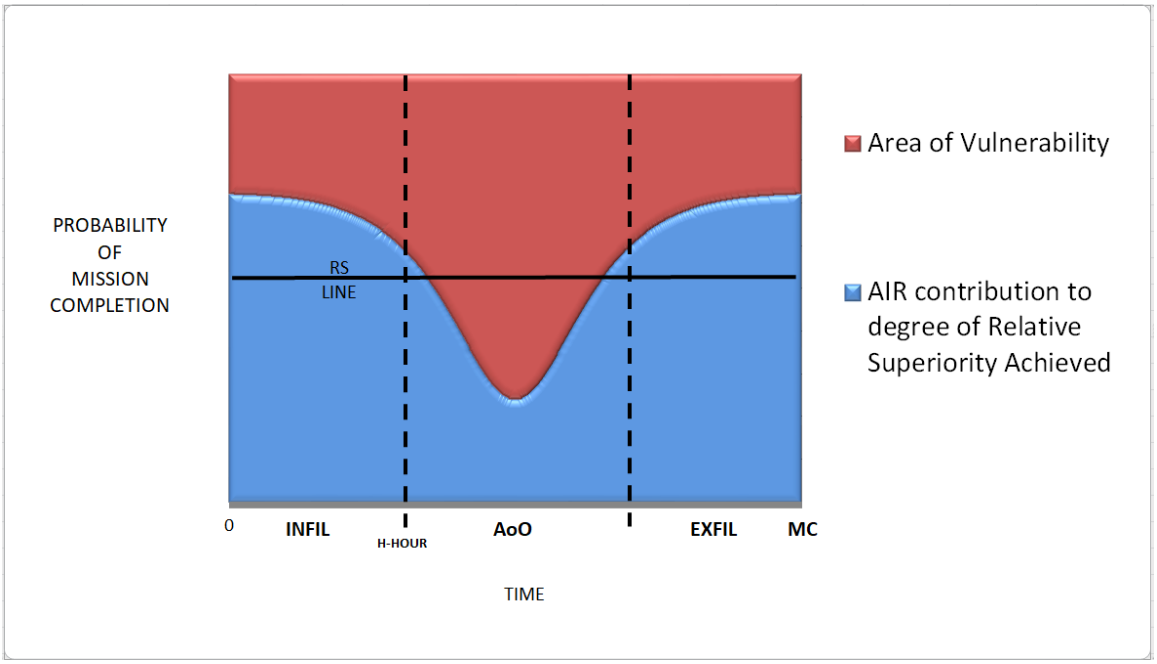

Figure 25. Air Assault Force Latent Potential Effectiveness of Contributions to Relative Superiority[256]

Jointly, the effectiveness of both air and ground assault force elements provide a more complete image of how a SOF direct-action mission assault force must utilize its assets to achieve relative superiority throughout the entirety of mission execution (see Figure 26).

256 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

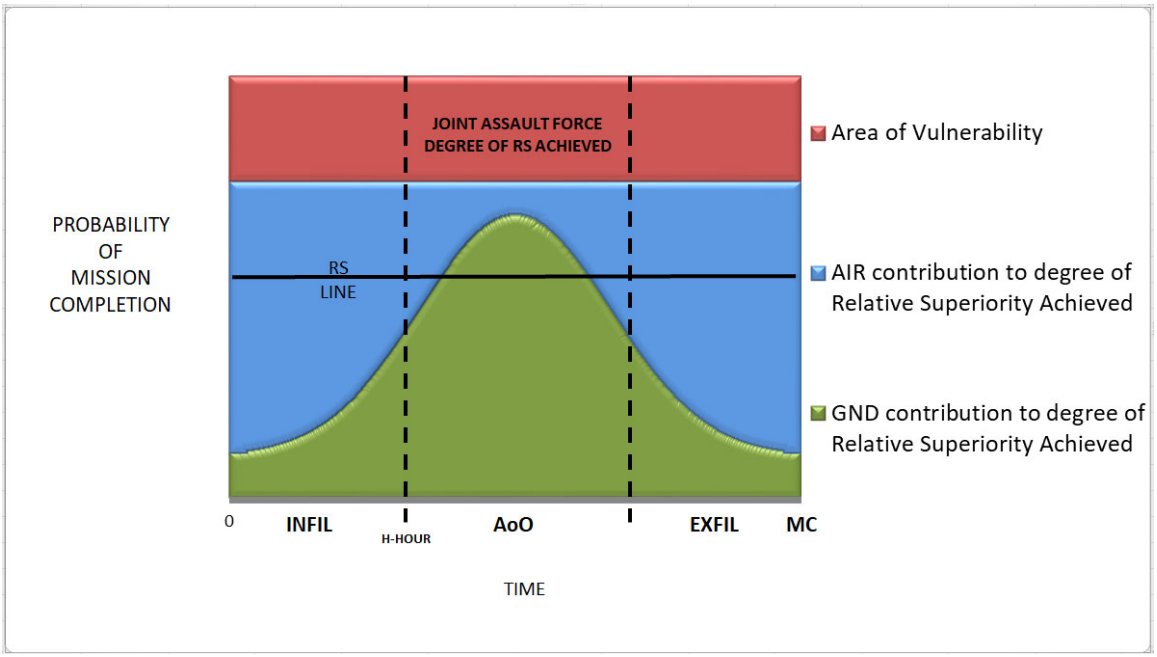

Figure 26. Joint Assault Force Latent Potential Effectiveness of Contributions to Relative Superiority[257]

While this functional bifurcation in contribution effectiveness towards relative superiority is educational, it is not yet comprehensive enough for one to understand why, in particular, extraction tends to be such a particularly difficult stage for sustainment of relative superiority. This model still falls short of showing why "two-way" SOF direct-action missions are so hard to achieve; why arguably five out of the eight case studies in

257 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

SPEC OPS are "one-way missions."[258] One more factor must be taken into account in order to understand this effect. Fortunately, McRaven has already provided the answer.

McRaven teaches that relative superiority is achieved as a function of speed because the "area of vulnerability" expands as a "function of time."[259] The longer the operation takes to execute, the more vulnerable the lightly equipped assault force becomes. The difficulty in sustaining relative superiority increases over time. The element of surprise is lost or spent; mission resources are depleted; and primary plans have given way to alternate, contingency, and emergency courses of action in order to mitigate circumstances encountered during mission execution. The cumulative effect makes exfiltration, and thus "two-way missions," the most difficult to achieve. This directly decreases the survivability of the mission force with the expansion of time. This can be represented by depicting an expanding area of vulnerability as a function of time.

This expanding area of vulnerability as a function of time can be incorporated into the relative superiority graph to visually depict how it affects the contributions of both the ground and air assault force elements (see Figure 27 and Figure 28).

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[258] The German glider assault on Eben Emael was arguably a "one-way mission" (29–72). Their survival was contingent upon both mission success and reinforcements from conventional forces. They did not otherwise have a viable extraction plan (46). Alexandria (73–114) was planned as a "one-way mission" (75–77), as was Saint-Nazaire (125) (115–162). The Mussolini rescue (163–200) was planned and authorized with a perceived 80% loss rate (178–181), and the final exfiltration plan for Mussolini left the majority of the remaining German assault force behind (187). The escape plan for the midget submarines that attacked the Tirpitz was not feasible (201–244), as there was inadequate time for their extraction before their explosives detonated (231). The Ranger raid on Cabanatuan, a prisoner of war (POW) rescue mission, was necessarily a "two-way mission" (245–286), though their most vulnerable moment was during the extraction phase (276). Operation KINGPIN was also planned as a POW rescue mission for the prisoners perceived to be at Son Tay, thus representing a "two-way mission" (287–331). Lastly, the Israeli Raid on Entebbe was a hostage rescue attempt that was planned as a "two-way mission" (333–380). Collectively, these examples arguably represent five "one-way missions" and three "two-way missions." Of note, all of the "two-way missions" required extraction of objective personnel. McRaven, *SPEC OPS*, 29–72, 46, 73–114, 75–77, 125, 115–162, 163–200, 178–181, 187, 201–244, 231, 245–286, 276, 287–331, 333–380.

[259] McRaven, *SPEC OPS*, 8, 21.

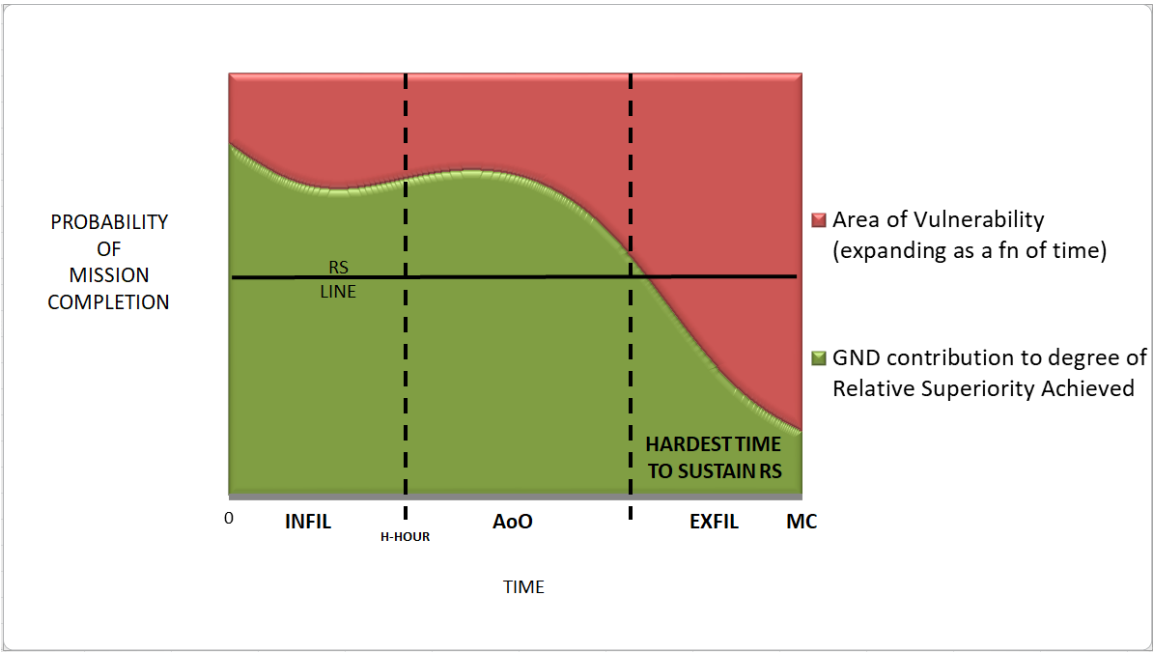


Figure 27. Ground Assault Force Latent Potential Effectiveness of Contributions to Relative Superiority, Incorporating Expanding Area of Vulnerability as a Function of Time[260]

Now it becomes clear why so many of the SOF direct-action missions that rely too heavily upon the ground assault force to achieve relative superiority throughout execution are planned to be (or inadvertently become) "one-way missions." The ground assault force is ill suited to contribute the excessive amount of relative superiority required to combat the expanding area of vulnerability, especially in the final stage of execution. As the area of vulnerability expands as a function of time, the amount of relative superiority required to counter it also increases, but the ground assault force simply is not effective at increasing relative superiority during the final stage of execution when the area of vulnerability has expanded the most. The result is often a "one-way mission," an unacceptable outcome in the preponderance of instances SOF direct-action is utilized in.

260 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

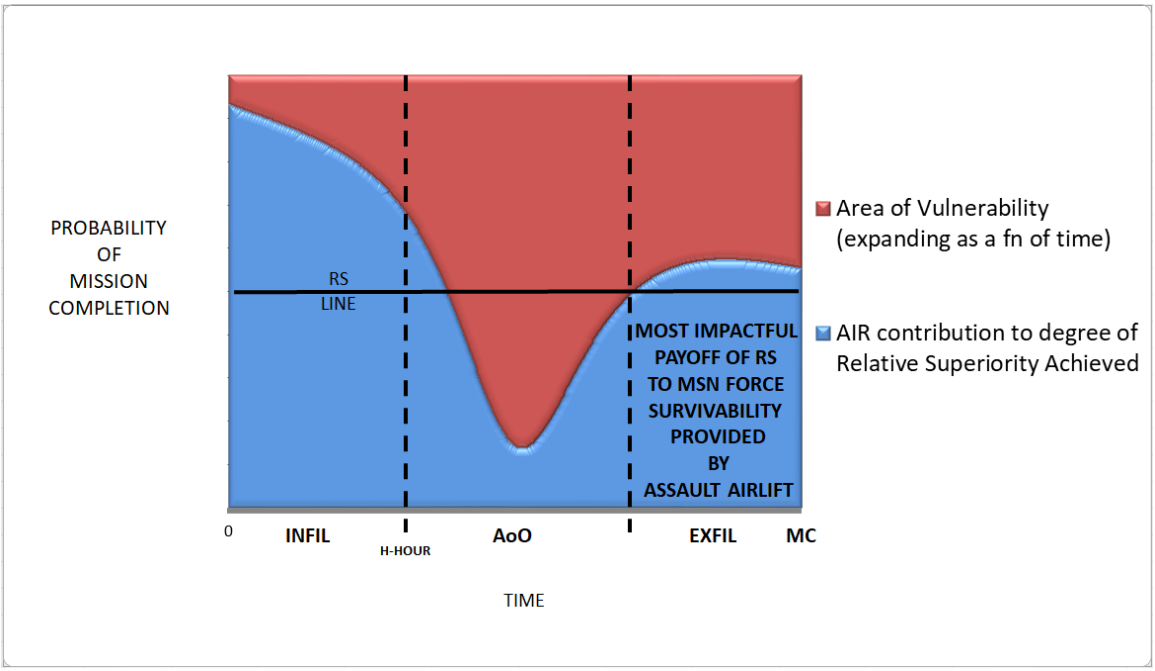


Figure 28. Air Assault Force Latent Potential Effectiveness of Contributions to Relative Superiority, Incorporating Expanding Area of Vulnerability as a Function of Time[261]

This makes assault airlift assets most powerful during the final stage of execution, exfiltration, when the area of vulnerability and the frictions of war have taken the largest toll on the assault force.[262] It is during exfiltration that the investment in assault airlift pays off to most significantly ensure the survival of the mission force.

Of course, the air assault force element's ability to contribute to relative superiority is not immune to the expanding area of vulnerability. It, too, faces a greater challenge of achieving relative superiority during the exfiltration phase of mission execution. But the air assault force has one advantage at this point that the ground assault force does not: the air assault force is inherently more capable of contributing to relative superiority during this final stage of mission execution. The air assault force has greater latent potential to contribute to relative superiority during the exfiltration phase of

261 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

262 McRaven, 8, 19, 21.

mission execution. So, while all assault force elements face a more challenging environment over the course of time, the air assault force retains the greatest ability to effectively contribute to relative superiority during the execution phase, making it the catalyst for achieving survivability and extraction of the mission assault. Recognizing this and empowering assault airlift to succeed in this endeavor can allow it to increase the probability of overall mission success.

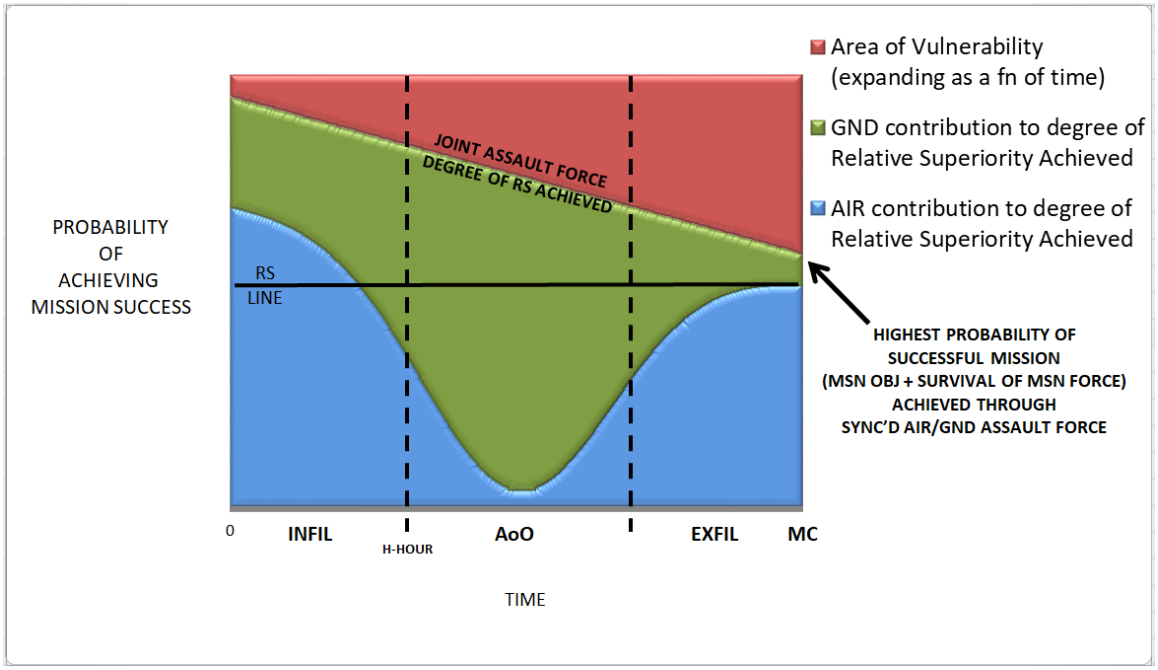
13. Survivability: Assault Airlift's Greatest Contribution to Mission Success

Because both the air and ground elements of the assault force have their areas of vulnerability expanded as a function of time, the joint mission assault force faces a survivability challenge in the exfiltration phase that surmounts the magnitude of areas of vulnerability previously encountered. While achieving a mission objective is always difficult, it is possible to accomplish this with the relative superiority achieved by the ground force, alone. The ground assault force contributes enough to the attainment of enough relative superiority to allow this outcome.

It is hardest for the assault force to survive through the exfiltration phase because this is the stage when the most vulnerability is inevitably encountered as a function of time. This is exactly the reason why five of the eight, or roughly two thirds, of McRaven's case studies exhibit "one-way mission" results.[263] They simply could not get out in time to avoid the collapsing window of opportunity momentarily provided to them by relative superiority. The defensive force was able to increasingly bring to bear all of

[263] The German glider assault on Eben Emael was arguably a "one-way mission" (29–72). Their survival was contingent upon both mission success and reinforcements from conventional forces. They did not otherwise have a viable extraction plan (46). Alexandria (73–114) was planned as a "one-way mission" (75–77), as was Saint-Nazaire (125) (115–162). The Mussolini rescue (163–200) was planned and authorized with a perceived 80% loss rate (178–181), and the final exfiltration plan for Mussolini left the majority of the remaining German assault force behind (187). The escape plan for the midget submarines that attacked the Tirpitz was not feasible (201–244), as there was inadequate time for their extraction before their explosives detonated (231). The Ranger raid on Cabanatuan, a prisoner of war (POW) rescue mission, was necessarily a "two-way mission" (245–286), though their most vulnerable moment was during the extraction phase (276). Operation KINGPIN was also planned as a POW rescue mission for the prisoners perceived to be at Son Tay, thus representing a "two-way mission" (287–331). Lastly, the Israeli Raid on Entebbe was a hostage rescue attempt that was planned as a "two-way mission" (333–380). Collectively, these examples arguably represent five "one-way missions" and three "two-way missions." Of note, all of the "two-way missions" required extraction of objective personnel. McRaven, *SPEC OPS*, 29–72, 46, 73–114, 75–77, 125, 115–162, 163–200, 178–181, 187, 201–244, 231, 245–286, 276, 287–331, 333–380.

the principles of attrition, eroding the otherwise potent strength of the assault force provided through relative superiority (see Figure 29).



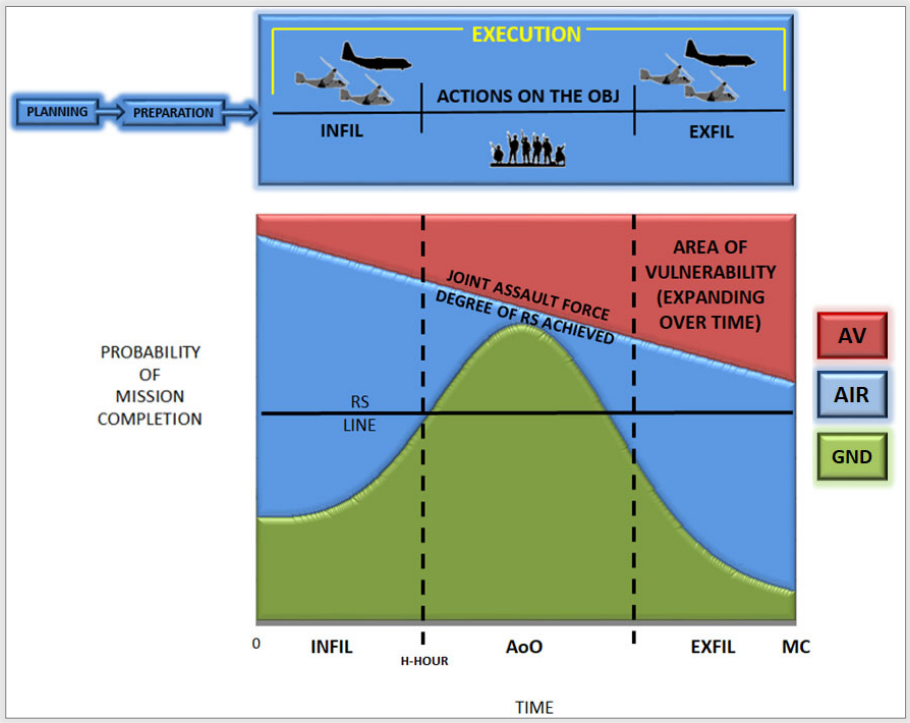
This model was constructed after studying the concepts provided by the economist Milton Friedman and McRaven's model in *SPEC OPS*.

Figure 29. Joint Assault Force Latent Potential Effectiveness of Contributions to Relative Superiority, Incorporating Expanding Area of Vulnerability as a Function of Time[264]

It is most difficult for an assault force to survive during the exfiltration phase, and this outcome is unacceptable in all but the most *in extremis* cases. Yet, it remains the inevitable outcome if the relevant effects of an expanding area of vulnerability are not countermanded. The rational follow-on is determining how best to counter this inevitability in an age where the survivability of assault force members is increasingly tied to the strategic success afforded SOF direct-action missions. This is where assault airlift investments pay off.

264 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

Assault airlift allows a mechanism for increasing the assault force's survivability throughout the engagement by bolstering relative superiority, especially when it directly benefits the survivability of the assault for the most: during the exfiltration phase of execution (see Figure 30).



The top graphic displays the three stages of mission execution: infiltration, actions-on-the-objective, and exfiltration.

The lower graphic underlays the joint assault force latent potential effectiveness of contributions to relative superiority. The lower graphic also incorporates an expanding area of vulnerability as a function of time.

Figure 30. Ability to Contribute to Relative Superiority through Use of Principles over Time[265]

The principles discussed thus far have focused on the ability of assault airlift to bolster relative superiority through simplicity, surprise and speed, thus achieving enough relative superiority to not only overcome intrinsically empowered enemy defensive

265 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

positions to accomplish a singular objective, but also to achieve a higher probability of survival for the mission assault force. Attention now turns to the survival of first, second, and third party individuals.

14. Relative Supremacy

Relative supremacy is the attainment of relative superiority to such a degree that it completely dominates a domain. It represents the ability to action an objective with unparalleled latitude, only made possible when environmental and adversarial threats have been utterly mitigated. It is the presence of assault airlift that makes this magnitude of relative superiority possible, and it opens opportunities for individual's survival that has not been possible for the majority of conflict throughout history: high levels of on-scene medical support and timely casualty evacuations (CASEVAC).[266]

If properly integrated into the mission assault force, assault airlift can help achieve relative supremacy, a complete domination of the environment, enough so as to be able to provide CASEVAC, and thus increase the individual survivability of assault force members. Assault airlift's ability to do this is contingent upon the presence of relative supremacy. "Airlift can be apportioned to evacuate patients from as far forward in a theater as the aircraft can operate," JP 3-17 details, acknowledging the capability of assault airlift platforms to provide CASEVAC to assault force members up to the extent that platforms can operate across a given domain.[267]

But this ability is seldom actionably feasible. Relative supremacy may not be achievable under all circumstances. It is conceivable for the conditions to pose such a bias against the assault force that achievement of relative supremacy is simply not possible. However, if it is to be achieved, the conditions necessary for its presence must be understood.

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[266] On-scene medical support is a benefit of having air mobility, but it is not necessarily exclusive to air transportation, nor is it necessarily indicative of the presence of assault airlift. A medical doctor can accompany any composition of assault force into an objective area and achieve on-scene medical support. It is the ability to provide timely and expedited evacuation of the casualties treated prior to the planned exfiltration of the mission assault force main body that signifies the presence of assault airlift at its finest, a capstone only made possible through the excessive presence of relative superiority.

[267] Joint Chiefs of Staff, *Air Mobility Operations*, III-16.

Relative supremacy is only possible during direct-action under the right conditions: when enough relative superiority exists to ensure the mission objective will be accomplished and the survival and extraction of the main mission assault force body have been assured. Otherwise, the mission assault force must focus on these prerequisites, first: the mission, the mission assault force survival, and then the survival of individual persons. Making possible the last is a dominating presence of relative supremacy. Creation of relative supremacy hinges upon the maximized utility of the principles of relative superiority and an exceptionally integrated and synchronized assault force combatting the enemy and the frictions of war. A sufficiently integrated and synchronized assault force is necessary to attain relative supremacy.

Under these circumstances, assault airlift not only has the ability to increase the survivability of the force in the most crucial phase of exfiltration, but it stands a chance of being able to provide on-scene medical support and CASEVAC throughout mission execution.

Casualty evacuations are less likely to be achieved during mission execution if the bare minimum amount of relative superiority has been achieved. In these cases, CASEVAC capability, mission force survival, and finally the mission objective itself are sequentially discarded as their realization becomes unfeasible. Without excessive amounts of superfluous relative superiority, it is not feasible to allow for the "luxury" of evacuating casualties during temporally and resource constrained combat operations.

Mission objective accomplishment and the survival of the main assault force, as prerequisites to overall mission success, supersede an assault force's ability to provide CASEVAC for internal or external persons. These priorities must be ensured prior to execution of CASEVAC. It would not be reasonable to ask an assault force pause mid-execution and sacrifice the fulfillment of their "no-fail" mission, or their own survival, to save the life of an injured first, second, or third party. In order for any casualty to be evacuated during mission execution, enough resources must remain (post the casualty's evacuation) to continue onward with the mission with the assurance that enough relative superiority will remain to both accomplish the mission objective and ensure the survival of the force. Not only is this level of dominance rare in modern operations, but this

"quantity" of relative superiority is not a hard and fast number. It involves a great deal of risk on the part of those making the decisions. Keep in mind that these SOF direct-action missions are transpiring in the realm of combat, deep within enemy occupied and controlled territories, and under tight time constraints. For these missions to experience the benefits of CASEVAC during mission execution (but prior to the extraction of the main mission assault force) is a truly luxurious phenomenon, to be sure. Such a capability has not been present for most of the world's history and its aspiration, now, reaches toward the limits of achievability.

Casualty evacuations are only possible in a direct-action if the degree of capitalized relative superiority is excessive enough to warrant its presence. If, after ensuring the achievement of mission objectives and extraction of the assault force, enough superfluous assault airlift assets remain operationalized and employable, then, and only then, can these excess resources can be expended to immediately assist in the evacuation of casualties experienced during mission execution. Assault airlift, in this way, uses excess generation of relative superiority to increase the resiliency of the mission force.

Excess assault airlift platforms can directly increase the survivability of individuals by being available to provide CASEVAC during the moments when these evacuations are needed the most: during the coinciding timeframe of mission execution and the golden hour. The concept of the golden hour was identified by Dr. R. Adams Cowley, a military surgeon and an integral founder of modern trauma care.[268] Cowley explained the importance of this critical hour:

> There is a golden hour between life and death. If you are critically injured you have less than 60 minutes to survive. You might not die right then; it

[268] "Remembering Dr. R. Adams Cowley: A Revolutionary & Pioneer of Trauma Medicine," *University of Maryland Medical Center* (blog), October 27, 2016, http://medcenterblog.org/2016/10/remembering-dr-r-adams-cowley-a-revolutionary-pioneer-of-trauma-medicine/; Walter A. Kerr, Timothy J. Kerns, and Richard A. Bissell, "Differences in Mortality Rates Among Trauma Patients Transported by Helicopter and Ambulance in Maryland," *Prehospital and Disaster Medicine* 14, no. 3 (July–September 1999): 52–57, https://www.cambridge.org/core/journals/prehospital-and-disaster-medicine/article/differences-in-mortality-rates-among-trauma-patients-transported-by-helicopter-and-ambulance-in-maryland/9F4DDDC7F8D2B4EA8A7A3104FF22A41D.

> may be three days or two weeks later—but something has happened in your body that is irreparable.[269]

Despite the importance of every single assault force life, capitalizing on this golden hour is difficult to achieve. For casualties incurred during mission execution, the golden hour exists concurrently with the remainder of mission execution. Each passing moment is vitally critical for both mission success and the survival of the would-be patient. These competing needs face limited resources and thus limited options.

Relative supremacy can help resolve this competitive process by providing enough dominance for the mission assault force to sacrifice a single air asset to CASEVAC, but only if the assurance of mission success is retained. CASEVAC is only possible during direct-action when the mission has been simplified to the point where the added complexity of retrieving a casualty and losing the assets to extract them do not detract from the overall mission objective or threaten the survival and extraction of the main mission force. CASEVAC will only be possible during SOF direct-action when the speed and surprise of the operation have so disrupted enemy forces that counter-attacks and conventional reinforcements pose no insurmountable threats to mission success.

It is true that adequate CASEVAC may not always be able to save lives. Lives may be lost regardless of the presence of CASEVAC capabilities. But making the effort to try does matter. It reflects upon the leadership and organizational cultures that send these brave souls into harm's way. It displays the sanctity for life and the honor for our soldiers that our senior military leaders, public, and elected officials espouse to.

And despite well-laid plans, adequate assault airlift may not always be available to provide CASEVAC under the resource-intensive operations direct-action missions tend to become. It is highly probably that high levels of relative superiority will not always mitigate the time, distance, and terrain standing between an injured party and the medical care they so desperately need. Some distances may prove to be too great; some injuries too severe. But the presence of CASEVAC should signify an incredible capacity of the mission assault force to have capitalized on relative superiority so fiercely so as to

269 "Remembering Dr. R. Adams Cowley."

have produced enough of it to expend on the immediate needs of even a single fallen comrade. This endeavor may be critical to the survival of injured persons, and its cause may be true, but its aspiration can only be achieved as an addition to accomplishment of the primary mission objective and survival of the main body of the mission assault force.

The presence of CASEVAC during the execution of a SOF direct-action mission therefore signifies an incredibly effective synchronization of the air and ground assault force elements to the degree that relative supremacy has been achieved. Therefore, during SOF direct-action, the existence of CASEVAC serves as definite indicator of the effective presence of assault airlift. It means that the mission assault force has achieved enough relative superiority to not only prosecute the mission's objective and to ensure exfiltration, but it has achieved enough relative superiority to expend it in pursuit of the survival of injured personnel during the infiltration, actions-on-the-objective, and exfiltration phases of mission execution. This level of relative superiority may be the most difficult to achieve, but is also represents the most desirable outcome on the part of the attacking force.

E. WHAT ASSAULT AIRLIFT NEEDS

1. Organizations Synchronized and Integrated by Leadership for Operationalization

In order to achieve a high level of relative superiority, or even enough to ensure the exfiltration of the mission assault force, a significant level of integration between the air and ground force components is required. Integration results as a construct of synchronization of efforts between forces stemming from conventionally heterogeneous backgrounds. Relationship-focused leadership is required to achieve adequate synchronization of these eclectic forces to integrate them to the level required for their operationalization. Haphazardly constructed amalgamations of conventional units labeled "special" and subsequently "authorized" to complete direct-action missions fall short of this goal. Something more is required, and this process and the leadership that it takes to make it happen are best understood if the desired mission outcomes are to be achieved. One of the best ways to counter these organizational design deficiencies and achieve

highly integrated mission forces has historically been through dedicated relationship-focused leadership.

2. Organizations

Today, as in the past, SOF members stem from organizations based in conventional roots. These roots bring with them many of the mindsets and strategic concepts that are perfectly applicable to conventional joint operations, but fall short of the integration required to operationalize a mission assault force. The results can be SOF mission parameters, force inclusion and exercise moldings, even overall mission plan designs, formed as much around conventional organizational politics and strategies as around the parameters required for successful mission execution. This was the illegitimate situation Colonel Roland D. Guidry, the squadron commander who flew in Operation EAGLE CLAW, described in his lecture video entitled "Operation EAGLE CLAW: The Iran Hostage Rescue Mission," posted to YouTube.[270]

Organizations, like military equipment, are designed to fight the wars of today, not the wars of tomorrow. Weapons developed for World War II began the fight of the Cold War. Decades later, the modern weapons developed for the Cold War were turned against terrorists networks. And the altered special operations forces of this global struggle against terrorist networks are now being turned against the violent extremist networks and failed states that threaten the fabric of the nation-state system. Weapons specifically designed to counter threats of the past are modified and used to counter new threats as they arises. The temporally proximal threat always gets attention as it rises, and the existing weapons are the first used against it. New weapons are developed over time to counter emergent threats, but in the technologically outpacing race of today, these weapons are outdated almost as soon as they are conceived and developed. The same can be said of organizations.

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[270] Operation EAGLE CLAW represents one such prominent example where conventional military politics interfered with the proper synchronization of disparate forces in an effort to ensure each conventional DOD service got its own "piece of the pie." "Operation EAGLE CLAW: The Iran Hostage Rescue Mission," YouTube, 58:31, Lecture by Colonel Roland D. Guidry, USAF, posted by bzylvn, 2012, https://www.youtube.com/watch?v=Ohy2-QIM-7s.

SOF organizations are not different, they have continually evolved to meet the challenges they face: from the warfighting Military Assistance Command, Vietnam–Studies and Observation Group (MACV-SOG) during the Vietnam War to the unified combatant command of United States Special Operations Command's (USSOCOM), founded in 1987.[271] But SOF organizations do face additional challenges over their conventional counterparts. SOF organizations are younger and their power base is less entrenched. SOF organizations have been subordinate to the needs of conventional forces since their inception. SOF was born of the conventional forces in an effort to face and counter new and emerging threats that did not fit neatly into attrition warfare strategic models. But the organizations provided to support SOF bare the marks of their history and the designs they were originally formed to fulfill. The organizations SOF members hail from are colored with the conventional paints that are designed to make them most effective at countering the existential threats their conventional ancestors were meant to face.

This assessment is not meant to be demeaning or demoralizing of either SOF or conventional organizations. Both conventional and special operations force organizations are positively and aggressively moving to better perform their intended functions. Conventional forces rightly focus on their honorable mission to counter existential threats to the nation. They should (and do) ensure the survival of the nation, utilizing all necessary means. For this reason, their calling will always trump the addressing of future potential problems. These future issues manifest in the present as "compulsorily-dealt with" but non-existential threats. These issues warrant less attention from conventional forces than do more clear and present dangers. And SOF organizations also continue to make significant developmental progress, as they have done since their inception. The maturing and progressive nature of SOF organizations was codified as they came into their own with USSOCOM's founding, in the aftermath of the 1986 Goldwater-Nichols

[271] MACV-SOG is written of by Thomas K. Adams in his 1998 book, *U.S. Special Operations Forces in Action: The Challenge of Unconventional Warfare.* Thomas K. Adams, *U.S. Special Operations Forces in Action: The Challenge of Unconventional Warfare* (Psychology Press, 1998), 116–150.

act.[272] All of these progresses move in the right direction. The intent here is to recognize the incongruences between characteristics associated with the conventional roots SOF members once hailed from with the needs of the joint organizations they must now become a part. These rifts must be mended to create a more integrated and operationally effective mission assault force. The goal is to unlock the means of accomplishing this seemingly difficult task.

No organization will ever be perfect. Changes will always be required. SOF-born organizations designed perfectly to support SOF warriors will be designed and crafted to specifically function in a manner most efficient at achieving their current mission taskings. But these taskings will inevitably change, driving the need for functional and even organizational changes. Even resilient organizational structures require internal functional reorganizations over time. Technological developments of friend and foe, as well as a dynamic operational context, demand it.

No organization can be expected to sacrifice current effectiveness and efficiency for potential effectiveness against as-of-yet undefined future taskings. One is always seeking to be ready for the unknown, but the details and parameters of how best to prepare are inherently illusive. It is an epistemological issue – one cannot know the future until it has arrived. Such is the nature of time. We only move one direction through it. We may remember the past, and we may predict and dream of the future, but human beings are destined and trapped, for better or worse, living in the moment as it transpires: in the present. There are no options here. It is physics as much as it is philosophy. And given that organizations are merely labels given to institutions composed of dedicated persons of a common interest or goal, the organizations themselves are not immune to these effects. SOF organizations, like others, are therefore destined to face incongruences

[272] Gordon Nathaniel Lederman discusses the Goldwater-Nichols Act of 1986 as well as the subsequent founding of the Joint Chiefs of Staff in his 1999 book, *Reorganizing the Joint Chiefs of Staff: The Goldwater-Nichols Act of 1986.* The 2017 USSOCOM Fact Book also corroborates the process and timeline. Gordon N. Lederman, *Reorganizing the Joint Chiefs of Staff: The Goldwater-Nichols Act of 1986* (n.p.: Greenwood Publishing Group, 1999): xi, https://books.google.com/books?hl=en&lr=&id=ANmsazlpQ10C&oi=fnd&pg=PR9&dq=goldwater+nichols+act+of+1986&ots=8hhnOgWtWt&sig=6VuSqz1RYtPb6bqmm-shkNIPM-E#v=onepage&q=goldwater%20nichols%20act%20of%201986&f=false; "United States Special Operations Command Fact Book, 2017," U.S. Special Operations Command, 2017, https://www.socom.mil/public-affairs/command-information/fact-book.

between their vested skill sets and those demanded as future proximal challenges emerge across the timescape.

Furthermore, because of the divested conventional roots of SOF units, there are relatively few (if arguably, any) jointly composed standing SOF units in existence today. SOF Army units are generally stationed at Army bases.[273] SOF naval units are stationed with conventional Navy forces.[274] SOF air units are stationed at Air Force bases.[275] This promotes unilateral training and reversion to conventional mindsets. Sure, these units participate in joint training exercises together, and they even fight together when deployed in large scale conventional campaigns such as Operation ENDURING FREEDOM or Operation IRAQI FREEDOM, but they remain segregated at home station based on their conventional ancestry. These delineations are no longer necessary or helpful in an organization that requires inherently joint actions.

Direct-action missions require these disparate units be synchronized and integrated at extraordinary levels in order to achieve mission success. Although relationships exist between these various SOF organizations, bridging the gaps to build from "potential" capability to "operationalization" requires more focused and intimate relationships than the tenuous ones maintained in the times between specifically mandated direct-action missions.

How does one go about ensuring interservice rivalries do not interfere with the empirical needs of a mission assault force on a critical "no-fail" direct-action mission? The first answer may be to build closer organizational ties. Collocating these units would encourage joint training and regular interactions. Mutual trust, credibility, and an increased understanding of functional counterpart issues would increase. But these

[273] United States Army Special Operations Command is located at Fort Bragg, NC. "United States Army Special Operations Command," United States Army Special Operations Command, 2017, http://www.soc.mil/.

[274] Navy SEALs are based at Naval installations at Coronado, CA; Little Creek, VA; and Pearl Harbor, HI. "Locator," NavySeals.com, 2017, https://navyseals.com/ns-overview/locator/.

[275] AFSOC units are located on Air Force bases in Hurlburt Field, FL; Cannon AFB, NM; and RAF Mildenhall, UK, among other locations.

tighter-knit organizations are only a foundation for progress. Someone must be there to encourage the interaction and movement in a more joint and integrated direction.

This is where the critical role of leadership comes into play. Leadership is what synchronizes disparate organizations. One of the best ways to counter these organizational design deficiencies and achieve highly integrated mission forces has historically been through balanced relationship-focused leadership.

3. Leadership

As with all organizations and strategic employments, leadership plays a critical role in the operationalization of assault airlift. SOF leadership must be able to bridge the organizational gaps between functionally diverse members in their inherently joint SOF mission force. Leaders must define the purpose of their organization. They must focus its efforts. Leaders must engender cooperation and diminish focuses that can lead to inter-service competitions that may interrupt integration, synchronization, and operationalization of the mission force.

a. Loyalty Flows up the Chain of Command / Service Flows Down

Leaders have two obligations as links in a command chain: their loyalty flows up the chain of command while their service, resource access, authorities, and empowerment flow down the chain of command.[276] Making these two conceptual obligations function is contingent upon mutual trust and credibility. Leaders in joint environments must engendering mutual trust and credibility with all of their functionally diverse subordinates. They must be able to relate to the various components under their chain of command. Approachability makes leaders more likely to become aware of technically-niched challenges of less-familiar functional components. Unapproachable leaders, though potentially extremely proficient in their own fields, are generally less relatable. They inherently focus on the needs of their own conventional service members over those of others. This seemingly "innocent" rivalry of interests can lead to oversights of relevant

[276] This concept is attributed to Lt Col Roy H. Oberhaus, commander of the 7th Special Operations Squadron, Air Force Special Operations Command's singular vertical lift platform asset in the European theater, 2016. Lt Colonel Roy H. Oberhaus, 7th Special Operations Squadron, RAF Mildenhall, UK, 2016.

and critical factors when unchecked in joint operational environments. It can foster identity issues within an organization that may prevent relevant issues from bubbling up to the attention of joint commanders.

In order to lead jointly composed organizations, a more balanced and comprehensive approach must be taken. This requires a great deal of humility: leaders must become both the student and the servant of the functional components whose issues he or she must now understand and address. They must invest the effort to learn about the issues these components face, and they must humble themselves enough to be willing to learn about how and why certain issues may matter. A leadership approach focused on the relationships and means of empowering various service components is most effective at reaching out to bridge this gap and successfully synchronize and integrate joint forces.[277]

b. Loyalty Flows up the Chain of Command

Loyalty flows up the chain of command. This means that military personnel and organizations obey their leaders. They must trust that leaders will not sacrifice their efforts or their lives in vain. They must be able to trust that leaders have their best interests at heart. Followers must believe that their leaders are legally and morally empowered to issue orders, and they must embrace that it is their duty to ensure that these orders must be followed. When the Commander decides for an early morning or weekend exercise, and the Sergeant disagrees, loyalty flows up the chain of command. Even though the personnel may not want to obey, the directive is moral and lawful. The unit does what the Commander orders, not what the Sergeant prefers. When the Commander orders men and women into harm's way, the operators obey, setting aside personal

[277] General (retired) Herbert "Hawk" Carlisle, USAF, identified humility and the ability to listen as two of the most positive leadership qualities he had observed in his 39 year military career. He also identified arrogance and hubris as the most damaging leadership traits. General Carlisle's background is of a conventional nature. Based on the four-stars of experience General Carlisle sheds on leadership, it is possible to induce that balanced relationship-focused leadership may be overarchingly a more effective leadership strategy over traditional technical-based quantitative leadership. However, such an assessment is outside the scope of this analysis. General (retired) Herbert Carlisle, (Guest Lecturer, Naval Postgraduate School, Monterey, CA, November 08, 2017).

reservations in a show of honorable courage and loyalty to their leader, their organization, and the causes they stand for. Loyalty flows up the chain of command.

c. Service Flows down the Chain of Command

Service, resource access, authorities, and empowerment flow down the chain of command. Service is what leaders provide to their people. Leaders are not made by the position they hold. Leaders are not born. Leaders are made: crafted through hard experience, sage advice, and valuable lessons learned that are taken to heart. Leaders motivate others to follow where none may have otherwise tread for the good of a cause that may have otherwise passed. Leaders serve their people. They provide the resources or means to fix the problems their subordinates bring to them for resolution. Leaders espouse to provide their subordinates with the authorities, resources, and training necessary to accomplish their individual tasks. Leaders seek to obtain from higher-command the authorities, resources, and solutions necessary to keep their own subordinates empowered. Service, resource access, authorities, and empowerment flow down the chain of command.

d. Balanced Leadership

Functionally balancing these two conceptual obligations is contingent upon mutual trust and credibility. Leaders who cannot trust their subordinates cannot responsibly empower those subordinates to achieve command's directives. The risks associated with allocating resources and authorities to individuals unfocussed on the specified tasks are unnecessary and unjustified.

Subordinates must be trustworthy in order to warrant the empowerment they need, in order for their voices to have the credibility required to justify this empowerment. This is what makes a volunteer service both a great trademark of successful special operations as well as a shining achievement among the American military branches. A volunteer service means participants are both willing and able to do their part. They have displayed both aptitude and desire. They want to be doing their job and they have been selected and vetted as competent. This engenders trust.

Likewise, leaders must be trustworthy in order to serve their subordinates. Subordinates who cannot trust their leaders face the perilous option of being ordered to perform tasks the subordinate may deem unnecessary, wasteful, or unjustifiably dangerous. Without a standing trust between the leader and the subordinate, obedience is merely a compulsory expression of an inability to disobey for fear of reprisal. Such relationships poorly form the inner workings of any organization, but they are particularly harmful when "inefficiencies" translate into corpses or unacceptable tactical or strategic mission failures. Synchronization, integration, cohesion of efforts, capitalization on the principles of relative superiority, and the very theory of special operations: all of these are contingent upon trust.

Self-preservation, one's career, the reputations of an individual and organizations, loyalty up the chain of command, and service down the chain of command are all priorities that must be carefully balanced. Leaders must maintain an extroverted focus on balancing these factors in a manner that is conducive to joint SOF environments. Leaders who are overly focused on the drives necessary to be successful in conventional departmental services tend to be less effective at bridging the gaps between disparate organizations that bust be integrated for joint operationalization.

e. Relationship-Focused Leadership

Relationship-focused leaders are leaders who value the relationships between people and organizations as much as the technical skillsets those people and organizations ostensibly offer.[278] Because they are focusing on these relationships, they are inherently inclined to place importance on the individuals and organizations in their

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[278] Adapted from the attributes associated with the term "servant leader." Servant leadership was defined, by Robert K. Greenleaf in his paradigm shifting 1970 essay and subsequent 2002 book, *Servant Leadership: A Journey into the Nature of Legitimate Power and Greatness*. Today, his work lives on through the Greenleaf Center for Servant Leadership, which provides the following definition:

> *Servant Leadership:*
>
> "The servant leader is servant first…. It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead. That person is sharply different from one who is leader first, perhaps because of the need to assuage an unusual power drive or to acquire material possessions…. The leader-first and the servant-first are two extreme types." "What is Servant Leadership?" Greenleaf Center for Servant Leadership, 2016, https://www.greenleaf.org/what-is-servant-leadership/.

relational networks. This extroverted emphasis means that relationship-focused leaders tend to place higher levels of importance on the needs and perspectives of those they are relating to. This, in turn, means they focus on the resiliency of their organization's members in concert with the prosecution of professional objectives. Relationship-focused leaders maintain a balance between their obligations both up and down the chain of command.[279]

These leaders can exist in any organizational structure, but their leadership style is especially successful in organizations of varied-composition that include individuals of disparate backgrounds. Their emphasis on relationships makes them particularly well suited for bridging the gaps that exist between individuals hailing from different branches in the Department of Defense. Relationship focused leaders are particularly keen on helping these disparate individuals relate to their new role as members of a joint mission force. This, in turn, leads to greater levels of mission force integration and overall synchronization.

f. Technical Leadership

In contrast to relationship-focused leadership, traditional technical leadership is a leadership style that has been incentivized to focus on quantitative accumulation of aims prescribed to increase upward-mobility within a narrow functional area. Technical leadership is driven by an emphasis on the needs and perspectives associated with a single functional role. It is about achieving the highest possible measure in this singular functional role: about becoming the best becoming the technical expert one can become. This makes technical leadership highly effective in its prescribed task area, while less effective at relating to the needs and perspectives of individuals from alternate

279 The delineating aspect depicted here and related to Greenleaf's work is the difference between servants who choose to esteem to lead ("servant leaders") versus individuals seeking to use positions of leadership to satisfy more innate self-centered goals, such as self-preservation, careerism, reputation, or glory. Such "leader-first" individuals are commonly referred to as "toxic leaders" in modern vernacular, though the term is stronger than is warranted here. Instead, suffice it to say that some leadership styles are less effective under certain circumstances than others. Robert K. Greenleaf, *Servant Leadership: A Journey into the Nature of Legitimate Power and Greatness* (n.p.: Paulist Press, 2002).

The term "toxic leadership" is attributed to George E. Reed and his 2004 article by the same name. George E. Reed, "Toxic Leadership," *Military Review* 84, no. 4 (2004): 67–71.

backgrounds. This contrasts technical leaders with relationship-focused leaders, who are driven by a need to accomplish their directed tasks in parallel with providing others with the opportunities they will need to succeed.

Being good at a single functional-job (while potentially an appropriate measurement of leadership effectiveness in a conventional sense) does not necessarily translate into effective leadership in a joint environment. In jointly composed organizations, the various differences of capabilities brought to the table by functionally diverse components make them quantitatively less comparable than conventional assets. Being good at flying planes and shooting down bad guys might make one a great fighter pilot, but it does not necessarily make one good at operationalizing a joint mission force. These skillsets are apples and bananas. They cannot be quantitatively compared in the same manner as conventional metrics. Identifying potential future leaders through conventional metrics is less effective at identifying the measures that can determine who is going to be a more-adept leader at integrating a joint mission force.

g. Successful Joint SOF Leaders

Dr. Leo Blanken, in his 2015 book, *Assessing War: The Challenge of Measuring Success and Failure*, edited by Hy Rothstein and Jason J. Lepore, discusses the incentivized nature of traditional military leadership and how the metrics that work well to quantify success in conventional combat can instead imbalancedly-serve to thwart strategic aims in irregular warfare.[280] In conventional conflicts, attriting more of one's enemy is a rewarded skillset that promotes one into a position to lead and teach others to do the same. Kill more bad guys and rise in the ranks. It is a tried-and-true traditional leadership mindset. Yet this mindset (and the associated incentives structure) is less effective at building the mutually trusting relationships that are critical in a joint organization, such as SOF.

It is posited here that an imbalanced emphasis on technical leadership above relationship-focused leadership can be damaging to the longevity and resiliency of

[280] Leo J. Blanken, *Assessing War: The Challenge of Measuring Success and Failure*, eds. Hy Rothstein and Jason J. Lepore, (Washington, DC: Georgetown University Press, 2015).

individuals in joint organizations. It can contribute to integration dissonances and inter-service biases that can inadvertently disrupt joint mission force operationalization. In a joint environment, both the mission and the people must be supported in tandem for the joint organization to completely integrate, synchronize, and operationalize.[281] If relationships are not emphasized, traditional leadership's narrow focus on accumulating service-centric metrics for upward-mobility and conventional-strategic successes can negatively impact the resiliency of these jointly composed organizations.

Relationship-focused leaders are less concerned with quantitatively comparable analyses, and are instead focused on providing all of their diverse subordinates with the tools necessary for each to succeed in his-or-her own right. Relationship-focused leaders are able to better understand and empower a diverse workforce in pursuit of command objectives. They recognize that the heterogeneous nature of their force means that the paramount success in one technical field does not necessarily equate to the same level of success in another. Multiple fields must be technically proficient to achieve overall success. Three bad guys identified via human intelligence is not worth more or less than three counter-terrorism sorties flown. Both are essential aspects of a joint mission force.

For SOF, relationship-focused leaders are a better investment than technical leaders. Either leader can make a mission force function for a limited period of time. But technical leaders are less effective at operating joint organizations across longer periods of time. Their overly-intense focus on any single priority, even if it is the achievement of mission objectives, makes them and their subordinates less resilient. They are willing to burn up the motor to win the race. This can allow the appearance of a short-term success, while eroding the very men and women who must persist to maintain future capability. These leaders can drive hard to accomplish an objective, but their imbalanced approach can misappropriately weigh the risks incurred to the mission force.

In contrast, relationship-focused leaders are able to operate joint organizations effectively in both the short term and across the breadth of time. They address the needs

[281] Inter-service biases is meant to describe the "brotherly" rivalries that exist between the Department of Defense service branches. The roles and identities of each of these departments serves as a benefit in a conventional sense, but can serve to fragment joint structures and isolate valuable inputs when an overemphasis on technical leadership is prevalent in a joint environment.

of their functional components to make them more effective in the "now" and into the future. They are functional in both short-term and long-term capacities. They more accurately weigh the risks to both the mission objectives and their mission force. This balanced approach bolsters mission force resiliency as well as accomplishing mission objectives. This perspective makes relationship-focused leaders more effective in SOF than singularly focused conventionally minded leaders. This makes relationship-focused leaders a better investment for SOF, overall.

The SOF enterprise may be in the fledgling steps of determining that new efforts are required to better identify and address its need to manage talent in addition to personnel. Major Paul R. Andrews, Jr, and Major Brett A. Stitt began to address the issue of talent management in their 2017 Naval Postgraduate School master's thesis, "Human Capital Management of Air Force SOF: Leadership Identification, Selection, & Cultivation."[282] Their research indicated that additional feedback mechanisms may be required in order to determine how leaders are performing, as well as additional education mechanisms. Perhaps feedback from those underneath a leader's chain-of-command could better allow higher headquarters to understand the means by which a leader is achieving their assigned tasks: whether success is achieved at the cost of their people or through the strength achieved by standing together on each other's shoulders.

An organization that retains a singular focus that can be accomplished by many homogenous individuals may rightly choose leadership based on those who demonstrate the highest levels of technical achievement. Technical expertise becomes the measure of merit, and thus a prerequisite for advancement. This may well be the case for many of the conventional DOD departments. It is highly probably that a fighter pilot whose primary job is to maintain air supremacy may be advanced inside the U.S. Air Force based on his-or-her ability to safely lead formations into and out of combat. His-or-her technical expertise is what makes him-or-her a great leader. They represent a successful technical leader in a functionally homogenous community.

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[282] Major Paul R. Andrews, Jr., and Major Brett A. Stitt, "Human Capital Management of Air Force SOF: Leadership Identification, Selection, & Cultivation," (master's thesis presentation, Naval Postgraduate School, Monterey, CA, November 10, 2017).

Conversely, relationship-focused leaders focus on the character of an individual and the relationships involved between persons and organizations as the primary means of advancing a given cause. Relationship-focused leaders motivate individuals by appealing to the positive qualities of their character and reinforcing these attributes. Relationship-focused leaders can be cultivated using a technique akin to the Ranger selection process: individuals of good moral character are selected based on their embodiment of the desired characteristics, as well as their aptitude to develop the requisite skillsets they will be required to achieve. The individual is selected based on their character and potential, and their technical performance will be brought up to speed in time.

It is exactly this model that is put into practice when direct-action missions are conceptualized. Those with virtuous moral character and skillset-aptitude are selected to develop skillsets that will need to be developed and matured to accomplish a given mission. Relationship-focused leaders are ideally suited to lead in these organizations.

Selecting relationship-focused leaders is not about favoring someone based on their personality or who is the most likable. It is not about choosing leaders based on "the good ol' boys' club." Instead, it is about focusing on identification of individuals who have both the character and the technical aptitude necessary to become the leaders an organization needs. It is about weighing character as a more significant factor than technical skillset in the initial stages of leadership development, while recognizing that both will eventually be paramount to mission success.

Leaders who find themselves more technically inclined increase their likelihood of success in joint environments by recognizing and minimizing their own vulnerabilities. Technically-inclined leaders tend to overly focus on the quantitative measurement of capability instead of the relationships that integrate and synchronize these organizations. Familiarity dictates that technical leaders will be better able to measure and thus support the effectiveness of functional components sharing their same conventional background. Their lack of familiarity with other functional components can lead to inadvertent ignorance of relevant issues. This can degrade the means necessary to operationalize joint mission forces. Of course functional performance matters, but technical leaders can

overly emphasize individual performance to the detriment of the organization's critical relationships. Introspectively recognizing this can enable one to mitigate it.

Leaders must also avoid the tendency to adopt an approach of presuming to understand diverse functional component issues without investing the effort to actually understand them. This is personified in attitudes that say, "I know what your job is and how you should be doing it." This attitude fails to build or bolster critical inter-service relationships. A more humble relationship-focused approach can prove more successful.

For relationship-focused leaders, these challenges are more easily surmounted due to their willingness to humbly recognize the functionally refined expertise of other component members. This makes them extremely effective at build relationships.

h. Empowerment

Sharing of power, or empowerment of one's subordinates, is critical to the role of leadership in an organization where no single actor retains the expertise necessary to action the mission alone. Leaders must choose to focus on the needs and concerns of the SOF personnel they serve. They must endeavor to fulfill those needs by seeking the intelligence, parts, money, permissions, and supporting elements that provide the solutions to their subordinate's requirements.[283]

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283 In sharp contrast to the relationship-focused leader is the destructive leader. Colonel George E. Reed, U.S. Army, along with Dr. Craig Bullis, provided a 2003 report to the Secretary of the Army, Assessing Leaders to Establish and Maintain Positive Command Climate, specifically aimed at examining destructive leadership and the assessment of effective leadership qualities. Their insights are incredibly relevant to the inherently joint nature of SOF mission forces as well:

> "Destructive leaders are focused on visible short-term mission accomplishment. They provide superiors with impressive, articulate presentations and enthusiastic responses to missions. But, they are unconcerned about, or oblivious to, staff or troop morale and/or climate. They are seen by the majority of subordinates as arrogant, self-serving, inflexible, and petty [emphasis added]." Craig Bullis and George Reed, *Assessing Leaders to Establish and Maintain Positive Command Climate* (n.p.: Army War College, 2003), 1.

Destructive leaders are clearly one end of the spectrum, but a leader need not be entirely destructive for their influence to have a negative effect in a joint operational environment. Being unapproachable or perceived to be biased towards one functional component is enough to allow relevant factors from less "favored" functional components to go overlooked. If a leader appears biased or self-interested, their subordinates are less likely to approach them with issues … issues that just might be of significant importance in the scales of weighing mission priorities. Reed, "Toxic Leadership," 67–71; Bullis and Reed, *Assessing Leaders to Establish and Maintain Positive Command Climate*.

Why is it so important to have relationship-focused leadership in SOF direct-action mission assault forces? It is critical to establishing and growing the overall trust in an organization that must be synchronized, integrated, and operationalized in an exceedingly short period of time. The time constraints associated with most direct-action missions (from conception to execution) require an immediate focus on addressing the granular and nuanced needs of the subordinates in a jointly composed assault force. Bolstering the inherent trust required for the individual members, hailing from various conventional backgrounds, to integrate well enough to adequately synchronize their functional roles requires the utmost attention.

High levels of trust are required for the men and women of an assault force to trust counterparts from various backgrounds with the authority to diminish safety factors that may well represent immediate and potentially fatal threats if eroded too far. These levels of trust, while inherent in homogenous conventional units, can be quickly undermined and dissolved in jointly composed mission forces if synchronizing leadership is not present to bridge the gap.

This is why relationship-focused leadership, in particular, is key to the operationalization of a truly joint mission assault force. Leaders of these forces must divest themselves of the identities once pertinent to their existence in a conventional unit. Instead, they must truly focus on seamlessly achieving the highest capability level possible with a blended force composed of various technical specialties and experience levels. Each of these diverse elements is critical to the employment of the joint mission force towards a singular mission objective. Compressed mission timelines and organizational trusts demand leaders who will empower the functional effectiveness of the eclectic backgrounds their joint mission force represents.

i. Humility

Leaders must be proficient in their own field of expertise, but they must also be willing and able to turn to technically proficient experts in fields they are not familiar with. It is not reasonable to expect a ground assaulter to become proficient in the expertise of assault airlift in the few weeks or months leading up to a specific direct-

action mission. Nor is it reasonable to expect an air operator to be able to dictate the details of ground tactics to the ground assault force. Both are independently functionally critical for a joint mission force. Leadership must remain aware of this to mature the trust and credibility required to operationalize the mission force.

The overall mission commander must have functional expertise available to them, and they must be humble enough to turn to those functional experts for advice when it is required. Leaders must be willing to accept risks and empower those functionally proficient experts who have earned their trust and operate in domains the leader him/ herself may not be proficient in. Leaders must trust their people. The people must, in turn, obey their leader.

McRaven acknowledged the importance of professional and humble leadership in the closing chapter of his book:

> The officers and enlisted whom I interviewed were professionals…. They were … exceptionally modest men who felt that there was nothing heroic in their actions and often sought to downplay their public image.[284]

In the end, this research hopes to be able to show benefits to SOF direct-action missions resulting from relationship-focused leaders who have stepped forward to provide the synchronization required to integrate SOF for mission accomplishment despite the inefficiencies and organizational pitfalls that befell them.

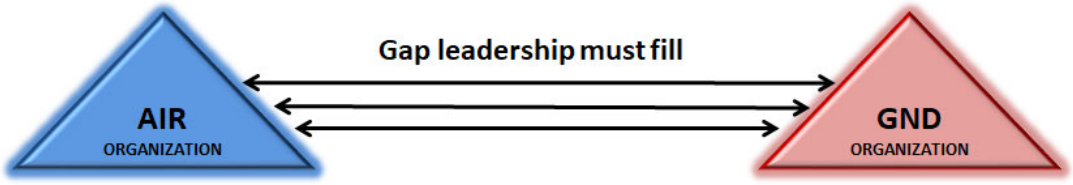
4. Synchronization

Synchronization is the engine that drives the integration and operationalization of organizations to form a mission assault force, and relationship-focused leadership is the driver of this engine. "Synchronization is critical to maintain the speed of the offensive," prescribes Dr. Kalev I. "Gunner" Sepp, a retired Special Forces (Green Beret) Army officer, former Deputy Assistant Secretary of Defense for Special Operations Capabilities, and a Senior Lecturer in the Department of Defense Analysis at the Naval

[284] McRaven, *SPEC OPS*, 391.

Postgraduate School.[285] The synchronization of a mission force is a primary enabler of the violent speed and aggressive execution that are essential during SOF direct-action missions.

Synchronization, as a concept, represents the organizations, equipment, personnel, planning, resources, and time invested to ensure proper alignment occurs between the integral portions of a mission assault force. Synchronization is something leaders do to overcome organizational, contextual, and historical incongruences that diminish the effectiveness of their mission force. If they are successful, the result is a mission force capable of maximizing the utility of its functional pats to achieve the maximum-possible level of relative superiority. This, in turn, results in the greatest chance of achieving the mission objective, survival and extraction of the force, and the survivability of individuals associated with the operation, whether friend or foe (see Figure 31).



Leadership must bridge the gap between conventionally dissonant conventional ancestral organizations. The farther these organizations are apart, the larger the gap leadership must fill.[286]

Figure 31. Leadership as a Means of Circumventing Organizational Dissonances[287]

[285] Kalev I. Sepp, "Psychological Warfare and Deception: The American War," (Lecture, Naval Postgraduate School, Monterey, CA, August 02, 2017).

[286] The social networking and analysis methods taught by both Dr. Sean Everton and Mr. Dan Cunningham at the Naval Postgraduate School eloquently articulate the various measures and metrics that can be utilized to understand how individuals can serve to bridge organizational networks. Their courses are highly recommended for those with the opportunity to attend. Adapted from Dr. Sean Everton, "Networks and Religion," (Lecture, Naval Postgraduate School, Monterey, CA, 2016); Dan Cunningham, "Visual Analytics," (Lecture, Naval Postgraduate School, Monterey, CA, 2017).

[287] Adapted from Everton, "Networks and Religion;" Cunningham, "Visual Analytics."

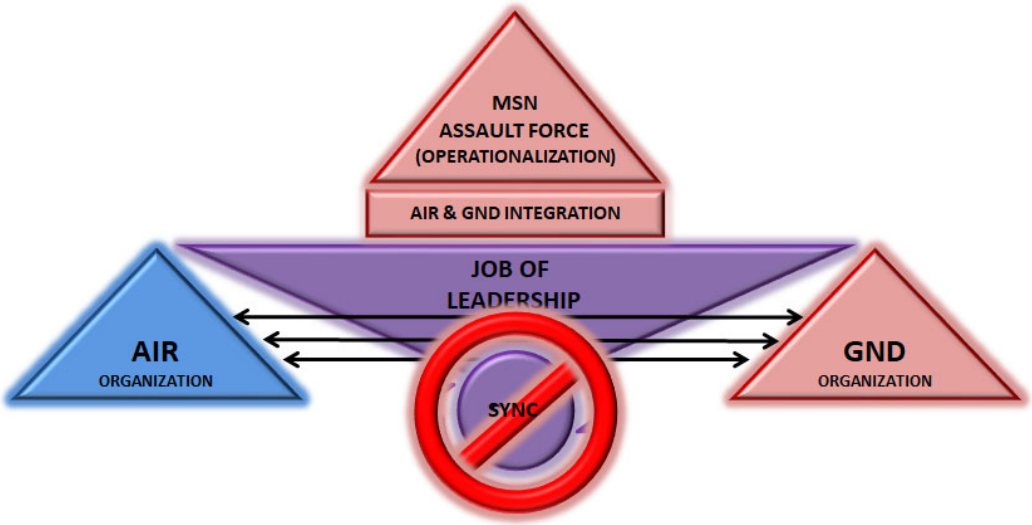
Synchronization is the engine that drives an assault force towards the achievement of relative superiority. It provides the assault force with the assets, resources, and means by which to prosecute their mission. Synchronization is achieved through the incredible sense of purpose instilled into each member of the assault mission force, accurate rehearsals practiced tirelessly to achieve proficiency, and clandestine tactics and equipment honed to mere extensions of the operators' will-power (see Figure 32).

Synchronization: The ability of relationship-focused leadership to bridge the gap between heterogeneous organizations across the contextual domain to synergize resources and attitudes in order to integrate an operational mission force.

Figure 32. Synchronization: A Product of Relationship-Focused Leadership[288]

288 Adapted from Dr. Sean Everton, "Networks and Religion," (Lecture, Naval Postgraduate School, Monterey, CA, 2016); Dan Cunningham, "Visual Analytics," (Lecture, Naval Postgraduate School, Monterey, CA, 2017).

Without proper synchronization, the main drive behind the mission assault force is faulty. Without it, the force will lift off without adequate guidance or thrust to attain and sustain relative superiority. Without it, the likelihood that the mission assault force will achieve enough relative superiority to ensure the survival and extraction of the mission force diminishes dramatically. No matter the mode of transportation this is true. It is simply easier to identify dissonance in synchronization when air mobility is the desired mode of transportation (see Figure 33).



Organizational structures that are separated by great dissonances create large gaps for leaders to fill. Overcoming this distance is possible, but weaker ties between organizational structures, at all functional levels, decrease the likelihood that leadership will adequately fill the gap and achieve synchronization.

Figure 33. Large Organizational Gaps Overstretch Technical Leaders[289]

When overland transportation is utilized, the necessity to employ specifically trained operators is usually negated. Ground assault force operatives can walk or drive themselves. They do not need specially trained operators to join their force for overland transportation. Surface or subsurface seafaring transportation methods increase the likelihood that specially trained mobility operatives will need to be a part of the

289 Adapted from Dr. Sean Everton, "Networks and Religion," (Lecture, Naval Postgraduate School, Monterey, CA, 2016); Dan Cunningham, "Visual Analytics," (Lecture, Naval Postgraduate School, Monterey, CA, 2017).

synchronized mission force, but these transportation mediums rarely deposit the assault force at the objective site. It is possible, but unusual for an objective to be at sea or accessible my water alone when prosecuting non-existential threat based strategic objectives. It does occur, but these cases are the exception and their existence serves as proof of the rule.

Synchronization means leadership that is willing and able to do what it takes to bridge the gaps between the imperfect organizations that were designed by those who preceded them in order to operationalize the mission assault force. It consists of investing during the planning and preparation phases; of simplification, security, rehearsals, and instilling a sense of united purpose amongst all of the assault force participants. JP 3-17 warns that "effectiveness is directly related to a commander's understanding of a number of planning factors. Each factor needs careful consideration."[290] Synchronized planning cells are where these functionally diverse factors are designed to be "careful consider[ed]."[291]

Adequate assault airlift is generally a prerequisite for mission success and for survivability of the mission assault force, but its presence does not ensure mission success. It must be intimately synchronized with the assault force in order to bolster relative superiority to the maximum extent possible.

One cannot achieve assault airlift by developing an insufficient plan and then simply "sprinkling" aircraft on it. What results will not be a plan exuding the sweet aroma of survivability brought forth by the air assets entailed to execute it. Instead, what will remain will be an incomplete assault plan containing air assets that will likely drive up the costs entailed when the plan catastrophically collapses on itself due to lack of synchronized support.

In these cases, it is most plausible that insufficient synchronization bears the blame for the mission failures. It is usually not failed equipment or unanticipated environmental circumstances, though these may appear as proximate causes of failure.

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290 Joint Chiefs of Staff, *Air Mobility Operations*, VI-11.

291 Joint Chiefs of Staff, VI-11.

Instead, it is usually a lack of proper synchronization of the air assault elements with the ground assault elements that likely bears blame for operationalization failures. It is a lack of proper synchronization that leads to ignorance of pertinent factors that allow proximate causes of failure to materialize. This pattern is observable and some of the various symptoms will be examined during the Operation EAGLE CLAW and Operation ANACODA case studies.

The effects of dis-integrated and unsynchronized mission forces are magnified by immersing the already-challenging realm of SOF direct-action missions into the unforgiving medium of flight. The costs in both blood and treasure are generally significant when aircraft incidents and crashes occur. Yet this situation and the unacceptable outcome are particularly possible when SOF direct-action mission forces are reliant on air mobility as their means of transportation without proper integration and synchronization. They risk failure at a time when failure is not an option. Yet it is the capability of aerial mobility through hostile environments that often makes these missions even feasible. It is precisely for this reason that it is so imperative that air, among all other current transportation mediums, demands flawless and seamless integration into an assault force to achieve the benefits of assault airlift while avoiding potentially unacceptable consequences. When proximate failures of equipment or otherwise do occur, the presence of assault airlift allows a mission assault force to exercise abilities and capabilities necessary to overcome the otherwise inevitable and intolerable consequences.

Assault airlift is what allows a mission assault force to snatch success and survivability from the jaws of defeat. It allows the flexibility and versatility to adapt to the changing environment, allowing the assault force to move through time and space with enough ease to simplify ever complicating scenarios throughout mission execution.

In the end, assault airlift is an ability and attitude with the focused purpose of achieving mission success while safely bringing home the mission assault force. If enough excess relative superiority exists, it may even be possible to spend it to increase

the survivability of individuals during the engagement itself, through the use of on-scene medical support and casualty evacuations.

5. Integration

Integrating and synchronizing the air assault force into the mission force increases the probability that the entire spectrum of the mission force's capabilities, limitations, and requirements will be identified and explored prior to the mission itself. This is why McRaven places such a heavy importance on full-scale rehearsals. Full-scale rehearsals are designed to make up for unforeseen discrepancies that individual component repetitions may not identify. These discrepancies are not identified during individual component repetitions because these repetitions are accomplished without integration. They are not fully synchronized with the rest of the assault force (and the environmentally contextual aspects) until they are carried out in the full-dress rehearsals.

JP 3-17 demonstrates the subordinate relationship air mobility has in conventional conflicts:

> Once the appropriate ground force commander orders an operation and establishes movement priorities, load plans, and departure points, the [commander of air force forces, or joint force commander] should control the air movement.[292]

This conventional model is defensible in conventional organizations and contexts, but its hierarchical status based on conventional roots is insufficient in attaining the level of synchronization and integration required in joint operations. SOF direct-action relies on the integration of functional roles of participating elements. The requisite level of integration and synchronization for SOF direct-action is not achievable in a cohesive mission force when portions are relegated to either "subordinate" or "dominant" relationships. This hierarchical concept goes against the grain of the inherently joint

[292] Joint Chiefs of Staff, *Air Mobility Operations*, III-16.

nature of SOF direct-action and magnifies ancestral conventional root fissures. Instead, direct-action requires a flattened and seamlessly integrated mission force.

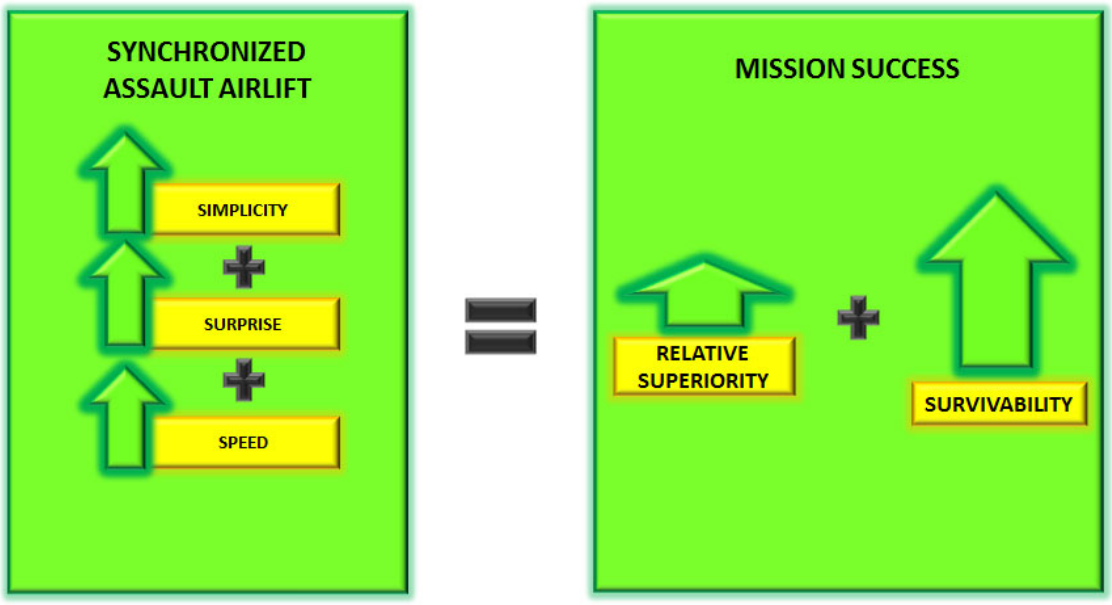
As demonstrated by the previously identified contributions of functional assault force elements to relative superiority, addition of technology can slightly increase a ground assault force's probability of attaining and sustaining relative superiority, but it may not allow enough relative superiority to allow extraction and survivability of that assault force. Integrating the air assault force, along with its intrinsic technology, personnel, tactics, training, and tenets, into a mission assault force is the best way to ensure the most possible relative superiority is achieved.

McRaven acknowledges the importance of synchronizing an assault force to achieve integration in the closing paragraph of his conclusions:

> In conclusion, what allows special operations forces to achieve relative superiority is their ability to effectively utilize the principles of special operations. The better the principles are integrated, the greater the relative superiority…. Once relative superiority is achieved, success favors those with initiative who, by virtue of their planning, preparation, and rapid execution, can exploit the weaknesses of the defense and defeat the enemy. This is how special operations succeed.[293]

Synchronized and integrated assault airlift provides the simplicity, surprise, and speed that increase relative superiority and enables SOF direct-action mission success. By increasing simplicity, speed, and surprise, assault airlift contributes to increases in mission force relative superiority, survivability, and the probability of overall mission success (see Figure 34).

[293] McRaven, *SPEC OPS*, 391.



Synchronized and integrated assault airlift provides the simplicity, surprise, and speed that increase relative superiority and enables SOF direct-action mission success. By increasing simplicity, speed, and surprise, assault airlift contributes to increases in mission force relative superiority, survivability, and the probability of overall mission success.

Figure 34. Mission Success Equation[294]

F. MAKING THE CASE

1. Scope

Akin to McRaven's exploration, this research will focus on SOF direct-action missions, particularly those involving air mobility as their primary means of transportation. It will not deviate into the other mission sets associated with special operations. The furthest deviation will be in the case study of Operation ANACONDA, which veers from the traditional raid-type of direct-action mission and encompasses a larger conventional territorial struggle.

294 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

2. Approach

This research will take the approach of analyzing four primary historical case studies to illuminate and examine the relationship between transportation and SOF direct-action mission success. These case studies will be examined to determine the circumstance under which assault airlift was able to effectively increase the likelihood of SOF direct-action mission success by bolstering the three germane principles McRaven's theory of relative superiority provides: simplicity, speed, and surprise. In doing so, this research aims to highlight both the capabilities and limits of assault airlift as it relates to achieving and maintaining relative superiority.

3. Methodology

This research methodology begins with a description of each case study, to include the planning, preparation, and execution phases. The execution phases will be broken down into the infiltration, action on, and exfiltration portions. The assault force will be functionally identified and discussed in the terms of the total mission assault force, the assault airlift assets providing infiltration and exfiltration, and the ground assault force assets who prosecute the actions-on-the-objective. Relative superiority will be graphed as described, in accordance with McRaven's augmented model[295] to incorporate the entire mission assault force's contributions. There will be a focus on examining these contributions to the principles supporting relative superiority, namely simplicity, surprise, and speed.[296]

The question will be asked, "Was assault airlift being adequately achieved?" If adequate assault airlift is present, then the characteristics it exudes should be measurably present, contributing to increased likelihood of survival of the mission force and mission success. If adequate assault airlift is not being achieved, then the characteristics it exudes should be noticeably absent. The event can then be analyzed to determine the cause of failure, whether it is from a synchronization issue or an unavoidable friction encountered during execution of the mission itself. In this way, it is believed that proximate causes of

[295] McRaven, *SPEC OPS*, 7.

[296] McRaven, 11.

failure can be separated from synchronization issues that may cause of mission force integration failure symptoms (see Figure 35).

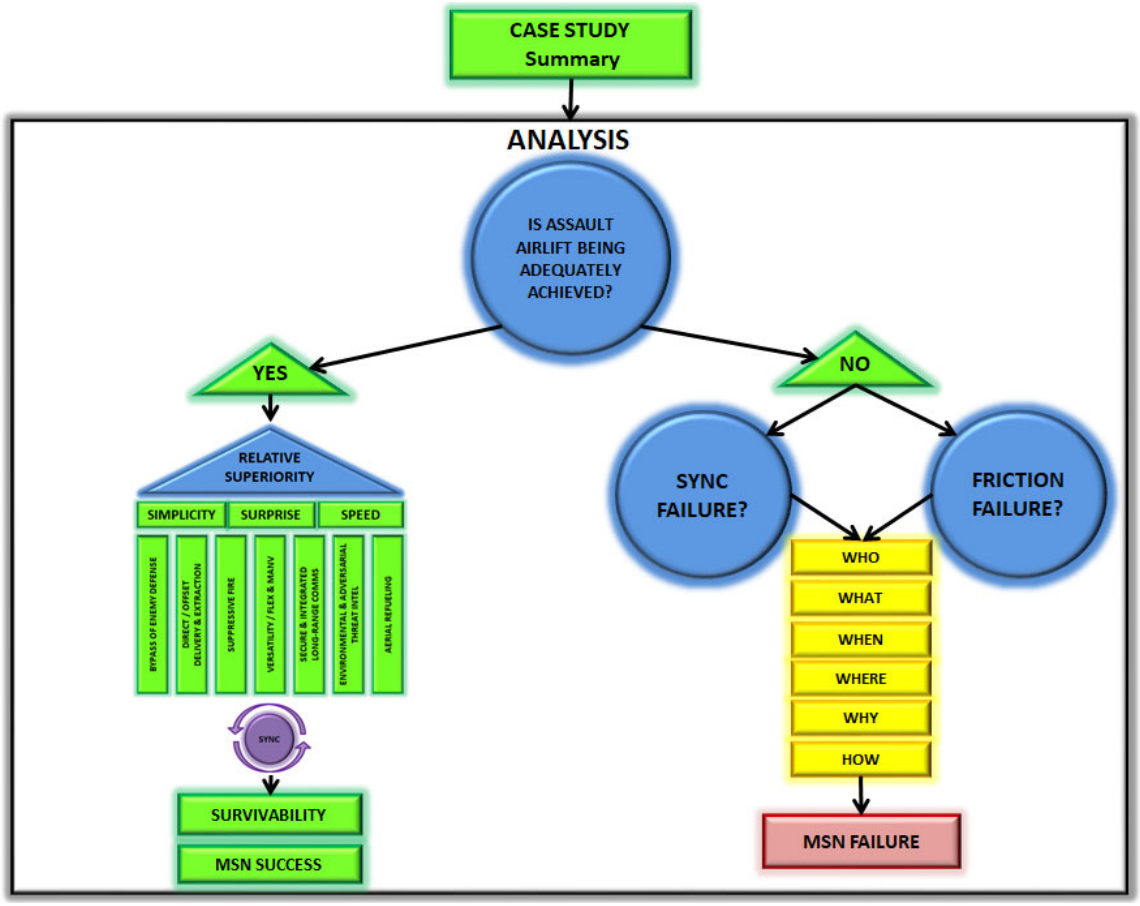


Figure 35. Methodology[297]

The primary cases studies for this research include: Operation KINGPIN, the prisoner of war (POW) rescue attempt at Son Tay in 1970 during the Vietnam War[298]; Operation EAGLE CLAW, the hostage rescue attempted in 1980 during the Iran hostage

297 Adapted from Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

298 McRaven, 287–331.

crisis[299]; Operation ANACONDA, the battle of Takur Ghar, Afghanistan in 2002, also known as Roberts Ridge[300]; and Operation NEPTUNE'S SPEAR, the Usama bin Laden raid of 2011 in Abbottabad, Pakistan, the culminating capstone operation of Admiral McRaven's distinguished career in special operations.[301]

These case studies were chosen because each of them represents a different combination of overall mission success or failure, successful or inadequate implementation of assault airlift, and differing levels of success actioning primary mission objectives.

Operation KINGPIN is an example of a successful mission whose success hinged on the ability to safely infiltrate and exfiltrate the assault force, despite the fact that the primary mission objective was not achieved. Admiral McRaven even does so far as to say, "The raid on Son Tay is the best modern day example of a successful special operation and should be considered 'text book' material for future missions."[302] Furthermore, the Son Tay case study, having been directly analyzed by McRaven, allows comparison between his original observations and those made here. This will provide an opportunity to discover how assault airlift augmented the theory of relative superiority while directly cross-referencing the aspects that McRaven himself determined relevant in this case study.

Operation EAGLE CLAW serves as an example of an unsuccessful mission whose failure was a result of inadequate assault airlift during infiltration.[303] The assault force never arrived at the objective.[304] Despite the fact that the ground assault force was exceedingly proficient and ready to execute their portion of the mission, they never arrived at the hostage rescue site and thus were never able to complete the mission's primary objective. This case study is also exciting to examine because its lessons learned

299 Radvanyi, "Operation EAGLE CLAW."

300 MacPherson, *Roberts Ridge*, 334

301 Bergen, "Architect of bin Laden Raid."

302 McRaven, *SPEC OPS*, 318.

303 Radvanyi, "Operation EAGLE CLAW."

304 Radvanyi.

led to the Goldwater-Nichols act of 1986 and the subsequent founding of USSOCOM in 1987.[305] Furthermore, this case study drove the development of tiltrotor technology thus enabling technology to simplify transportation during the infiltration and exfiltration portions of mission execution, a topic Whittle expands on directly throughout his book.[306] All of these factors combine to make Operation EAGLE CLAW a "must" for SOF direct-action mission analysis.

Operation ANACONDA represents an example of an overall mission failure, one whose primary objective as not achieved by the special operations direct-action assault force. The SOF ground force was compromised by inadequate mobility. This led to an inability to achieve relative superiority, decreased survivability of the mission force, and an inability to prosecute the mission objective in the face of significant resistance by entrenched enemy defensive positions. These factors culminated in the need for a more conventional force augmentation to enable extraction of the initial assault force. The other aspect of this case study that causes it to warrant attention is that it represents the propensity of SOF to be called upon to augment conventional forces during attrition warfare. The associated dynamics of this relationship and any pertinent factors affecting mission success will be examined.

Operation NEPTUNE'S SPEAR represents the culmination of Admiral McRaven's distinguished career in SOF. McRaven literally wrote the book on *SPEC OPS*, published in 1996.[307] Fifteen years later, Admiral McRaven commanded Operation NEPTUNE'S SPEAR to capture or kill Usama bin Laden, the most wanted man of the 21st century.[308] Given that this raid represents the capstone event of McRaven's career and given that it was planned based on his own theory of relative superiority, it provides an informative opportunity for analysis.[309]

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[305] Lederman, *Reorganizing the Joint Chiefs of Staff*," xi; USSOCOM, "United States Special Operations Command Fact Book, 2017."

[306] Whittle, *The Dream Machine*.

[307] McRaven, *SPEC OPS*.

[308] Bergen, *Holy War, Inc.,* 1.

[309] McRaven, *SPEC OPS*, 1, 3–8.

In total, these four case studies span the scope of SOF direct-action missions executed with assault airlift for the infiltration and exfiltration portions of mission execution. They display varying degrees of transportation success. They include both successful and unsuccessful executions of actions-on-the-objective, and they are comprised of both overall mission successes and failures (see Figure 36).

Analysis of these case studies should be able to prove or disprove the following claims. First, adequate mobility is a necessary condition for mission success. It is necessary to have adequate mobility to execute the infiltration and exfiltration stages of mission execution. If this is true, then inadequate mobility will prove detrimental to mission success and the effects of this should therefore be observable. Second, mobility, specifically assault airlift, enables a SOF direct-action assault force to achieve relative superiority by bolstering McRaven's supporting principles of simplicity, surprise, and speed. These will be examined for each of the primary case studies in detail. Third, exfiltration retains the potential to become the most complex and resource intensive phase of execution. Exfiltration means must be flexible enough to compensate for the contingencies and problems encountered in all previous phases of execution. This must be done without the element of surprise, as it has probably already been spent. Furthermore, exfiltration must be accomplished in the latter timeframe of execution, when the risks to the assault force can manifest at their highest amplitudes as the area of vulnerability has expanded as a function of time.

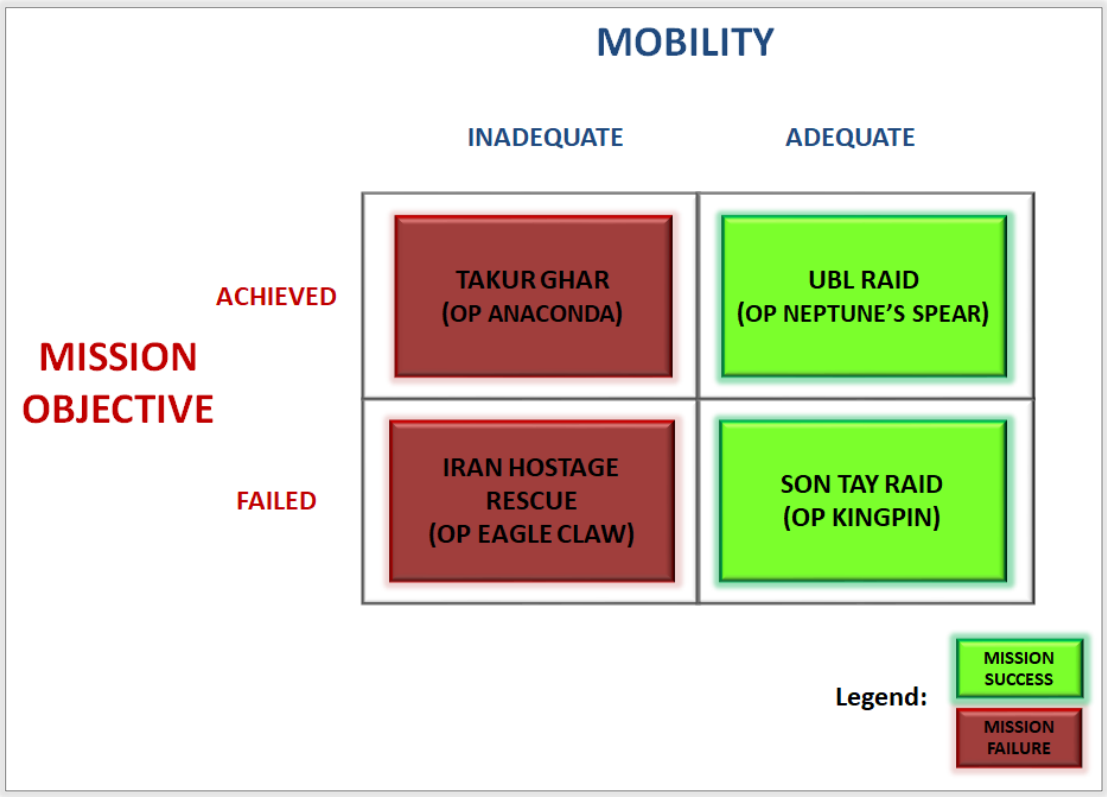

Figure 36. Adequate Mobility Is a Prerequisite to Mission Success, Independent of Mission Objective Achievement[310]

If these claims are true, analysis of historical case studies should display them as well as any other relevant relationships between adequate mobility and SOF direct-action mission success. The analysis should illuminate how the demand for a "two-way mission" can be satisfied by using assault airlift to capitalize on McRaven's theory of relative superiority via the principles of simplicity, speed, and surprise. Research should be able to help show that if the appropriate integration of transportation is achieved, chances for mission success can be substantially increased. Furthermore, it should be able to explain why assault airlift is often chosen as the most appropriate means of transportation: due to the amplification it provides to the simplicity of a mission, the speed with which it operates relative to other modes of transportation, and the subsequent

310 Adapted from Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

ability it provides to leverage surprise against a larger defensive force. Research should show that the resultant effect is a preference for assault airlift when simplicity, speed, and surprise need to be maximized for mission accomplishment in a time-sensitive environment (see Figure 37).

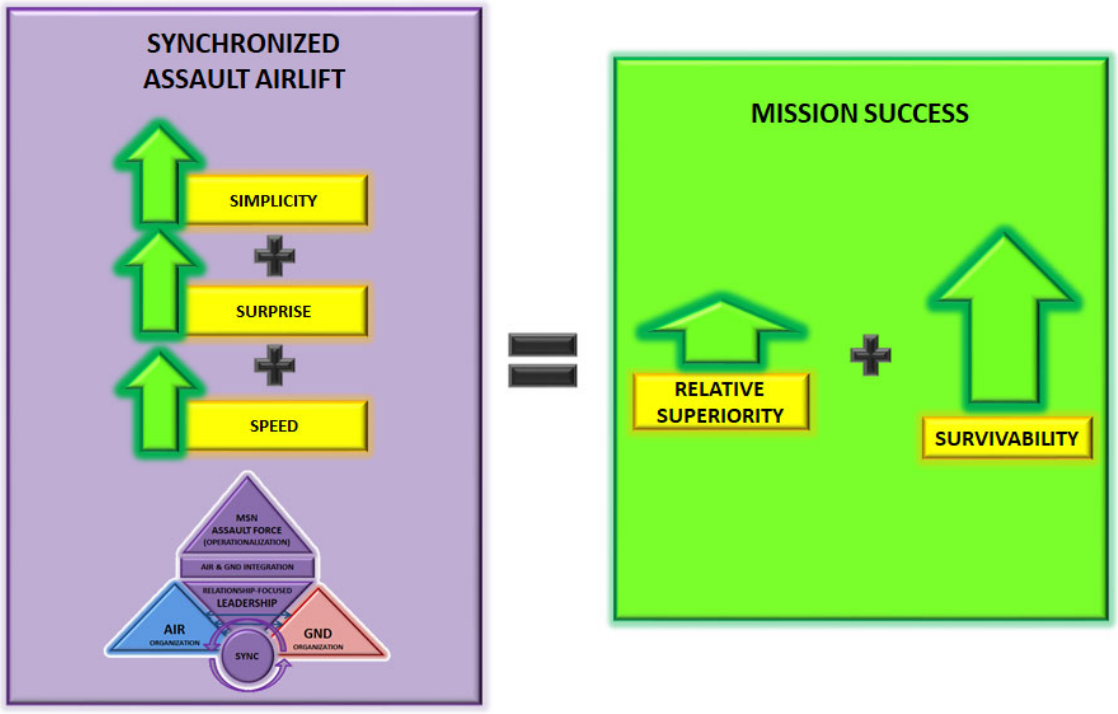

Figure 37. Synchronization: The Engine Driving the Equation of Mission Success[311]

Research analysis will reveal that an integrated and synchronized mission assault force that seamlessly integrates air and ground forces is most effective at augmenting relative superiority through simplicity, surprise, and speed, thus increasing the survivability of the mission force and the overall probability of mission success.

The information for each of these case studies will be obtained via archival research and open sources. Sources will be vetted to ensure credibility is maintained at

311 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

the high level of academic standards commensurate with the Naval Postgraduate School. Sources were selected for accuracy, credibility, and accessibility. As some details and sources associated with more recent case studies remain classified, they necessarily rely more heavily upon journalist and news reports, to include news interviews with key individuals, such as Admiral McRaven and President Barack Obama in the case of Operation NEPTUNE'S SPEAR.

II. CASE STUDY #1—"OPERATION KINGPIN"

The Son Tay Raid

A. INTRODUCTION

> Also I heard the voice of the Lord saying, who shall I send, and who shall go for us?
>
> Then said I, here am I, Send me.
>
> —Isaiah 6:8.[312]
>
> (Motto of the "Sons of the Seventh" who led the Son Tay raid assault mission force into harm's way.)

On the 21st of November, 1970, an American special operations forces direct-action assault force infiltrated the Democratic Republic of Vietnam (more commonly known as North Vietnam) to accomplish one of the most daring, studied, and successfully executed SOF direct-action missions in modern times. They were headed behind enemy lines into some of the most intensely defended and denied airspace in history, protected by a web of surface-to-air missile (SAM) defense stations, anti-aircraft artillery batteries (AAA), and an ever vigilant network of early warning radar systems (EW). But this was no one-way mission. It could not be. The mission's objective was to extract American prisoners of war (POWs) from a detention facility at Son Tay, just 23 miles west from Hanoi,[313] the capital of North Vietnam. The mission itself demanded a two-way and tactically integrated mobility solution to ensure the POWs were safely extracted from the grip of their captors. This necessity would lead to the planning, preparation, and

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312 Lieutenant General (retired) LeRoy J. Manor, USAF, "Untold Stories: Son Tay Raid: An Historic Operation," vnafmamn.com, accessed May 06, 2017, http://vnafmamn.com/sontayraid.html

313 23 miles is the distance reported in the documentary video, "Raid on Son Tay–Vietnam POW Rescue Story." "Raid on Son Tay–Vietnam POW Rescue Story," excerpt from History documentary, YouTube, 23:25, posted by Robert Imaginashon, 12 Dec 2012, https://www.youtube.com/watch?v=uuGhobYrPqc&feature=youtu.be

execution of the mission that would become the textbook protocol for future SOF direct-action missions: the Son Tay Raid (see Figure 38).[314]

Although multiple sources for studying the Son Tay raid exist, the primary references utilized here are the books by Admiral McRaven, Colonel John Gargus, and Lucien S. Vandenbroucke, as well as the eye-witness testimony of Sergeant Terry Buckler, a member of the ground assault force. Their accounts provide thorough and credible perspectives of the events leading up to, encompassing, and following the raid. Their sources are varied and include eye witnesses from both the American and North Vietnamese perspectives. McRaven's account specifically addresses the Son Tay raid as a case study utilizing his theory of relative superiority. McRaven discusses the Son Tay raid in chapter 8 of his 1996 book, *SPEC OPS*.[315] Gargus brings with him the experiences of an air commando who flew in the raid himself. Gargus's book, *The Son Tay Raid*, is, as the title eludes, entirely focused on the Son Tay raid.[316] Vandenbroucke's perspective as an author and historian help ensure an unbiased approach to the event. Vandenbroucke addresses the Son Tay raid in Chapter 4 of his book, *Perilous Options: Special Operations as an Instrument of U.S. Foreign Policy*.[317] Buckler provides a first-hand account of the actions that transpired throughout the raid in his presentation, captured by the United States Army Heritage and Education Center (USAHEC) video, "Son Tay: The Most Daring Raid of the Vietnam War by Mr. Terry Buckler," posted by USAHEC to YouTube.[318] These qualifications collectively make these three authors and Buckler particularly well suited for the purposes of this research. Other sources have also been incorporated, and are cited throughout, but these sources warrant particular recognition.

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[314] McRaven, *SPEC OPS*, 318.

[315] McRaven, 287–331.

[316] Gargus, *The Son Tay Raid*.

[317] Vandenbroucke, *Perilous Options*, 51–71.

[318] "Son Tay: The Most Daring Raid of the Vietnam War by Mr. Terry Buckler," YouTube, 1:10:40, posted by United States Army Heritage and Education Center (USAHEC), May 26, 2017, https://www.youtube.com/watch?v=bx9C8ynUS_U

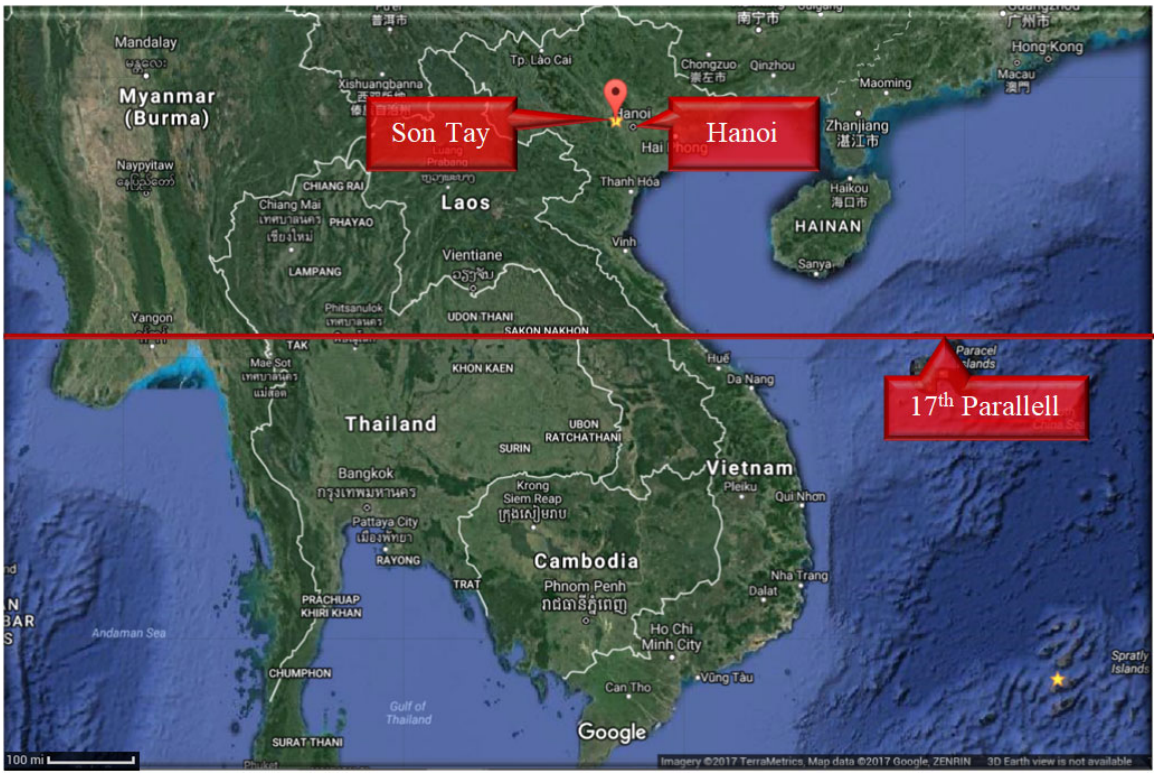

Figure 38. Location of Son Tay Relative to Hanoi and Vietnamese Borders[319]

Despite its being heralded as a textbook example of how SOF direct-action missions should be planned and executed, all aspects of the Son Tay raid were not entirely successful.[320] In fact, the primary mission objective of rescuing the POWs was not achieved.[321] Yet, the Son Tay raid remains an icon of SOF employment and one of the most studied SOF direct-action raids of the modern era.[322] It is heralded as the way

319 Adapted from "Sơn Tây, Hanoi, Vietnam," Google Maps, accessed May 04, 2017, https://www.google.com/maps/place/Tx.+S%C6%A1n+T%C3%A2y,+Hanoi,+Vietnam/@16.1262575,105.3972324,1635939m/data=!3m1!1e3!4m5!3m4!1s0x3134f5fff8f581e9:0x5e22ee99588c41af!8m2!3d21.1032279!4d105.4969964

320 McRaven, *SPEC OPS*, 318.

321 McRaven, 318.

322 Examples of studies and writings focusing on the Son Tay raid include the following sources: C. V. Glines, "The Son Tay Raid," *Air Force Magazine* 78, no. 11 (November 1995): 64–69; Gargus, *The Son Tay Raid*, 1; Vandenbroucke, *Perilous Options,* 51–71; Mark Amidon, "Groupthink, Politics, and The Decision to Attempt the Son Tay Rescue," *Parameters* 35, no. 3 (Autumn 2005): 119; Shelby L. Stanton, *Green Berets at War: U.S. Army Special Forces in Asia, 1956–1975* (n.p.: Presidio Press, 1995); McRaven, 287–332.

SOF direct-action missions should be operationalized. Admiral McRaven analyzes the Son Tay case study in his book, *SPEC OPS*, where he iconically describes it as follows: "The raid on Son Tay is the best modern-day example of a successful special operation and should be considered textbook material for future missions."[323] How does a mission that does not accomplish its primary mission objective become heralded as a "textbook" success?

The answer in part lies in the degree of relative superiority achieved and the consequential survivability of the mission force made possible through the successful operationalization of assault airlift. Overall mission success was achieved, in part, by using the air assault force as a means to achieve relative superiority by capitalizing on the principles of surprise, speed, and simplicity. Additionally, because the Son Tay mission force was able to successfully infiltrate enemy battlespace, arrive at the objective area, and subsequently exfiltrate denied enemy battlespace without incurring significant casualties, the mission achieved enough positive effects to achieve strategic significance and become a successful example of how SOF direct-action missions should be executed.[324] In this way, the assault mission force was able to achieve overall mission

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[323] McRaven, *SPEC OPS*, 318.

[324] There were conflicting reports on the casualties that the Son Tay mission force suffered during Operation KINGPIN. Some sources stated only a single casualty, but others provided sufficient evidence to conclude there were actually two casualties: one injury on the ground assault force and one on the air assault force. Sergeant Terry Buckley, a member of the REDWINE ground assault force, and McRaven's research both confirm Sergeant Noe Quezada of the REDWINE ground assault force security group was shot in the back of the leg during the raid. Buckley and Gargus also reported there was an additional casualty during the crash of BANANA into the courtyard when a fire extinguisher broke loose and broke the ankle of the flight engineer, Sergeant Leroy Wright. When the injuries of both the ground assault force and the air assault force are thus tallied, two casualties are totaled. This tally is also confirmed by the 27th Special Operations Wing, Public Affairs account. The following sources provide insights into this conclusion: McRaven, *SPEC OPS,* 324; "Interview with Sergeant Terry Buckler About the Son Tay Prison Camp Raid during the Vietnam War," HistoryNet, July 12, 2006, http://www.historynet.com/interview-with-sergeant-terry-buckler-about-the-son-tay-prison-camp-raid-during-the-vietnam-war.htm ; Gargus, *The Son Tay Raid*, 282; Senior Airman Shelby Kay-Fantozzi, "Cannon Air Force Base–News: Son Tay Raiders Share Memories with Air Commandos," 27th Special Operations Wing, Public Affairs, November 25, 2015, http://www.cannon.af.mil/News/Article-Display/Article/631294/son-tay-raiders-share-memories-with-air-commandos/; USAHEC, "Son Tay;" "Hall of Valor: LeRoy M. Wright," Military Times, accessed May 04, 2017, http://valor.militarytimes.com/recipient.php?recipientid=3619; Sean Linnane, "The Son Tay Raid," *Stormbringer* (blog), November 21, 2010, http://seanlinnane.blogspot.com/2010/11/son-tay-raid.html.

Gargus, *The Son Tay Raid*, 234.

McRaven, 318.

success despite the fact that the primary mission objective was not achieved. This phenomenon makes the Son Tay raid an excellent example for examination here.

B. EVENT SUMMARY

1. Planning

In the spring of 1970, President Nixon faced a troubling political situation on the home front.[325] The Vietnam War continued to grow increasingly unpopular. Domestic public support for the war and the administration was waning.[326] The draft had forced an arguably unwilling population to support an unpopular and perceptually unjustifiable war. There was a perception that unwilling Americans were being forced into combat and their lives were being spent in vain. To further aggravate this issue, American servicemen had been captured by the North Vietnamese Army (NVA) in large numbers. "By 1970, more than fourteen hundred U.S. servicemen were prisoners of war or missing in action (MIA) in Southeast Asia," the historian Vandenbroucke relayed in his book *Perilous Options*.[327] The treatment of the POWs was being reported as "inhumane," and was not in compliance with the Geneva Conventions.[328] This all brought the administration to the precipice of a need to take action to resolve this crisis. President Nixon was personally invested in the return of the POWs and engaged with North Vietnam in Paris, France, to negotiate.[329] The POWs were one aspect of the discussion, and Nixon hoped to negotiate the return of the POWs, many of whom were airmen who had been shot down while operating behind enemy lines.[330] But another option emerged that could potentially free some of the POWs if the political negotiations did not bear fruit.

The Son Tay raid was initially conceived by Colonel Norman H. Frisbie, covert operations planner from the Air Force Plans and Policy Directorate and working for

325 Vandenbroucke, *Perilous Options*, 53.

326 Gargus, *The Son Tay Raid*, 1.

327 Vandenbroucke, *Perilous Options*, 53.

328 Gargus, 4–5, 6.

329 Vandenbroucke, 53; Gargus, *The Son Tay Raid*, 4.

330 Gargus, 7.

Brigadier General James Allen, Air Force Deputy Chief of Staff for Plans and Operations.[331] SR-71 Blackbird intelligence indicated there were POWs being held at the Son Tay prison compound, deep inside enemy territory.[332] Colonel Frisbie concluded that a relatively small assault force, comprised of a ground assault force and an air assault force using HH-53 "Super Jolly Green Giant" helicopters, could rescue the prisoners.[333] Col Frisbie's conclusion was provided to Brigadier General Donald D. Blackburn, Special Assistant for Counterinsurgency ad Special Activities, who convened a feasibility study group operating under the code name Operation POLAR CIRCLE in June of 1970 that would conduct initial planning for the mission.[334]

There were other prisoner camps that could have been targeted, but Son Tay was the best available choice. While the Son Tay prison camp was behind heavily defended enemy lines, it also possessed unique characteristics that made it particularly vulnerable to attack and exploitation from the American perspective.[335] First, the site was isolated.[336] The Son Tay detention camp was the only detention facility located in a rural setting, away from the more populated areas that would complicate any rescue attempts. Although the camp was near a clustering of North Vietnamese conventional forces, the camp was geographically isolated providing the enemy with limited ability to provide ground reinforcements once a rescue attempt was underway.[337] A North Vietnamese account of the camp's strategic setting provided by Gargus follows:

> The camp was located in the middle of a rice field and was surrounded by dikes. In the rainy season Xa Tac [Son Tay camp] was always threatened because if the water rose, it would be flooded. Back then, this area was very empty and there were virtually no families living in the area. To get to Xa Tac [Son Tay camp] from Son Tay city, one had to cross a small

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331 Gargus, 7–8; USAHEC, "Son Tay."

332 McRaven, *SPEC OPS*, 287.

333 Gargus, *The Son Tay Raid*, 8.

334 "Interview with Sergeant Terry Buckler …;" Gargus, *The Son Tay Raid*, 8.

335 Gargus, 6.

336 Gargus, 6.

337 History, "Raid on Son Tay–Vietnam POW Rescue Story;" Gargus, 6.

> bridge across the Tich [Song Con] River. This was the only road, and it was extremely vital from the military defensive standpoint.[338]

McRaven described it in this way:

> It was bordered on the west by the Song Con [Tich] River which flowed south to north and bent slightly to the east three hundred feet from the camp. The river was about forty feet wide and fordable by foot troops in the dry season. There was a sixty-foot, single-lane, three-span bridge to the north that became a gravel road to the east of the compound. The road was bordered by power lines and air-raid pits. A small canal bordered the compound in the south. The entire area, from the bridge to the canal, including the compound and surrounding buildings, was no larger than three football fields laid side to side.[339]

The avenues for Vietnamese reinforcements by land were forced through the single chokepoint, the Song Con River bridge, where strategically placed means of denial or deterrence could deny or delay reinforcements to the camp.[340] These factors simplified any potential POW rescue attempt at this location, making possible the feasibility of such a mission.

The Son Tay prison camp, affectionately referred to as "Camp Hope" by the North Vietnamese, had been activated on 24 May 1968 and contained fifty-five American POWs (see Figure 39).[341]

Air Force aerial reconnaissance of the camp in May of 1970 revealed the POWs' presence at the camp.[342] These findings were presented to Brigadier General Donald Blackburn, who handled special activities on the Joint Chiefs of Staff (JCS).

In June of 1970, SR-71 Blackbird recon of POW sites, to include Son Tay, confirmed the presence of the POWs.[343] There were men at Son Tay. The questions

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338 This passage is from Gargus, while the interpreted location names are adapted from the works of both Gargus and McRaven. Gargus, *The Son Tay Raid*, 242, 330–332; McRaven, *SPEC OPS*, 293.

339 This passage is from McRaven, while the interpreted location name of the Song Con [Tich] River is adapted from Gargus. Gargus, 330, 331; McRaven, 293.

340 McRaven, 293.

341 Gargus, *The Son Tay Raid*, 242–243; McRaven, 287.

342 Gargus, *The Son Tay Raid*, 7; McRaven, 287.

343 McRaven, 288.

previously raised about if they could be gotten out had a new sense of urgency behind them. Blackburn presented the information to the JCS in June of 1970. They directed a concept be developed to retrieve the men. Blackburn complied and presented them with a concept in July of 1970 which the JCS endorsed "with enthusiasm."[344] In an unprecedented move, the JCS chose to directly oversee the execution of the operation. The JCS had not commanded the execution of any operations up to this point of time. Son Tay would be their first.[345] The JCS ordered a planning group to develop the means necessary for extracting the POWs.[346]

The POWs were being held in North Vietnam, which presented its own challenges. While it was quite popular at the time to attempt POW rescue missions in South Vietnam, these attempts had all ended in failure.[347] Previous rescue attempts in South Vietnam had not freed even "a single American solder," Gargus relates.[348] McRaven records that "over ninety-one POW rescue attempts" were undertaken "between 1966 and 1970."[349] George J. Veith relates in his book, *Code-Name Bright Light: The Untold Story of U.S. POW Rescue Efforts during the Vietnam War*, how unsuccessful these missions were.[350] McRaven and Gargus confirmed that none of them dared reach through the North Vietnamese air defense networks to an area as heavily defended as Son Tay.[351]

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344 Gargus, *The Son Tay Raid*, 9; McRaven, 288–289.

345 USAHEC, "Son Tay."

346 McRaven, 288–289.

347 Gargus, 6.

348 Gargus, 6.

349 McRaven, 319.

350 George J. Veith recounts many of the POW rescue attempts in his 1998 book, *Code-Name Bright Light: The Untold Story of U.S. POW Rescue Efforts during the Vietnam War*. George J. Veith, *Code-Name Bright Light: The Untold Story of U.S. POW Rescue Efforts during the Vietnam War* (Free Press, 1998).

351 "None of these [POW rescue attempts] were in North Vietnam." McRaven, 319.

"Attempted POW rescues from South Vietnamese camps were quite frequent and always unsuccessful. They did not free a single American soldier even though FU. S. forces promptly raided all newly discovered jungle camps." Gargus, *The Son Tay Raid*, 6.

Son Tay was located in the heart of the military training region that supported the Democratic Republic of Vietnam war efforts, next to the seemingly impenetrable enemy defenses at Hanoi.[352] "The North Vietnamese air defense system was one of the most extensive in the world," McRaven observes.[353] "It was the most heavily defended area of the country, close to MiG interceptor air bases, and carefully positioned antiaircraft artillery and surface-to-air missile sites," Gargus adds.[354] "The number of American airmen in captivity was a clear indication of their competence," Gargus recalled.[355] There were SAM threats above 3,000 feet and AAA threats below.[356] One SAM launch training site was situated a mere three miles from the Son Tay compound, and there were eight AAA sites just in the local area.[357] Additionally, at any altitude the North Vietnamese MiG interceptors were a lethal threat to the assault force.[358] They could be launched from air bases as close as 17 miles from Son Tay.[359] But intelligence indicated there were approximately 60 American servicemen being held at the site, and it represented a unique opportunity to take action and potentially return them home with honor.[360] They would have to find a way through.

The initial plan Blackburn and his team developed involved inserting an indigenous human intelligence operative, a spy, into the vicinity of the prison camp to "verify the presence of the POWs and call in a helicopter … [assault] force" for the rescue.[361] This plan would have had the rescue force prepositioned along the border of Laos.[362] Inopportunely, the logistical necessity of prepositioned forces associated with

352 Gargus, 7.

353 McRaven, *SPEC OPS*, 297.

354 Gargus, 7.

355 Gargus, 92–93.

356 "Interview with Sergeant Terry Buckler …"

357 Gargus, 93.

358 Gargus, 73.

359 Gargus, 92–93.

360 Gargus, 7.

361 McRaven, 288.

362 McRaven, 288.

this initial plan represented an unacceptable level of security degradation.[363] The North Vietnamese could easily determine a rescue effort was imminent were they to discover the force in waiting.[364] Such a breach could allow them to set an ambush and turn the rescue force into POWs themselves.[365]

Figure 39. Map of Laos, Son Tay, Hanoi, and the Gulf of Tonkin[366]

Blackburn's planners developed an alternative to mitigate this staging force logistical constraint.[367] A small fixed and rotary-wing assault force could infiltrate into

[363] McRaven, 288.

[364] McRaven, 288.

[365] McRaven, 288.

[366] Adapted from Manor, "Untold Stories: Son Tay Raid."

[367] McRaven, *SPEC OPS*, 288.

Northern Vietnam from a less conspicuous location in Thailand using aerial refueling and radar detection avoidance techniques. The assault force would be composed of the air and ground elements and accompanied by an air strike force for protection and to provide the flexibility and versatility the mission would call for.[368] But even this would not be enough. A major diversion would be required in order to distract the North Vietnamese integrated air defense network.[369]

2. Preparation

The Son Tay raid was prepared under the code name Operation IVORY COAST.[370] It would be commanded by General Leroy J. Manor, commander of the Air Force Special Operations Forces (AFSOF) at Eglin Air Force Base (AFB), Florida. His position and experience uniquely provided him with the qualifications and perspectives that would be required to orchestrate an airborne raid of this type. Brigadier General Blackburn, who selected Manor as the operational commander of the raid, knew that the success of the mission would hinge upon the synchronization of the air and ground elements in addition to the supporting conventional forces. Blackburn believed Manor to be the kind of leader who could operationalize these assets to achieve mission success. In his book, Gargus relayed the importance of this point when he said:

> The amount of air support for the contemplated rescue would require extensive coordination with various Air Force major air commands and units both at home and in Southeast Asia. This requirements favored Air Force leadership…. Brig. Gen. LeRoy J. Manor became that leader.[371]

The selection of Manor highlighted how the mission itself was transportation centric, to get in and then back out with the POWs. Furthermore, the surprise necessary to exploit deep infiltration would be gained through the execution of the largest night air operation of the Vietnam War.[372] Manor's ability to coordinate and command these

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368 McRaven, 289.

369 Gargus, *The Son Tay Raid*, 73.

370 "Interview with Sergeant Terry Buckler …"

371 Gargus, 11.

372 Gargus, *The Son Tay Raid*, 164.

efforts made him ideally suitable to the job of commanding the Joint Command Task Force that would conduct the Son Tay raid.[373]

Brigadier General Blackburn also identified General Manor's deputy commander, a combat veteran of World War II, Korea, and Southeast Asia whose expertise would be critical in formulating the ground portion of the assault mission, Colonel Arthur D. "Bull" Simons of the Army Special Forces.[374] As a complement to General Manor's expertise in air support, Colonel Simons commanded the respect of the Green Berets who would carry out the raid. He was extensively experienced in the regional nuances, having been immersed in the culture throughout his Laotian assignments.[375] But most importantly, Simons brought to the table a "meticulous" level of research and planning.[376] This quality ensured that he would not be willing to accept undertaking of any endeavor whose plan did not encompass all of the relevant preconditions and redundancies prerequisite to obtain mission success.

Manor and Simons received the full support of Admiral Moorer, the chairman of the JCS. Manor recalled to Gargus that, "We had practically a blank check when we left … to go ahead with this. We had the authority we needed to get whatever resources we needed personnel-wise or equipment-wise or whatever." This empowerment would prove essential in obtaining the support required.

The selection process for assault party participants ran the gauntlet of soliciting volunteers from among those with the skillsets necessary to perform the required tasks. For the Green Berets from Fort Bragg, North Carolina, this meant personal face-to-face interviews with Simons.[377] They would further compete against each other for the privilege of becoming one of the ground assaulters. Those who did not meet the mark would continue to serve on in subordinate supportive roles until the completion of the operation.

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373 Gargus, 11.

374 Gargus, 11.

375 McRaven, *SPEC OPS*, 300.

376 McRaven, 301.

377 McRaven, 289.

For the air commandos, recruitment was not so centralized. The aircrew members who would comprise the air assault force were distributed around the globe, and Manor had to rely on subordinates to recruit on his behalf.[378] Prior to recruitment the air commandos had already volunteered for aircrew duties and had since faced a stringent battery of "weeding out" processes meant to ensure only those with the "right stuff" were at the controls. The air commandos who were selected would not be competing for their positions, as the ground assaulters would be, but they would instead be solely focused on honing the skillsets and techniques necessary for them to perform their duties. The Combat Talon C-130s were from Manor's own command in AFSOF. They would be brought in from Pope AFB, North Carolina. The A-1E Skyraiders for the strike team would be supplied from Hurlburt Field, on the sprawling Eglin range. The HH-53 Super Jolly Green Giants and HH-3 Jolly Green Giants were also from Eglin AFB and could be borrowed from Military Airlift Command (MAC). The "sons of the seventh" of the 7th Special Operations Squadron in Germany would augment the C-130s with additional crewmembers, and several pilots with regional expertise would be requisitioned from Vietnam and Thailand.[379]

Once the selection of assault team candidates had been accomplished, the focus moved onto an extensive training process to refine their skillsets. These skillsets would need to be refined to the level necessary to overcome the hazards associated with the mission itself. For ground assaulters, this meant refining their physical fitness through rigorous training while honing their specialty combat skillsets. It meant learning the physical layout of the compound and training to shoot under what were, at the time, novel conditions (at night, under flares, using new laser night scopes).[380] For the air assaulters, this meant developing and practicing new formation flying techniques, flying the missions in as realistic a scenario as could be expected in training and devising

[378] Gargus, *The Son Tay Raid*, 15.

[379] Gargus, 15.

[380] USAHEC, "Son Tay;" McRaven, *SPEC OPS*, 302–307.

alternative courses of action to deal with possible challenges that may arise during the mission.[381]

At the Eglin AFB training facilities, "Manor and Simons … strove to meld the task force's Army troops and Air Force crews, who never had worked together before, into a highly cohesive team," Vandenbroucke perceived.[382] Although there was initial strife between the two elements because of their contextual differences and backgrounds, their synchronization was critical to the success of the mission. Credibility and trust had to be established and then proven between them to ensure they would be able to operate seamlessly behind enemy lines. After all, some of the air commandos would be going all the way to the ground with the ground assaulters.

McRaven and Gargus do incredible jobs of providing insights into the kinds of technological and tactical innovations that allowed the air assault force to simplify the mission for the operators involved. Forward-looking infrared (FLIR) systems were installed onto the HC and MC-130s, as well as an additional navigator on the MC-130s. These assets would be used to augment one of the primary roles of the MC-130s, leading the assault and strike packages into the objective area. There was also an integrated communications net designed to ensure all members of the assault force were able to communicate with each other and flash suppressors to increase the accuracy of the HH-53 gunners at night.[383] Every man carried two radios, a novel concept for an operation of this era, but it ensured any single man could communicate with the entire assault force.[384] Any single ground assaulter could individually take advantage of the versatility of the assault airlift assets were the need to arise. There were also locator beacons called "ground acquisition responder/interrogation (GAR/I) beacons," which could be used to

381 McRaven, *SPEC OPS*, 324.

382 Vandenbroucke, *Perilous Options,* 59.

383 McRaven, 324; Gargus, *The Son Tay Raid*, 27.

384 Gargus, 15.

augment the Doppler radars of the MC-130s "in determining their location over the ground."[385] Gargus explained how these modifications were required due to the slow speeds at which the Fruit Salad formation was forced to fly relative to the higher speeds the equipment was initially designed to operate at.[386] Above all, Gargus believes the tactics and techniques employed by the air commandos were the most instrumental asset they had in allowing them to overcome obstacles that would have otherwise prevented the plan from coming into fruition.[387]

The plan was refined and details added. A ground assault force composed of about 60 Green Berets (the final count would be 56 ground assaulters and three air commandos, for a total of 59 assaulters) into the Son Tay compound and the surrounding area.[388] The ground assault force element inside the compound would neutralize the guards and free the POWs. In the meantime, the two supporting ground assault elements outside the compound would neutralize enemy threats in the surrounding buildings, delay enemy conventional force responses by destroying ingress routes by blowing the bridge along the access road and clear a helicopter landing zone (HLZ) for extraction. To accomplish this, they would need to be inserted directly onto the objective area without the enemy having detected their presence or having time to respond to it (see Figure 40).

385 McRaven, *SPEC OPS*, 29.

386 Gargus, *The Son Tay Raid*, 58–62.

387 Gargus, 69.

388 Manor, "Untold Stories: Son Tay Raid."

Figure 40. Son Tay Raid Load Plan[389]

The lead HH-53, call sign APPLE 03, would act as a gunship and extraction platform. It would go in to ensure the guard towers, which could be lethal to the assault force once it was on the ground, were neutralized.[390]

The HH-3, call sign BANANA, would back up the gunship by also hitting the guard towers and then perform a controlled crash inside the compound walls, enabling the BLUEBOY ground assault group, led by Captain Richard J. "Dick" Meadows, to focus on immediate enemy guard suppression and rescuing the POWs.[391]

HH-53, APPLE 01, would insert the GREENLEAF support group, led by Colonel Simons, to the southeast of the compound to secure the area to the east of Son Tay, destroy the Song Con Bridge, and prevent enemy reinforcements.[392]

389 Adapted from Linnane, "The Son Tay Raid."

390 Gargus, *The Son Tay Raid*, 269–288.

391 Gargus, 269–288; McRaven, *SPEC OPS*, 309, 312, 313.

392 Gargus, 269–288; McRaven, 309, 312, 313.

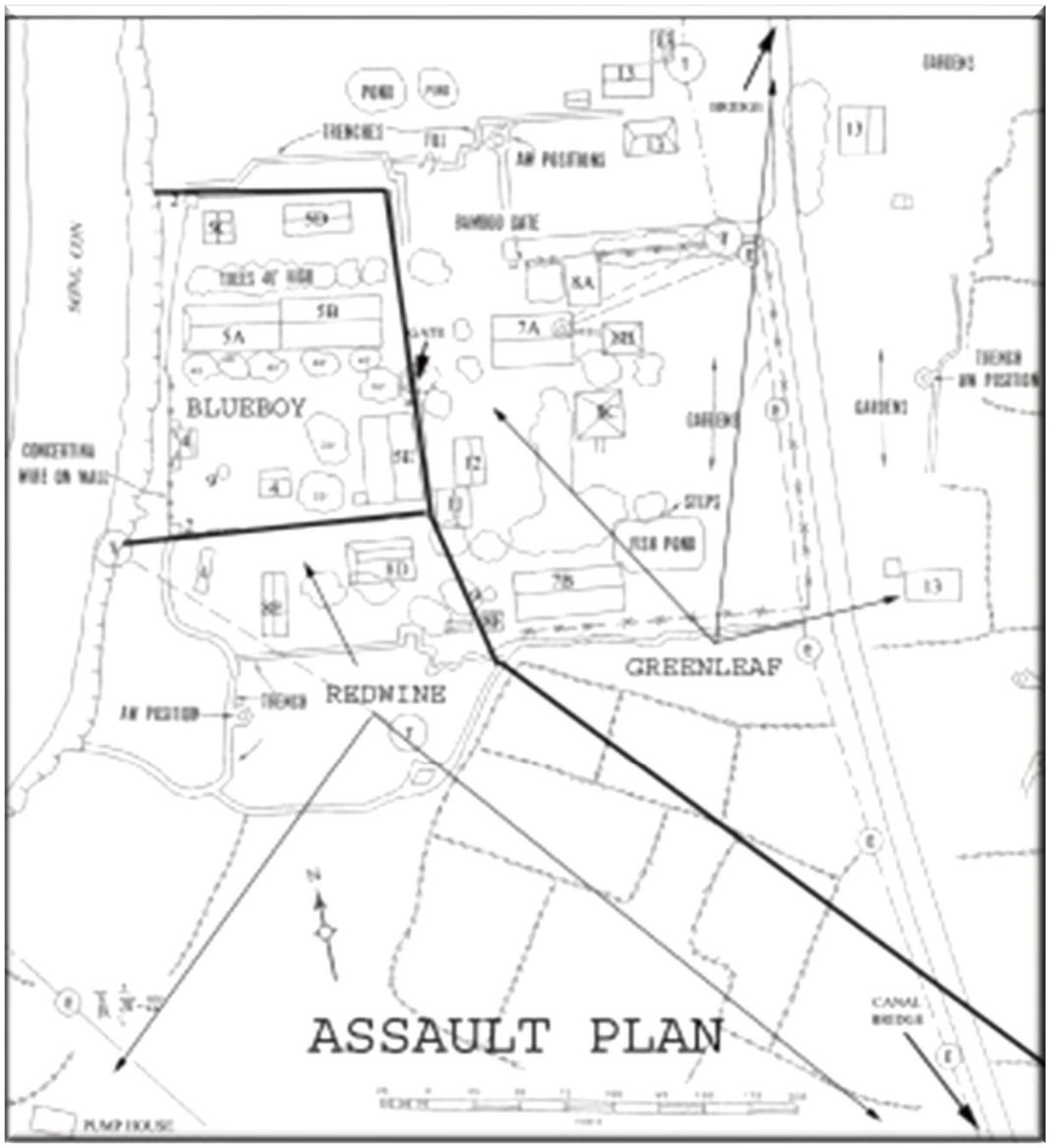
The last HH-53 going in on the insertion would be APPLE 02, who would insert the REDWINE security group, led by Lieutenant Colonel Elliott "Bud" P. Sydnor, Jr., to the south of the compound to secure the area around Son Tay and prepare an extraction landing zone.[393] Sydnor had been appointed the ground force commander for the raid by Colonel Simons. A medical doctor would also be integrated into REDWINE security group to provide care for sick or wounded POWs or any members of the assault force who may be injured during the assault.[394] Sean Linnane studied the raid in some depth and posted his findings in his 2010: "The Son Tay Raid." Linnane provided this succinct summary:

> The first was the 14-man assault group, "BLUEBOY," which was to land inside the camp compound. This would be supported by the 22-man command group, "GREENLEAF," which would land outside, then blow a hole in the compound wall and support BLUEBOY. These were supported by the 20-man "REDWINE" which was to provide security against possible North Vietnamese reaction forces [see Figure 41].[395]

393 Gargus, *The Son Tay Raid*, 269–288; McRaven, *SPEC OPS*, 301, 309, 312, 313.

394 Gargus, 29, 270.

395 Linnane, "The Son Tay Raid."



"[Son Tay] camp area and targets assigned to the BLUEBOY, REDWINE, and GREENLEAF Groups (Joint Contingency Group sketch adjusted by John Gargus)."[396]

Figure 41. Operation KINGPIN Assault Plan for Actioning the Objective[397]

396 Callie Oettinger, "Son Tay Raid Revisited," The History Reader, November 21, 2011, http://www.thehistoryreader.com/military-history/son-tay-raid-revisited/.

397 Adapted from Oettinger, "Son Tay Raid Revisited."

Time would be of the essence upon alerting the enemy to the presence of the rescue force. It was determined that the ground assault force would need to reach the POWs within one minute of enemy alertness in order to mitigate potential retaliations toward the POWs themselves by the guards.[398] Failure to comply with this strict timeframe could incur consequences ranging from executions to hostage standoff scenarios. Insertion into the compound via overland or boat were clearly infeasible. The only way to meet the timeliness constraint the raid required would be to bypass the exterior walls of the compound by landing one of the helicopters directly inside the compound's exterior walls.[399] This would allow the ground assault force the ability to take full advantage of every second post their detection and maximize the chances of successful POW extraction (see Figure 42).

Landing a helicopter inside of the compound presented its own set of problems for the joint assault force to tackle. First, there were three guard towers on the compound that could prove formidable to any asset once it was on the ground. To mitigate these three towers, plans and backup plans were developed and rehearsed. The HH-53 gunship, APPLE 03, would perform a firing run on two of the towers.[400] The contingency for survivors in these towers from this initial hit would be small arms fire directed from the BLUEBOY ground assault force on BANANA as their helicopter descended into the courtyard for their controlled crash landing during infiltration.[401] During rehearsals, they discovered they could not only achieve 360 degree coverage (with one mounted gun and ten small arms CAR-15s sticking through the doors and windows) but they could train a significant amount of accurate firepower on the towers during their infiltration.[402] With the single point night firing sights, their accuracy was sufficient to suppress the towers were the initial gunship pass to be called off or unavailable for any reason.[403] The HH-53

398 USAHEC, "Son Tay."

399 USAHEC, "Son Tay."

400 Gargus, *The Son Tay Raid*, 81–82.

401 Gargus, 81–82.

402 Gargus, 25–27.

403 Gargus, 25–27.

gunners were also able to increase their accuracy by running full tracer loads. This would hopefully bolster friendly force courage and paralyze the enemy's response capability as they faced a visible barrage of gunfire.[404]

Another innovative down-teching, or using less technology to accomplish a mission goal, was associated with the assault force electing not to utilize armored plates in their body armor. This choice was based on the fact that their men and aircraft were extremely performance limited. It would be more advantageous to reduce the weight and gain an increase in speed by removing the armored plates and accepting the accompanied risk.[405]

Another issue with landing inside the courtyard was that the courtyard of the compound was too small to land a helicopter without striking the blades. A UH-1H was considered for the landing, owing to its smaller rotor diameter. Unfortunately, the UH-1H came with several drawbacks, one of which was it was not tall enough to clear one of the smaller structures inside of the courtyard. Its blades would be crashing into walls once it got nearer to the ground.[406] The HH-3 would not have this same problem, as it was taller. Unfortunately, it was also wider, in both body and rotor diameter. It would barely fit within the compound at all, and would clearly be striking trees on the way in, rendering it unserviceable for the extraction phase of execution.

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[404] Gargus, *The Son Tay Raid*, 27.

[405] USAHEC, "Son Tay."

[406] The UH-1H posed additional problems, to include the fact that it was not air refuelable, it had a cramped interior for the required size of the ground assault force, and it did not inherently have the range to make the mission required distances without a forward staging location that could represent a security breach. During preparations, fuel bladders were added to a UH-1H for testing and it was determined that the additional fuel would unacceptably displace a number of ground force assaulters. A full-mission profile rehearsal proved that the ground assault force members, whose legs went to sleep and whose bodies were stiffened from three hours of ingress flight in the cramped interior of the Huey, would lose valuable time in the initial portion of executing the actions-on-the-objective. This was particularly unacceptable because there was less than one minute from insertion for the ground assault force to reach the POWs, and the element of surprise, though powerful, is swiftly spent and is subsequently unrecoverable in most scenarios. Nonetheless, rigorous and dangers flight drafting techniques were developed in order to potentially use the UH-1H in some "unforeseen" scenario that might develop. It was forward deployed with the joint assault force to Udorn, just in case. Gargus, 52–55, 74–77, 96; McRaven, *SPEC OPS*, 16–19; USAHEC, "Son Tay."

Master Sergeant Jeffrey Michalke provides the following commentary in his assessment, "Son Tay Raid Remembered Nearly Four Decades Later": "Code-named 'Barbara,' U.S. intelligence built this scale model of the Son Tay prisoner-of-war compound as a training aid for the raiders."

Figure 42. Barbara: Scale Model of Son Tay Compound[407]

In order to get the helicopter assault force to the objective area, not only would aerial refueling and some dicey drafting aerodynamic wizardry be required, but also additional air elements would be required during the infiltration and exfiltration portions of mission execution.[408] The North Vietnamese had a heavily integrated air defense SAM network coupled with Mikoyan-Gurevich, or "MiG-21 Fishbed," fighters they were

407 Adapted from Master Sergeant Jeffrey Michalke, "Son Tay Raid Remembered Nearly Four Decades Later," 1st Special Operations Wing History Office, November 20, 2007, http://www.hurlburt.af.mil/News/Commentaries/Display/Article/206406/son-tay-raid-remembered-nearly-four-decades-later/.

408 "Flying the UH-1H in formation with a C-130 was 'not within the capability of the average Army aviator,' but after intense training 'the tactics of drafting with HH-3 and UH-1H [were] proven and [could] be applied in future plans.'" Commander, Joint Chiefs of Staff Joint Contingency Task Group, *Report on the Son Tay Prisoner of War Rescue Operation* (Washington, D.C.: Office of the Joint Chiefs of Staff, 1970), E-61, E-54); quoted in McRaven, *SPEC OPS*, 306

utilizing for defense of their homeland airspace.[409] They were highly proficient. "Enemy air defenses in the Son Tay area were among the world's most formidable…. The whole Hanoi area was ringed with surface-to-air missile sites that were heavily defended by a variety of antiaircraft artillery," Gargus remembered.[410] Strike support for the assault force and an aerial diversionary strike would be required to keep the North Vietnamese from focusing their attention on the ingressing air assault force (see Figure 43).

Figure 43. Son Tay Air Assault Force during Rehearsals at Eglin AFB, Florida[411]

409 William A. Guenon, Jr., flew as part of the Son Tay raid assault force. His account, "Secret and Dangerous: Son Tay Raider Pilot Looks Back," is recorded at the National Museum of the USAF. Major (Retired) William A. Guenon, Jr., "Secret and Dangerous: Son Tay Raider Pilot Looks Back," National Museum of the United States Air Force, Wings & Things Guest Lecture Series, accessed May 02, 2017, http://www.nationalmuseum.af.mil/Portals/7/documents/transcripts/son_tay_raid_transcript.pdf

410 Gargus, *The Son Tay Raid*, 92–93.

411 Adapted from Tom Demerly (tomdemerly), "Successful Failure: The Son Tay Raid," Tactical Air Network, ALERT 5, December 06, 2014, https://tacairnet.com/2014/12/06/successful-failure-the-son-tay-raid/.

The air assault force would be guarded by another strike element during their actions-on-the-objective. The strike element would be led in along a separate but complimentary route by an additional MC-130, CHERRY 02, and would consist of five A-1Es, PEACHs 01–05.[412] This would allow complimentary support between the strike and assault group during infiltration and exfiltration. Close air support and bombing by A-1E Skyraiders would provide additional flexibility to the ground assault force during actions-on-the-objective should any contingency plans need to be enacted.[413] Contingency options would require these capabilities to augment the ground assault force's plan to keep nearby conventional North Vietnamese forces from responding to their presence once they were detected.[414] This was another way that General Manor ensured "redundancy was planned into every phase of the air elements" (see Figure 44).[415]

In case something went wrong, alternative contingency plans were thought out and rehearsed. "The planners tried to anticipate everything that could go wrong. In military jargon, they extensively "what-iffed" the plan," Vandenbroucke relayed in his account of the planning phase.[416] Pondering these eventualities led to the development of alternative contingency plans based on the eventuality that an assault aircraft may not be able to reach the target compound at Son Tay.[417] This was the primary driver behind the development of contingency plans for the operation.[418] "Manor and his staff … realized that one of the helicopters might have mechanical problems en route to Sontay and that the entire ground force might not reach the camp."[419] To compensate for the possible loss of any of the three ground assault force elements, contingency plans were devised that would allow one of the support elements to adjust their tactics to compensate for the

412 McRaven, *SPEC OPS*, 305.

413 Gargus, *The Son Tay Raid*, 43.

414 Gargus, 43.

415 McRaven, 305.

416 Vandenbroucke, *Perilous Options,* 59.

417 Gargus, 42.

418 Gargus, 42.

419 Vandenbroucke, 59.

loss.[420] There was also an additional HH-53 added to the air assault force to act as a flying integrated spare.[421]

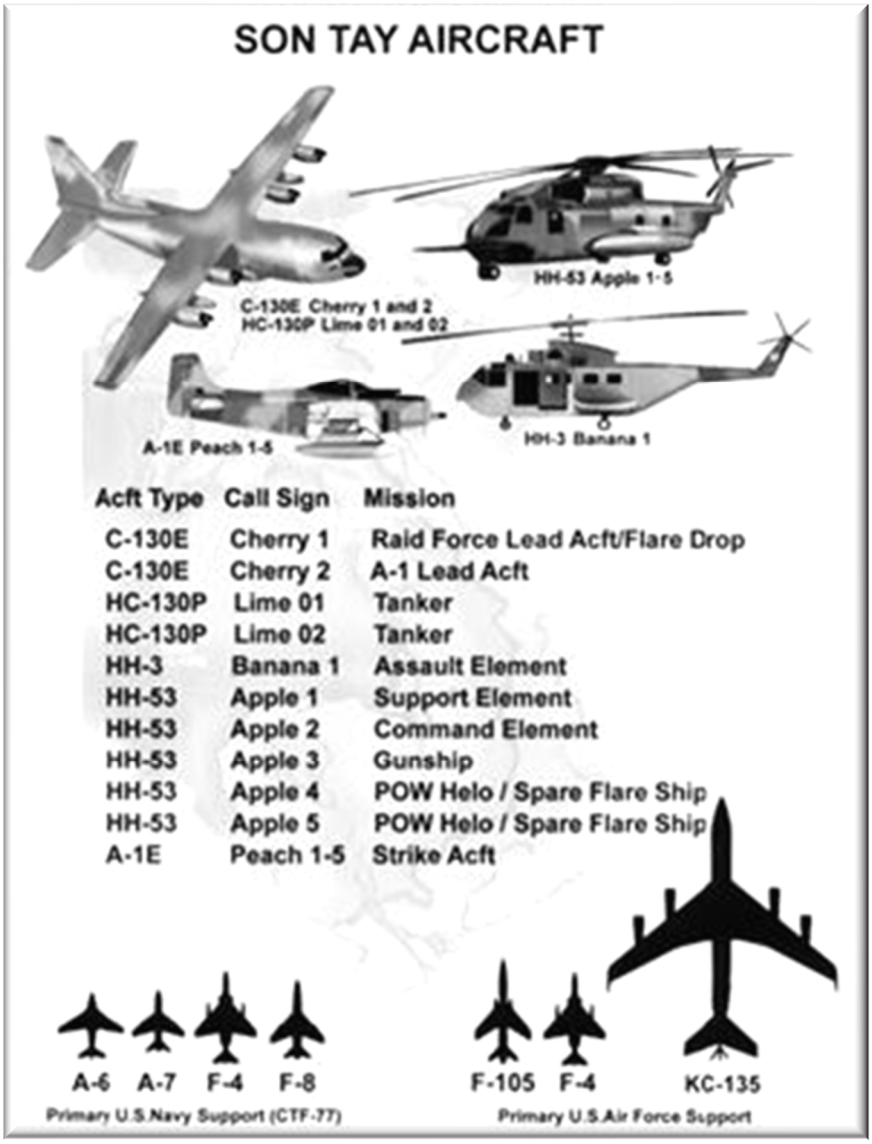

Figure 44. Fruit Salad "With a Punch" Call Signs[422]

[420] Vandenbroucke, *Perilous Options,* 59.

[421] USAHEC, "Son Tay."

[422] Adapted from Michalke, "Son Tay Raid Remembered Nearly Four Decades Later." Term "With a Punch" is from the presentation of Mr. Terry Buckler. USAHEC, "Son Tay."

While these special operations forces were preparing for their daring assault behind enemy lines, their conventional counterparts were shouldering the mantle of responsibility that came with executing a massive diversionary campaign under far from ideal conditions. There was a great deal of coordination and effort required to organize and requisition the resources required to divert the attention of the NVA air defense network.

The North Vietnamese MiGs posed a serious threat to the assault and strike formations, and a plan had to be devised that would keep them on the ground. Gargus explained how the "MiG interceptors … could be very successful against our fleet of C-130s, A-1Es, and helicopters."[423] The plan integrated the naval diversionary air strike to the east with support from the Air Force fighters from the west. In his book, Gargus described how the Air Force and Navy frequently played a cat and mouse game with the North Vietnamese interceptors. The Navy fighters from the east would challenge the North Vietnamese interceptors to engage. Once the engagement kicked off, Air Force fighters, launching from bases to the west, would pounce on the MiGs as they were returning to base, critically low on fuel.[424] Of course, the Navy fighters would be more than willing to return the favor for the Air Force fighters in the future. This became known as the "MiG trap scenario," and the North Vietnamese pilots and integrated aerial defense operators had become warry.[425] When they sensed their interceptors might be taken advantage of, they had a preference to rely on their SAM missile defenses to protect their airspace. Of course, it was far too dangerous to launch interceptors in the same airspace where SAMs were being fired for fear of striking one's own aircraft.[426]

The Son Tay plan called for just such a scenario to keep the MiGs on the ground during the night of the raid. The Navy would conduct a diversionary air strike from the east. The Air Force would provide fighters orbiting in the west. When the NVA picked up the Navy fighters approaching from the east and saw the Air Force fighters orbiting in

423 Gargus, *The Son Tay Raid*, 73.

424 Gargus, 73.

425 Gargus, 73.

426 Gargus, 73.

the west, they would sense a MiG Trap Scenario and rely on their SAMs to provide protection while denying launch authority to their air interceptors. This would, in turn, saturate the enemy early warning radars, draw the attention of the enemy defenders, and simultaneously ground the MiGs denying the enemy the use of the most lethal asset they had to counter the air assault force's intrusion.[427]

The current political environment was less than accommodating for such a maneuver, and the rules of engagement (ROEs) for both the strike formation and the supporting diversionary air strike would have to be modified to accommodate. Gargus explained:

> We had to observe the president's bombing pause that went into effect over portions of North Vietnam on 31 October 1968. Under this restriction U.S. aircraft could not drop any bombs on North Vietnam north of the 19th parallel. Consequently, our Skyraiders were obliged to limit their bombing and strafing to the small area where their air power was needed to assist and protect our ground forces. The Air Force's MIGCAP [MiG Combat Air Patrol] and the Navy's coastal diversion fighter activities would be limited to attacking only those targets that engaged them with hostile fire.[428]

Given this scenario, the strike and diversion aircraft would rely upon firefight simulators (devices designed to mimic gunfire), flares, anti-radar weaponry, and aggressive flight and electronic warfare tactics to distract the North Vietnamese air defense network.[429] These firefight simulators could be airdropped into North Vietnam and the area surrounding the objective to simulate ground-force small-arms fire, delaying the enemy's understanding of the exact location of the actual assault force and delaying an effective response.

General Manor contacted Admiral John S. McCain, Jr., commander-in-chief of the Pacific Command and thus owner of the Pacific Fleet.[430] He would need Admiral McCain's support to use the naval carriers and their fighters to support the diversionary

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427 Gargus, *The Son Tay Raid*, 73.

428 Gargus, 77.

429 Gargus, 80, 134; McRaven, *SPEC OPS*, 311.

430 Gargus, 104.

air strike. McCain was a man whose own son, John McCain, was currently being held as a POW by the NVA.[431] Admiral McCain endorsed Manor's plan and gave his full support.[432] The most honorable part of this is that at the time Admiral McCain gave his full support, he did not believe his son to be at the Son Tay location.[433] Yet he supported the rescue efforts despite this. This had to have been especially conflicting for the Admiral know that his son may suffer at the hands of his captors were the rescue attempt to be successful. There were sure to be reprisals against any remaining POWs if the rescue attempt succeeded. However, Admiral McCain knew that each and every one of the other lives rescued was just as deserving as his own son. He made his decision while valuing his duty to recover members of other American families as much as the loyalty he had to his own son. His actions are noble and inspiring (see Figure 45).

In addition to the naval support for the raid, the Air Force theater assets would need to be coordinated to ensure their end of the MiG Trap Scenario could be accomplished. While Manor's leadership in this area is well documented, one of the most notable aspects of this portion of the mission preparation is the down-teching utilized to ensure security was maintained while balancing the need to disseminate the sense of purpose and necessary details to the supporting fighter aircraft units. "The entire operation was to be laid out and coordinated by person-to-person contact and briefings" Brigadier General Cramer relayed to Gargus when interviewed about how the Air Force conventional force support was obtained for the raid.[434] While this example exemplifies how operational security for SOF direct-action mission should be operationalized, it is not an aspect unique to air coordination. There were no aspects of security specifically unique to assault airlift that are not also experienced or provided by other air, sea, and ground force assault mobility options. Locations, means, methods, and timing remain aspects of mission parameters worthy of concealment, but security must be balanced against sharing enough information to operationalize the required assets.

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431 Gargus, *The Son Tay Raid*, 91.

432 Gargus, 104.

433 Gargus, 91.

434 Gargus, 105.

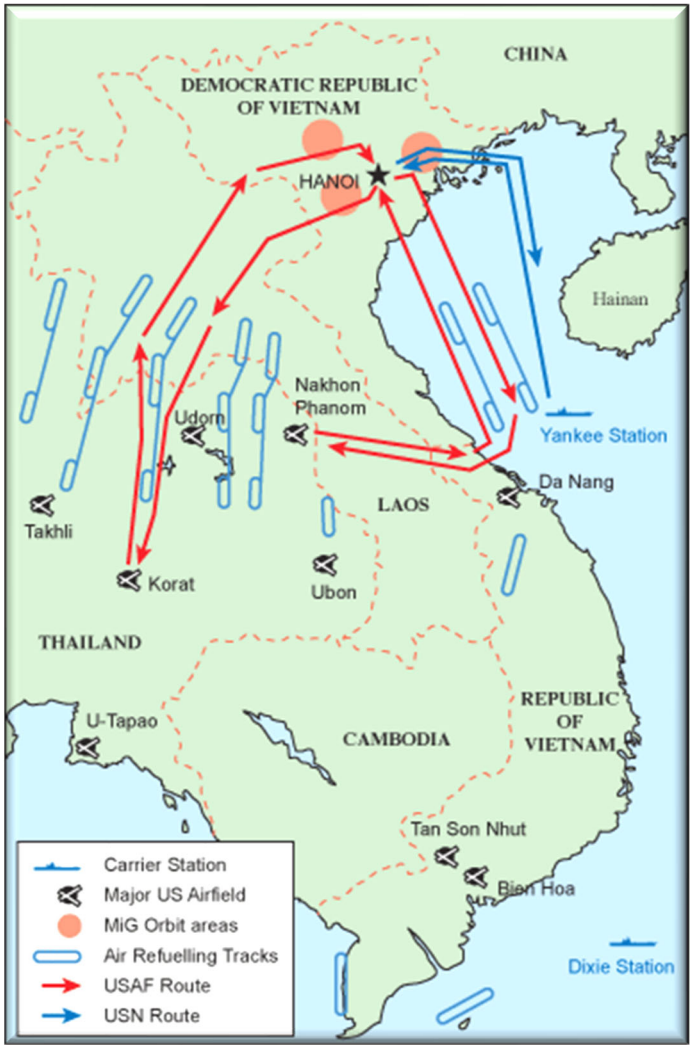

Figure 45. Air Force and Navy Tracks Coordinated in Support of Operation KINGPIN[435]

As the raid channeled through the chain-of-command to receive approval, precious time slipped away. The mission force departed Eglin Air Force Base between 14 and 17 November to be staged at Takhli, a Royal Thai Air Force Base (RTAFB) Central Intelligence Agency (CIA) Compound, where it waited to receive its launch authorization and final mission briefing.[436] This took several days.[437] In the interim, they focused on weapon and equipment checks. The air force crews and maintainers focused on ensuring

[435] Adapted from Tom Pilsch, "*Vietnam War Resources*," accessed May 04, 2017, http://www.tom.pilsch.com/Vietnam.html.

the aircraft were acclimated to flight in the area and were in peak operating condition.[438] Eventually, on 18 November 1970, President Nixon authorized the mission.[439] The mission was planned for execution on 22 November 1970, but could be executed anytime in the window between 20 to 26 November at Manor's discretion.[440]

The raiding window was based on the required nominal level of a quarter moon.[441] This would allow the air assault force enough light to infiltrate without being easily visually detected while also allowing the ground assault force, which was not fully outfitted with night vision devices, to be able to see enough to accomplish their mission. Aerial flares would be airdropped by the MC-130s and HH-53s during the raid, but these would only augment the moonlight, which was still a prerequisite for the nighttime ground operations.[442]

The intelligence regarding the presence of POWs at the Son Tay detention camp became less conclusive as the time for execution drew near, but the weather dictated a decision be made.[443] There were conflicting reports between the SR-71 Blackbird photos and the human intelligence information being fed in from the ground. Human intelligence indicated that there may not be POWs at the camp, but aerial recon photos indicated activity in the camp.[444] With time running out on whether or not to execute before the weather deteriorated, Manor's experience and familiarity with the mobility requirements of both the air assault force and the air diversion were drawn upon to their maximum capacity. He knew that the weather requirements for the mission to proceed were non-

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436 USAHEC, "Son Tay;" McRaven, *SPEC OPS*, 307.

437 McRaven, *SPEC OPS*, 308–309.

438 McRaven, 308–309; "Firsthand Account of Son Tay Prison Raid," ShadowSpear Special Operations, 2014, https://www.youtube.com/watch?v=bpxNJNKrQjU.

439 McRaven, 292, 307.

440 Gargus, *The Son Tay Raid*, 142, 261.

441 McRaven, 307–308; Manor, "Untold Stories: Son Tay Raid."

442 USAHEC, "Son Tay;" McRaven, 307–308.

443 Gargus, 261.

444 Gargus, 261.

negotiable. His familiarity with the constraints of air power became just as important as his knowledge of its capabilities. McRaven provides the following details:

> It was essential for the success of the mission that the air element have a five-thousand- to ten-thousand-foot cloud ceiling en route to Son Tay and suitable moonlight for the ground operations at the objective. Additionally, the coastal ceiling off the Gulf of Tonkin had to be seventeen thousand feet for the navy [sic] to conduct their diversionary air raid. Manor received a detailed weather brief the afternoon of the nineteenth, and based on that forecast he made the decision to launch the raid on the twentieth instead of the twenty-first.[445]

Unfortunately for the assault force, the weather conditions were deteriorating quickly with the approach of Typhoon Patsy, reported to be the worst of its kind in over one hundred years.[446] The degrading weather was moving in from the east and threatened to interrupt the naval diversionary strike necessary for the assault force to infiltrate and return from the objective area safely.[447]

Brigadier General Manor knew that not going early might mean not going at all, and he knew the risk was warranted. He made the call to proceed and execute the mission 24 hours early, during the best available weather scenario.[448]

General Manor's decision was in line with the guidance provided by the President, who had indicated his strong support for the mission regardless of whether or not the POWs were actually able to be retrieved. President Nixon provided a note of support to Admiral Moorer just prior to the mission's execution (see Figure 46).[449]

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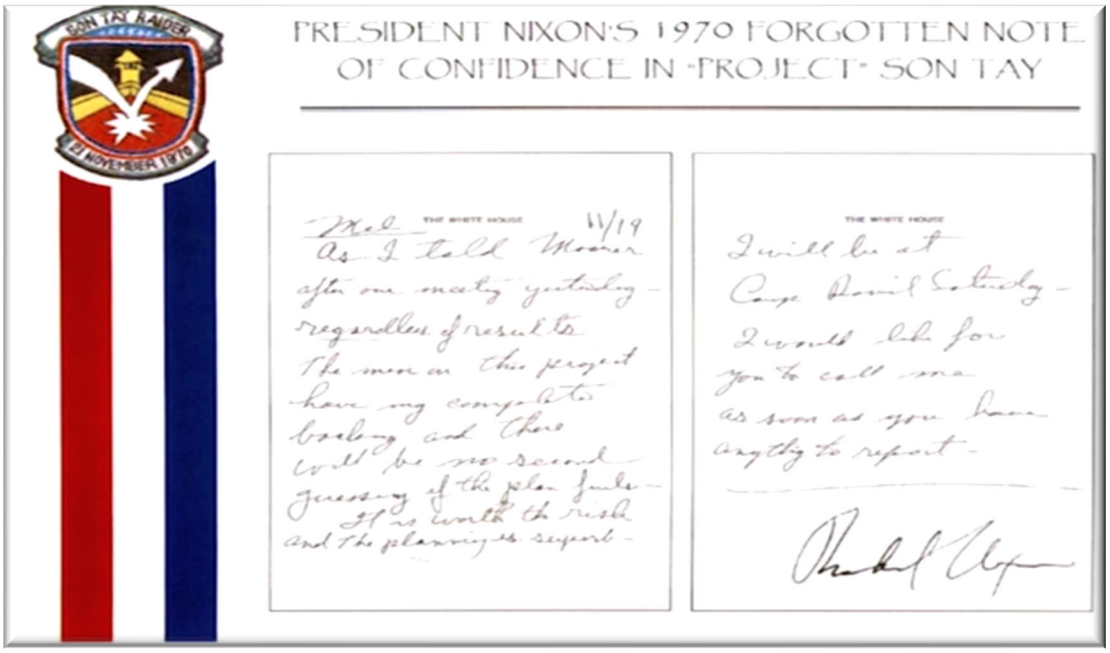
[445] McRaven, *SPEC OPS*, 307–308.

[446] Gargus, *The Son Tay Raid*, 142.

[447] Gargus, 142–143.

[448] Gargus, 144.

[449] USAHEC, "Son Tay."



"As I told Moorer after our meeting yesterday—regardless of results the men on this project have my complete backing and there could be no second guessing if the plan fails—it is worth the risk and the planning is superb—I will be at Camp David Saturday—I would like for you to call me as soon as you have anything to report" —Richard Nixon. Extracted from the presentation of Terry Buckley.

Figure 46. President Nixon's 1970 "Note of Confidence" in Project Son Tay[450]

3. Execution

The Son Tay rescue mission would be executed under the code name Operation KINGPIN.[451] Once Manor received the final "go," the mission assault force received a rest cycle and was then given their final mission brief on 20 November 1970.[452] The preponderance of the participants remained in the dark about many of the actual mission details until COL Bull Simon's briefed them on it just before they loaded the aircraft for departure. This was the first time many of the assaulters knew where they were going and what their mission objective was.[453] The mission force was immediately then forward

450 Adapted from USAHEC, "Son Tay."

451 "Interview with Sergeant Terry Buckler …"

452 McRaven, *SPEC OPS*, 308.

453 McRaven, 308.

deployed to Udorn and Takhli, from where it would be launched at 11:18 PM on 20 November 2017 to rescue the POWs (see Figure 47).[454]

"The Son Tay Raiders move out to load the aircraft."[455]

Figure 47. The Son Tay Raiders[456]

[454] CHERRY 01 experienced a notorious failure of the #3 engine to start, delaying the assault force takeoff 23 minutes. This type of delay was quite common with these models of MC-130 aircraft. Gargus, *The Son Tay Raid*, 284.

[455] Linnane, "The Son Tay Raid."

[456] Adapted from Linnane, "The Son Tay Raid."

a. Infiltration

The naval diversionary air strikes kicked off on schedule. It was surely a sight to behold. Due to the presidential order restricting offensive strikes in the area, the diversionary force would be relying on maneuvering tactics and flares to distract the North Vietnam aerial defense network.[457] Fortunately, the North Vietnamese behaved just as expected.[458] Because they were expecting a cat and mouse chase between the Air Force and Navy fighters, they relied on their SAM defenses and kept their MiG fighters remained on the ground.[459] McRaven expertly summarizes the conventional air support as follows:

> As the ground engagement was in progress, the aviation support forces (F-4Ds and F-105s) were busy avoiding and suppressing SAMs. Approximately sixteen SAMs were fired, and the F-105s responded with eight Shrikes. While flying at thirteen thousand feet, one of the F-105s (FIREBIRD 03) was damaged by a SAM that exploded under its left wing and apparently ruptured the fuel tank. The crew was forced to eject at eight thousand feet over the Plaine des Jarres. They were eventually picked up by the assault formation HH-53s [APPLEs 04 and 05].[460]
>
> The navy [sic] diversionary raid proceeded as planned. It is estimated that twenty SAMs were fired at the force, but no casualties were sustained. It was later reported that "the density of the Navy operations in the Gulf of Tonkin [during the Son Tay raid] was the most extensive Navy night operation of the SEA [Southeast Asia] conflict" [see Figure 48].[461]

457 Gargus, *The Son Tay Raid*, 77, 132–135, 237.

458 Gargus, 183.

459 This statement, indicating no MiGs were launched, is available in a revision of Gargus's book as an amendment to the section labelled "*MiGs?*" on pages 222–224 of this edition. Gargus, 222–224.

460 McRaven, *SPEC OPS*, 317.

461 McRaven, 317–318.

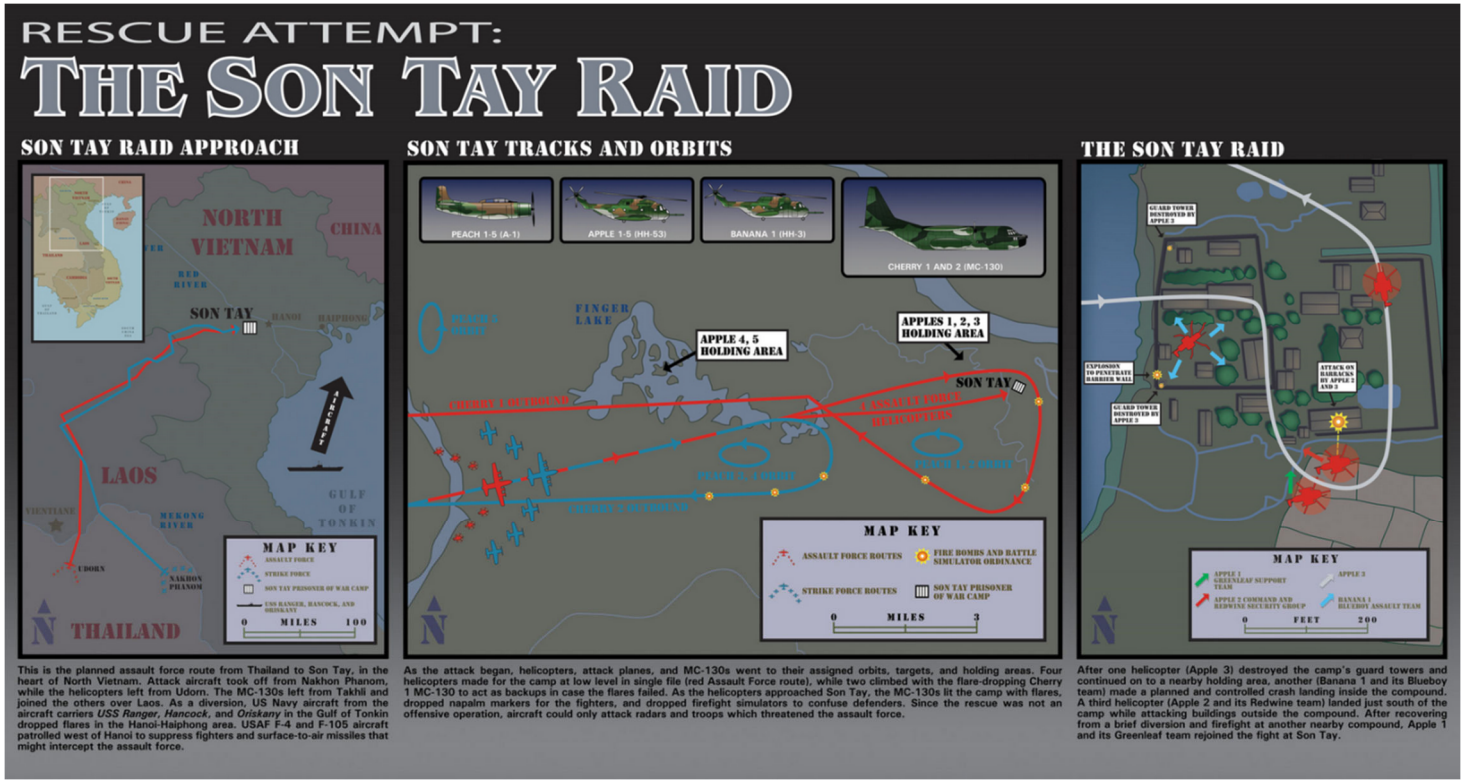


Figure 48. Son Tay Raid Mission Execution Storyboard[480]

480 Source Linnane, "The Son Tay Raid."

With the enemy air defense network task saturated with the diversionary air strike, the assault force infiltration proceeded as planned until just prior to landing (see Figure 49).

"Rescue force en route to Son Tay."

Figure 49. Son Tay Ground Assault Force Raiders[481]

The Fruit Salad air assault force took the form of a flock of geese, taking advantage of the aerodynamic drafting techniques pilots had gleaned from observations of their more naturally endowed counterparts.[482] The "tip of the spear" was comprised of the 7th SOS MC-130, CHERRY 01, leading a wedge of six helicopters: the HH-3

[481] Adapted from Michalke, "Son Tay Raid Remembered Nearly Four Decades Later."

[482] USAHEC, "Son Tay."

(BANANA) and five HH-53s (APPLEs 01–05).[483] In order to stay together, the helicopters were at the top of their performance speed, while the MC-130 was at the bottom of its own. The MC-130 flew 105 knots, just five knots above stall speed. It had to have its flaps at 70 percent in order to increase the surface area of the wing enough to hang into the air at this slow speed. Flaps are normally employed in similar configurations for aircraft during landings, but this was the configuration necessary to enable the MC-130 to stay in formation with its helicopter brethren. Of course, there are sacrifices to flying at such slow speeds in an MC-130. The controls are mushy. It feels as though the pilot is attempting to balance a very large and heavy plate on the top of a thin pencil. Let the aircraft tip too far in any single direction, and the result may become unrecoverable. It is a fine dance played upon the yoke and throttles in which every correction creates turbulence and magnified effects for the other aircraft in the formation. If the lead aircraft adds a small amount of power or lateral correction, the preceding aircraft must add a little more than that to maintain its position. The third aircraft's correction must be even larger. And then again, for the fourth. The expanding differential in these corrections is why it is so difficult to maintain close positions in larger aircraft formations, especially for any length of time. But the mission assault force did not have the luxury of avoiding these necessary risks (see Figure 50).

[483] Gargus, *The Son Tay Raid*, 279.

Figure 50. Fruit Salad Formation … "With a Punch"[484]

[484] Adapted from Linnane, "The Son Tay Raid."

Term "With a Punch" is from the presentation of Mr. Terry Buckler. USAHEC, "Son Tay."

The HH-3 BANANA had to be so close to the MC-130 in order to take advantage of the drafting technique that the rotors from the HH-3 literally overlapped the wing of the MC-130.[485] The consequences of any lack of attention could have easily resulted in the blades of the helicopter digging into the fuel-filled wing or clashing unforgivingly with the propeller of the MC-130's wing-mounted engines. This feat was harrowing enough, but it became even more challenging to maintain such parameters over the three and a half hour flight during the ingress route to Son Tay.[486]

CHERRY 01, the lead MC-130 Combat Talon, led the assault formation across the border into Laos for aerial refueling and then on into North Vietnam. As the formation drew nearer their objective, they reduced their altitude to facilitate the limited performance margins of the aircraft and to reduce the possibility of detection by enemy radar sites.[487] Major William A. Guenon, Jr., who flew CHERRY 01, the lead MC-130 Combat Talon of the air assault force, later recalled later how the terrain-following radar of the MC-130 "allowed us to get down to about 300 feet … especially the last 20 miles into Hanoi, because … we were trying to stay down low, below the radar … we were the lowest one and then the helicopters were stacked up, three on each side of the wing above us" (see Figure 51).[488]

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[485] Had the UH-1H (that had been utilized in the full-mission profile rehearsal) been used in the actual mission, this would have been an even more constrained flight. The Huey had to be flown even closer to the MC-130 than the HH-3 in order to draft into position. They Huey, being a smaller and slower helicopter than the HH-3, necessarily required more drafting to keep up with the formation. This drove it to be flown even closer to the MC-130, significantly decreasing the already miniscule margin for error. Gargus provides an excellent description of this drafting technique in his book. Gargus, *The Son Tay Raid*, 52–56.

Term "With a Punch" is from the presentation of Mr. Terry Buckler. USAHEC, "Son Tay."

[486] Gargus, *The Son Tay Raid*, 284–285.

[487] Gargus, 52–56.

[488] Guenon, "Secret and Dangerous."

"This MC-130E Combat Talon was formerly 'CHERRY 01,' the lead aircraft for the Son Tay Raid."

Figure 51. CHERRY 01[489]

Keep in mind this was before the days of the Global Positioning System (GPS). That is why, Gargus points out, that the FLIR, additional navigator, and other navigational aids were so critical. They had to be able to get the assault formation in to the objective area. Their three navigators were each responsible for critical portions of this task: one provided regular timing and procedural control of the flare airdrops and lights, one was responsible for navigation by radar, and one for basic navigation using clock, chart, and ground checkpoints to confirm and maintain navigational positional awareness.[490] Combined, these officers were able to perform a difficult task that has been made to seem simple by modern technology. Nonetheless, such precise navigation using internal means only was a significant accomplishment using even the most advanced tools of their day.

The MC-130, an aircraft model affectionately referred to as the Chariot of Armageddon by her crew, also carried on board an Electronics Warfare Officer (EWO).

489 Adapted from Demerly, "Successful Failure."

490 Guenon, "Secret and Dangerous."

Guenon provided the following simile as an unclassified version of a way to think about the EWO:

> He is much like your radar detector in your car. He can pick up all the radars that are looking at you at night, tell you what they are and tell you the [sic] which ones are a threat or which ones are long-range radar, ATC radar or MiG radar is painting you, that's not a good thing, or the SAM's with their radar, you can tell that. And then he had a whole bag full of electronic wizardry that he could deal with these different radars. So that was good, that was our defense. That was how we could get around this stuff.[491]

Conventional C-130s, even today, do not maintain the level of "electronic wizardry" and defensive penetration capabilities as those provided by the MC-130s of the Air Force's Special Operations Command. These tools, and the proficiency to use them to their utmost utility, are necessary in order to mitigate necessary risks associated with clandestine penetration of enemy airspace behind enemy lines, a task often required by SOF direct-action missions. These tools enable assault airlift to attain and maintain relative superiority via detection and threat avoidance.

There were conflicting reports between McRaven's sources and the firsthand account of Gargus regarding how the enemy early warning threat radars were handled. McRaven's source credited the tactics employed to defeat the radars to an intelligence provision. This intelligence provision allowed the air assault force to shoot a timing gap within the radars. Gargus, a navigator whose job it was to manage the timing of the mission aircraft, disputed the use of such information and says the assault force utilized routing and terrain masking.

McRaven purported:

> In assessing the intelligence provided the planning group, General Blackburn later recalled that "operational intelligence was flawless…. One day we got from Manor, 'Hey, do you realize that to fly from the Plaine des Jarres down into Son Tay, there are two radars? If we fly between those two radars, we are going to make that northeast warning system go hot. What do we do?' I [Blackburn] got a fellow named Milt Zaslov from [the National Security Agency]. I said, 'Zaslov, we have a problem. How

491 Guenon, "Secret and Dangerous."

> do we handle this thing?' … In less than a week … they were able to solve the problem. There is a five-minute gap in the way these things are rotated and we used that five-minute gap and they flew through it undetected."[492]

Gargus's account described the event in contradiction to McRaven's, saying there was no "gap" in the radar timing provided by intelligence assets. Gargus instead insisted the timing was based on the changing of the guards at Son Tay and the route was developed based on using terrain masking for radar avoidance:

> Many years later, some writers and analysts of the Son Tay raid would claim that the raid's timing took advantage of some little known shortcoming of North Vietnamese early warning radars and that we incorporated a lapse, or down time, of their radar coverage to "thread the needle" in order to avoid detection. The truth is that our only fixed times were the traditional shift change of enemy guards and the optimum moon elevation and illumination phases that coincided on the desired October and November time frames. We wanted to arrive at Son Tay between 2:15 and 2:20 A.M., with the exact time dependent on the prevailing inflight winds. We asked Captain Knops about any known or predictable early warning radar down times that could figure in our route selection and timing. I have no doubt that the intelligence community in Washington addressed that question. However, the three navigator planners (Clark, myself, and Stiles) never received any input on how to "thread the needle." We received excellent input from our radar intelligence source, Lt. Col. Homer Willett. He brought us a map that showed early warning radar coverage that addressed masking behind mountain peaks and ridges in the most vulnerable sector of our formation routes. We used it along with terrain elevations extracted from 1:50,000 scale maps to plan the routes southeast of the Na San radar site. Lieutenant Colonel Kennedy from the Pacific Air Defense Analysis Facility reviewed these routes in Washington. Neither he nor Captain Knops came back to us with information about any enemy radar down times.[493]

The final leg into the objective area was preceded by the "initial point" (IP). This was the point from which all assault aircraft would proceed toward their individually assigned tasking areas. It was also the point from which the mission plan started to decay. APPLE 03, the HH-53 gunship that would be making an initial firing run on the guard towers to suppress enemy forces, was now in the lead of the helicopter assault formation. They

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[492] McRaven, *SPEC OPS*, 323.

[493] Gargus, *The Son Tay Raid*, 77–78.

would be flying too low to see very far or navigate very well. Their plan was to follow a designated heading between selected ground references and then pick up the flares dropped by CHERRY 01 to guide them in.[494] But from their low vantage point amid the dark and murky visual flow of the terrain, the pilot of APPLE 03 momentarily mistook a compound to his right as the target area.[495] He made a slight bid right, and was almost immediately corrected by his copilot who saw the Song Con River off their left side.[496] They slowly corrected their heading back to the Son Tay camp.

Following APPLE 03's head-fake to the south, BANANA had drifted slightly south of their planned course line and the pilots did not see the flares from CHERRY 01.[497] Neither did they realize that APPLE 03 had completely pulled off of the presumed target without firing. These details were lost in those critical seconds.

As BANANA flared and descended into the compound, warning signs began to show that it was not what they had expected.[498] The courtyard had no clearing for their helicopter to land.[499] Obediently trained, BANANA's assaulters began to open fire on the locations they expected their designated targets to be, even though some of the guard towers and buildings were obviously missing.[500] They had mistakenly taken the Secondary School to be the Son Tay compound. They were 400 meters too far to the south.[501] Realizing the error they had made, the pilots immediately applied maximum power, lifted and turned left, then almost an immediately turned right and flared for BANANA's final descent into the actual compound, some 400 meters to the north (see Figure 52).[502]

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494 Gargus, *The Son Tay Raid*, 186.

495 Gargus, 189.

496 Gargus, 189.

497 Gargus, 189.

498 Gargus, 82–83, 190–193.

499 Gargus, 190–193.

500 Gargus, 190–193.

501 Gargus, 196.

502 Gargus, 190–193.

Figure 52. HH-3 Jolly Green Giant (Same Model as BANANA)[503]

APPLE 03 and BANANA's navigational errors would seem to have narrowly avoided any significant consequences, and that may have been the case had they not been leading APPLE 01 and APPLE 02 behind them. However, as is predominantly true regarding all positions of leadership, the mistakes of these leaders matriculated down to punish those who were following and relying on them. APPLE 01, with GREENLEAF's 22 member assault force on board, saw BANANA's gunners open fire on the Secondary School and mistook it for their primary objective area. Even though several members of the GREENLEAF ground assault force had realized this was the wrong compound when they saw the Son Tay detention center out the left side of the aircraft on approach, there was no time to effectively communicate the error. Gunners were opening up on their intended targets and APPLE 01 set down in a location approximating its intended position to the south of the prison camp. The ground assaulters, to include Colonel Bull Simons,

503 Adapted from Pdoggbiker. "The Failed Son Tay Prison Raid." *Cherries—A Vietnam War Novel* (blog), May 04, 2016. https://cherrieswriter.wordpress.com/2016/05/04/the-failed-son-tay-prison-raid/.

dismounted and immediately proceeded along their rehearsed routes.[504] APPLE 01, still unaware of their error, lifted away (see Figure 53).

"MH-53M (serial number 68-10357) that took part in the Son Tay Raid."

Figure 53. APPLE 01[505]

APPLE 02 followed APPLE 01 in towards the Secondary School, but they benefited from a more objective perspective and were able to see BANANA's wave-off, whereas APPLE 01 was already focused on their own landing by the time BANANA had pulled away. APPLE 02 recognized the error in time and pulled up and away, to land at their correct location at the actual Son Tay compound.[506]

The GREENLEAF ground assault force, still not entirely aware of their erroneous location, immediately encountered resistance from an enemy who "did not appear to be North Vietnamese."[507] The Secondary School was crawling with enemy forces that were eager to engage the small ground assault force. It would take a few moments for the error to be communicated to all of the now dispersed GREENLEAF members. It would take a

504 Gargus, *The Son Tay Raid*, 193–197.

505 Adapted from Demerly, "Successful Failure."

506 McRaven, *SPEC OPS*, 312.

507 Gargus, 195.

few more moments for them to secure the landing zone for extraction, having kicked a hornet's nest (see Figure 54).[508]

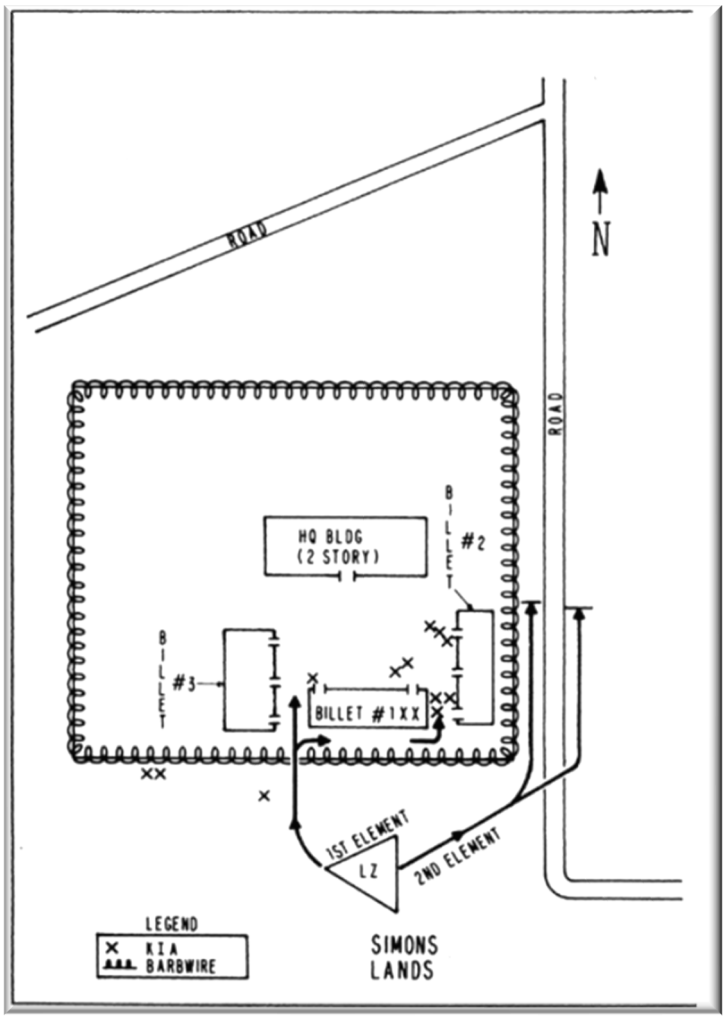

Figure 54. Map of Secondary School Compound Depicting GREENLEAF Security Group Movements[509]

508 Gargus, *The Son Tay Raid*, 195.

509 Adapted from McRaven, *SPEC OPS*, 16–19

b. Actions-on-the-Objective

At the same time GREENLEAF was landing at the Secondary School, APPLE 03 opened fire at the actual Son Tay compound, disintegrating the wooden guard towers.[510] They proceeded to a holding point to await call in for exfiltration (see Figure 55).[511]

Figure 55. Map of Son Tay Area Depicting Both Son Tay Camp and the Secondary School[512]

510 McRaven, *SPEC OPS*, 312.

511 McRaven, 312.

512 Adapted from Manor, "Untold Stories: Son Tay Raid."

BANANA 01, who moments before had mistakenly descended and fired on the wrong compound, now found themselves descending for a controlled crash into the actual Son Tay compound courtyard. On descent into the courtyard, the HH-3's blades began to strike the trees, which were larger than the intelligence reports had relayed.[513] As the rotors contacted one of the larger trees in the courtyard, the aircraft lurched sideways, ejecting one member of the ground assault force.[514] The helicopter violently fell to its final resting place. It struck the ground with enough force to break loose a fire extinguisher, crushing the ankle of the flight engineer (see Figure 56).[515]

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513 USAHEC, "Son Tay."

514 USAHEC, "Son Tay."

515 Sergeant LeRoy Wright had his ankle broken when a fire extinguisher broke loose during the crash landing of BANANA. Following his injury, Wright continued to perform his duties without assistance, which included evacuating the occupants of the crashed HH-3 and then placing "extremely effective covering fire on enemy positions." He then proceeded, unassisted, to the exfiltration site. Sergeant Wright was subsequently awarded the Air Force Cross for continuing the mission with his injury. McRaven, *SPEC OPS,* 324; "*Hall of Valor: LeRoy M. Wright*,"

Wright's account exemplifies the additional level of integration an air assault force takes on with the ground force that separate this relationship from that of conventional support elements. There is an additional level of trust required between a ground assaulter and an air commando when their lives may literally depend on the decisions they make and the information they share. It is this trust between the air and ground elements that enables them to develop the level of synchronization required to achieve relative superiority together and surmount the risks bestowed upon mission assault force. Air commandos go behind enemy lines with the ground force. They are an integral part of the mission force. They go in and get out together.

The level of trust and credibility required to operationalize SOF direct-action missions cannot be achieved overnight and requires time and training to build. This is a deeper level of trust than that required between the assault force and conventional assets who are less tangibly associated with assault operations. These additional iterations of trust are established in the organizations these assaulters work in before an assault is even planned. They are then further developed, and nominally require establishment, in the mission planning and preparation phases of an operation using air and ground assault elements. This additional level of integration is necessary to satisfy the requirements of a mission assault force as opposed to the less intense considerations required by supporting air elements, such as those providing diversions, dropping bombs, infiltration-only mobility options, or a broader "pick up and drop off" mobility transport.

"Remains of the HH-3," BANANA 01, "inside Son Tay camp."

Figure 56. The Remains of BANANA 01[516]

BANANA's crash was more forceful than predicted.[517] Buckley later recalled the recovery the 14 Green Berets on BANANA 01 experienced following the crash[518]: "BLUEBOY's job was to crash land that chopper inside the compound and take out that guard tower and get to those POWs within one minute."[519] The BLUEBOY assaulters' tasks had not been affected by either the crash or the current absence of GREENLEAF. Their mission remained the same: neutralize the guards and recover the POWs as quickly as possible. They displayed incredible resilience recovering from the controlled crash and pushing forward to prosecute their mission. This in itself is no small task. Keep in mind

516 Adapted from Michalke, "Son Tay Raid Remembered Nearly Four Decades Later."

517 Gargus, *The Son Tay Raid*, 197–198.

518 Guenon, "Secret and Dangerous."

519 USAHEC, "Son Tay."

that they had never practiced the helicopter crash landing during rehearsals. It was the one part of the mission they could not have trained for.

Meanwhile, at the Secondary School, Colonel Bull Simons radioed for APPLE 01 to return while GREENLEAF suppressed the now alerted enemy forces. It took only minutes for APPLE 01 to return and extract them from their misadventure at the Secondary School.[520]

With APPLE 01 absent from the Son Tay site, contingency plan Green was almost immediately implemented.[521] The ground force began to implement the plan, flexing to their alternative targets, without pause.[522] They had rehearsed this scenario many times before. They called in the A-1E strike aircraft to compensate and attack the Song Con Bridge. As all of this transpired, APPLE 01 returned with the GREENLEAF assault force. Within eight minutes of their landing at the Secondary School, GREENLEAF was back in the fight with REDWINE at Son Tay.[523]

Meanwhile, inside the compound, BLUEBOY, led by Lt Col Meadows, prosecuted their targets and infiltrated their assigned buildings to recover the POWs. Simons, having been preoccupied with the GREENLEAF security group at the Secondary School, had only just arrived at Son Tay himself.[524] Sydnor and his men in REDWINE were reorienting themselves to GREENLEAF's belated arrival, while Meadows and BLUEBOY entered and cleared the buildings they suspected of containing the prisoners, suppressing limited enemy resistance along the way. What Meadows found inside was lacking … empty cells. Within ten minutes, the first radio call to carry the stark news crackled across the radio net. "Negative items," (see Figure 57).[525]

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520 Gargus, *The Son Tay Raid*, 196.

521 Gargus, 286.

522 McRaven, *SPEC OPS*, 313.

523 Gargus, 286.

524 Gargus, 286; USAHEC, "Son Tay."

525 USAHEC, "Son Tay;" McRaven, 313.

Figure 57. Empty Detention Cells Photographed during the Raid at Son Tay[526]

526 Adapted from Linnane, "The Son Tay Raid."

There were no POWs in the compound. Simons called across ordering the men to check again.[527] When their futile efforts revealed the same bleak results, Simons was compelled to see for himself. He personally checked each of the cells to ensure no POWs were present.[528] This disbelief and "are you sure" reaction would matriculate up the chain of command.[529] When Manor received the report, he also asked to have the cells checked again, as well. But the camp did not contain any prisoners to be rescued.

During the actions-on-the-objective, the helicopters of the assault force had lifted and landed approximately two miles away in an unsecured but wide-open and empty field to ground laager until the ground assault force was ready for exfiltration.[530] This kept them on a short leash for the ground assault force so that they could react and provide extraction at a moment's notice. "Like getaway drivers waiting for bank robbers to come back after pulling a heist," they left their engines running.[531] This helped to ensure the engines would remain running and they would be ready to go by avoiding any possible startup malfunctions. Ground laagering in this fashion also protected these critical extraction assets from any unnecessary exposure to the firefights that were inevitably occurring during the actions-on-the-objective.

c. Exfiltration

REDWINE would be the first group to exfiltrate the compound, but there was a small issue. There were utility light poles in the originally designated exfiltration landing zone that they had planned to cut down. These utility poles turned out to be constructed out of concrete, not wood as the intelligence had initially suggested. The chainsaws brought to cut them were not effective, and the helicopter landing zone for extraction had to be moved "a little further out, in the rice patties" Buckley recalled.[532] While the

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527 USAHEC, "Son Tay."

528 USAHEC, "Son Tay."

529 Gargus, *The Son Tay Raid*, 286.

530 USAHEC, "Son Tay."

531 Quote from Professor Arquilla. Dr. John Arquilla, Thesis Review, Naval Postgraduate School, Monterey, CA, 2017.

532 USAHEC, "Son Tay."

landing zone was re-established and the helicopters were called back in for extraction, a C4 explosive charge with a 20 minute fuse was used to blow the sacrificial BANANA HH-3 helicopter in place.[533] Within a few minutes, APPLE 01 and APPLE 03 respectively landed to extract the ground assault force (see Figure 58).[534]

"The wreckage of HH-3E looking toward the west compound wall, with the river beyond."

Figure 58. The Remains of BANANA 01 (Alternate View)[535]

One of the primary concerns was of course personnel accountability. It could be very easy to accidentally leave a man behind in the chaos of the moment, in the swirling dust and in the dark of the night. Such an error could have devastating consequences, so personnel accountability was of an immediate nature and of the utmost importance.

533 USAHEC, "Son Tay."

534 Gargus, *The Son Tay Raid*, 286.

535 Adapted from Pdoggbiker, "The Failed Son Tay Prison Raid."

Several counts were taken to ensure all assaulters, to include the crew of the crashed HH-3, were accounted for (see Figure 59).[536]

Figure 59. Raider Equipment Abandoned at Son Tay[537]

As exciting as the actions-on-the-objective had been, the assault force was not "out of the woods" yet. The North Vietnamese air defenses, rattled by the Navy and Air Force fighters, were now on high alert and were actively launching their missiles at any moving targets.[538] As the helicopters lifted from the ravaged compound, they became exposed to the barrage of fire. Buckley, who was aboard APPLE 01 with the rest of REDWINE for the exfiltration, recalled in a 2016 recount of the event, "about that time our chopper just takes a drop to the right … a pole, about thirty feet long … shoots up our tail

536 USAHEC, "Son Tay."

537 Adapted from Pdoggbiker, "The Failed Son Tay Prison Raid."

538 Gargus, *The Son Tay Raid*, 255–256.

end … and another one."[539] Buckley credits the skill of the pilots for avoiding being hit during the exfiltration from North Vietnam.[540]

As the assault force departed North Vietnam to the west, the weary pilots faced one more aerial refueling before they could finish the journey to their staging bases in Thailand. The men were dejected, saddened, angry, and spent.[541] It was a rather unfulfilling end to a mission the assault force and the nation had invested so much in.

4. Post-mission: Aftermath

No hostages had been rescued, but was the mission a success? Admiral McCain warned the raiders not to judge themselves too harshly. "Don't let anyone tell you that this mission was a failure. We will learn, as the results develop, that many benefits will accrue as a result of having done this."[542] Admiral McCain's assessment … proved to be correct," Gargus relates. General Manor recalled the aftermath of the raid as follows:

> President Nixon … was anxious to receive a first-hand report. While disappointed that we didn't rescue any POWs, he was pleased that we had experienced no losses. He expressed the belief that the rescue attempt would result in the improvement of morale among the POWs, the next of kin and, in fact, the whole country. Congressional reaction was mixed -- with more favorable than unfavorable. The end results were proclamations by both the House and the Senate praising the effort.[543]

C. ANALYSIS

1. What Did McRaven Have to Say?

The case study of Son Tay provides the unique opportunity to examine an event independently of McRaven while also being able to compare and contrast the findings of this research with the findings of McRaven himself. McRaven provided the following relevant analysis conclusions after having examined the Son Tay raid (see Figure 60).

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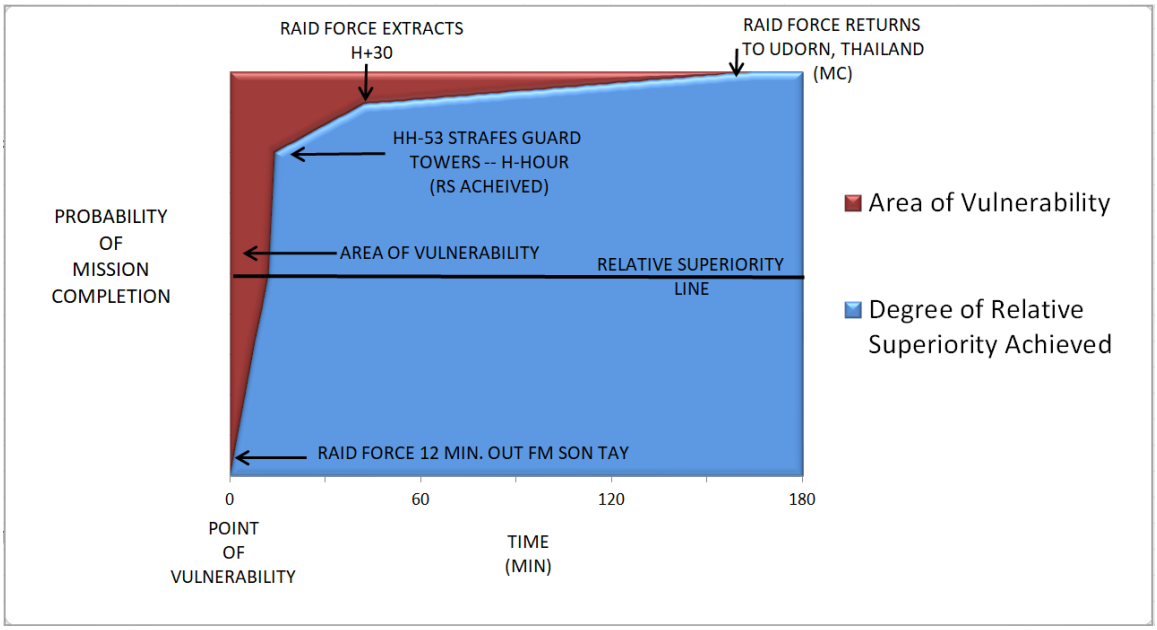
539 USAHEC, "Son Tay."

540 USAHEC, "Son Tay."

541 Gargus, *The Son Tay Raid*, 226.

542 Gargus, 258–259.

543 Manor, "Untold Stories: Son Tay Raid."



McRaven's model in *SPEC OPS* primarily focuses primarily on contributions of the ground assault force component.

Figure 60. McRaven's Operation KINGPIN Relative Superiority Graph[544]

McRaven identifies the point of vulnerability as "the point that the central and western air defense systems could detect the inbound aircraft," or "twelve minutes before [the raid force] reached the objective."[545] He identifies the attack of the gunship, APPLE 03, as the moment where the assault force attained relative superiority.[546] McRaven identifies mission completion as the "successful return of the raid force" to Udorn and Takhli RTAFBs.[547] McRaven's justifications are valid for making these assessments based on the case study he presents. He summed it up well when he said, "In the end, gaining and sustaining relative superiority became a function of proper planning, preparation, and execution rather than being dependent on benevolent frictions of war or the strong intervention of the moral factors."[548]

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544 Adapted from McRaven, *SPEC OPS*, 7, 322.

545 McRaven, 321.

546 McRaven, 322.

547 McRaven, 7, 321.

548 McRaven, 7, 322.

However, McRaven's assessment is proposed from the perspective of the ground assault force as the primary element of the mission assault force. In contrast, the perspective taken here is that the ground assault force, though an indispensable member of the SOF direct-action mission force, is independently incapable of accomplishing a mission of this sort alone. Just as it would be irrational to form a mission assault force composed only of assault aircraft, it is also incomplete to only analyze relative superiority from the perspective of the ground assault force.

There is but one discrepancy between McRaven's assessment and the operation as viewed through the lens of an assault airlift air commando. McRaven's model does not fully appreciate the contributions and vulnerabilities of the assault airlift component of the mission force.

Regarding the vulnerabilities of the mission force, McRaven identified that the "area of vulnerability decreased to a negligible amount" once the ground assault force was back on the assault lift helicopters, but this assessment is almost completely focused on only the ground assault force portion of the total mission force.[549] McRaven does acknowledge, "The return trip to Udorn, Thailand, was punctuated by several SAM sightings, which required evasive action on the part of all the air force elements."[550] He classifies this level of risk as "negligible" and attributes this lack of vulnerability to General Manor's provisions for conventional Navy and Air Force support to suppress and distract NVA MiGs and SAM threats via the diversionary MiG Trap Scenario plan.[551] However, this assessment focuses too heavily on only the ground element of the total assault force and does not recognize the ground force as a synergistic element of the total mission assault force. It almost disregards the contribution of the air assault element in providing transportation to and from the objective area, a critical and necessary component for mission success. Both McRaven's admission of the SAM threat during exfiltration and Buckley's account of the two SAM shots specifically directed at the

549 McRaven, *SPEC OPS*, 322.

550 McRaven, 317.

551 McRaven, 322.

helicopters during their extraction facilitate recognition of this contribution.[552] This is not a nuance to be overlooked. Had the engagement resulted in the loss of an air asset it is conceivable that the entire mission, from conception to execution, would have been viewed in a much more negative light. The vulnerability to the assault mission force was substantially more than "negligible" during the exfiltration phase of the operation.

Clearly the more lethal treat to the air assault force was the potential for being intercepted by the MiG fighters, but the SA-2 Guideline SAMs and the AAA employed by the North Vietnamese were not empty threats or easily surmountable obstacles.[553] The SAM sites were manned by highly trained and proficient operators who were exceedingly skilled at their jobs. In addition to the SAMs, radar guided AAA was a dangerous threat. Mobile AAA sites meant that paths that were cleared safe on one day could become ambushes lying in wait the day after. "At that time, North Vietnamese had the best air defense system in the world. They were trained by the Soviets. They were defending their homeland and after seven years, they were damn good," Gargus relayed in a documentary with the History channel.[554] McRaven does give credit the air assault force for conquering these daunting challenges, but the modern attitude toward the value assault airlift provides toward achieving relative superiority falls short of grasping the intrinsic dangers associated with flight in denied enemy battlespaces while behind enemy lines.[555]

McRaven's model does not seem to appreciate the magnitude of the risk these conventional enemy defenses posed to the assault mission force. Fortunately, the air assault force was capable enough to mitigate this threat, but this does not mean that the capability should be taken for granted. Quite the contrary. Because the air assault force's capabilities were able to mitigate this substantial threat to the mission force is precisely the reason that this capability should be firmly integrated into other such mission forces in the future, when time sensitivity and flexibility for a SOF direct-action mission demand this level of versatility in the assault mission force.

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552 USAHEC, "Son Tay."

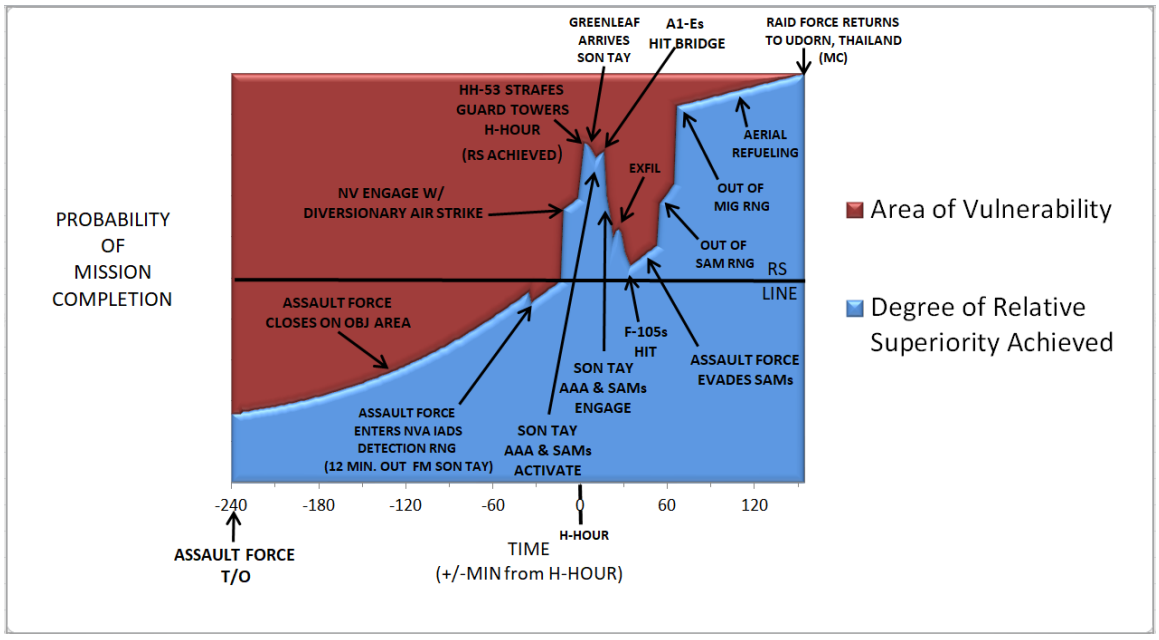
553 Gargus, *The Son Tay Raid*, 74.

554 History, "Raid on Son Tay–Vietnam POW Rescue Story."

555 McRaven, *SPEC OPS*, 317.

2. Theory of Relative Superiority

Relative superiority during the raid was specifically impacted by assets other than the ground assault force, to include the air assault force, at several key points. McRaven's assertions regarding relative superiority during the Son Tay mission are sound. His analysis is not in error. However, his initial Son Tay Relative Superiority Graph does not encompass the contributions or vulnerabilities of assault airlift. Independent analysis of the Operation KINGPIN reveals additions to McRaven's initial analysis by including the air assault force perspective. In this way, a more complete representation can be obtained that shows both the air and ground aspects of the assault mission force. This will assist in analysis of how assault airlift can be operationalized to better attain and maintain relative superiority and thus increase the survivability of the mission force (see Figure 61).



This augmented model includes comprehensive analysis of both air and ground assault force components.

Figure 61. Augmented Operation KINGPIN Relative Superiority Graph[556]

556 Adapted from McRaven, *SPEC OPS*, 7, 322.

a. Timeline

The following timeline is provided from Gargus with relative commentary added as pertinent to this discussion. Gargus was a navigator aboard CHERRY 02. As such, his crew position was responsible for logging the events of the operation as they transpired. He expertly provides the timeline in his book which, with limited augmentation from additional sources, has been used to create the timeline below[557]:

10:25 PM, CHERRY 02, lead ship for the strike formation, takes off from Takhli RTAFB.[558]

10:55 PM, CHERRY 01, lead ship for the assault formation, is unable to start their #3 engine at Takhli RTAFB.[559] This represents the first time the prepared plan was exposed to a level of risk that necessitated redundancy planning in order to mitigate. Fortunately, this mechanical malfunction did not take out the MC-130, as it was eventually resolved. If this had not been the case, then CHERRY 02, who had departed at 10:25 PM to lead the strike formation, would have had to flex and take over as lead of the assault formation instead. This would have left the strike formation unguided on the way into enemy airspace. This could have significantly reduced the available flexibility and increased the amount of exposure the mission assault force experienced throughout the rest of the operation. This shows how factors can begin to erode (or bolster) relative superiority even prior to the mission commencing.

11:17 AM, the assault formation HH-53 APPLEs 01–05 and HH-3 BANANA lift off from Udorn RTAFB.[560]

11:18 AM, CHERRY 01 departs Takhli RTAFB, 23 minutes later than scheduled.[561] At this point, the mission force is exposed to the degradation of resources associated with the spent time and fuel, significantly decreasing their chances of being

557 Gargus, *The Son Tay Raid*, 284–288.

558 Gargus, 284.

559 Gargus, 284.

560 Gargus, 284.

561 Gargus, 284.

able to "reset" and attempt the mission again should any catastrophic failures occur. The window of feasible execution has arrived and the mission resources are committed.

12:40 AM, the assault formation refuels with the LIME HC-130Ps over Laos.[562] This provides the air assault force with the necessary resource, fuel, to push forward with the infiltration. This fuel will be turned into options for the assault force by the air assault force throughout mission execution.

1:45 AM, North Vietnamese launch their first SAMs at the diversionary strike aircraft to the east.[563] This is relevant because it specifically distracts the North Vietnamese from focusing their attention or resources on the western front, where the assault formation is penetrating their airspace. The effect is an increase in relative superiority achieved by the diversionary strike aircraft on behalf of the mission assault force.

2:08 AM, the Air Force F-105 Wild Weasels arrive into a high orbit over Son Tay to distract NVA SAM sites from placing their attention on the incoming assault force.[564] This represents a significant and definitive increase in relative superiority afforded to the assault force on behalf of the distraction provided.

2:10 AM, Air Force F-4s providing MiG suppression arrive in high orbit over Son Tay. This also affords to the significant increase in relative superiority of the assault force.[565]

2:18 AM, APPLE 03, the assault formation gunship, commences its "firing run on the Son Tay guard towers."[566] This is the point McRaven credits with the gain of relative superiority. Indeed, it does represent a dramatic increase in relative superiority, as this is the moment the assault force expends the element of surprise. The amplitude of the impact associated with the expenditure of surprise is increased by high levels of potential

562 Gargus, *The Son Tay Raid*, 284.

563 Gargus, 285.

564 Gargus, 285.

565 Gargus, 285.

566 McRaven, *SPEC OPS*, 312.

built-up by the operation. This potential was achieved through the aerial diversionary strike, the clandestine bypass of the enemy's defenses, and the explosive point-blank impact of the assault force's suppressive fire brought to bear against the enemy positions. The impact of surprise is expended in this moment at its initial maximum amplitude, which then diminishes over time as the effect fades.

At 2:19 AM, BANANA lands inside the POW courtyard.[567] Meadows and BLUEBOY infiltrate the compound. At the same time, APPLE 02 delivers Sydnor and REDWINE to their LZ just outside the southern wall of the Son Tay compound. APPLE 01 lands beside the "Secondary School" with Simons and GREENLEAF.[568]

The landing of BANANA at Son Tay represents a distinct increase in relative superiority as it put the ground assault force inside the enemy's defensive perimeter. While the misadventure of APPLE 01 at the Secondary School did not specifically decrease relative superiority, it did diminish the amount of mass the assault force was able to gain at Son Tay and thus diminished the amplitude of overall relative superiority that was achieved at this point in time. Although the GREENLEAF element would later be brought to Son Tay, at 2:28 AM, their later arrival provided less of an increase in relative superiority than it would have provided had it occurred earlier in the operation, when surprise was still effective.[569]

2:25–28 AM, AAA radars and SAM sites in the Son Tay area become active. This will eventually contribute to a decrease in the level of relative superiority the assault force has as surprise fades and its effects diminish. GREENLEAF arrives at Son Tay.[570]

2:29 AM, A-1E Skyraiders attack the Song Con River bridge, delaying and effectively denying enemy reinforcements for the duration of the operation.[571] This

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567 Gargus, *The Son Tay Raid*, 285; McRaven, *SPEC OPS*, 312–313.

568 Gargus, 285.

569 Gargus, 286.

570 Gargus, 286.

571 Gargus, 286.

represents maintenance of relative superiority given that the enemy soldiers in the Son Tay camp are now finite, isolated, and in disarray. Meadows reports "zero items."[572]

2:35 AM, NVA SAM sites begin launching SAMs at the assault and strike aircraft in the Son Tay area. This represents a decrease in relative superiority to the assault force.[573] The loss of relative superiority is associated with the superior firepower of the North Vietnamese conventional forces being brought to bear against the vulnerable assault and strike aircraft. The chart depiction only represents the relative superiority associated with the assault force.

2:40 AM, FIREBIRD 03, an F-105 in MIGCAP above Son Tay is hit by a SAM.[574] There is a loss of relative superiority associated with the SAM sites' ability to erode this conventional support and thus increase their chances of targeting the SOF direct-action mission assets.

2:40–2:45 AM, APPLE 01 and APPLE 02 depart Son Tay to exfiltrate with the ground assault force.[575] This represents an increase in relative superiority as the ground threats are no longer able to reach this portion of the assault force, but it also exposes these assets to the threats in the airspace above.

2:46 AM, FIREBIRD 05, meant to replace FIREBIRD 03, is also struck by a SAM over Son Tay.[576] This prevents any increase in relative superiority to the previously attained level and represents a growing threat from the SAM sites. Of note, APPLE 04 and 05 are eventually split off from the assault force, which is returning to Thailand, to rescue the F-105 pilots. The pilots are recovered safely.

2:47 AM (estimated), the departing air assault force is fired upon by NVA SAM missile sites. The level of vulnerability is substantial, although relative superiority is maintained due to the engagement parameters of the SAM missiles employed (designed

572 McRaven, *SPEC OPS*, 312–313.

573 Gargus, *The Son Tay Raid*, 286.

574 Gargus, 287.

575 Gargus, 287.

576 Gargus, 287.

for high altitude targets and less effective at the low altitudes the assault force is transiting at) as well as the tactics employed by the pilots to avoid being hit.

3:12 AM (estimated), the assault force departs NVA SAM range. Represents an increase in relative superiority as the assault force's vulnerability to this threat subsides.

3:24 AM (estimated), the air assault force departs effective NVA MiG intercept range.

3:45 AM (estimated), the air assault force refuels en route to Thailand while over Laos.

5:00 AM (estimated), the assault force lands in Thailand. Mission Complete.

3. Was Assault Airlift Being Adequately Achieved?

The presence of assault airlift as a contributing mechanism towards relative superiority is clearly evident in the Son Tay raid case study. The patterns here show that relative superiority, as it relates to assault airlift, can be attained by using the versatility of assault airlift to provide a number of capabilities to the assault force: bypass of enemy defenses, suppressive fire (to include close air support), direct infiltration and exfiltration of mass on the objective, integrated communications, flexible maneuver, and aerial refueling.

When the entire spectrum of probabilities associated with the air and ground elements of the assault force are taken into account, it becomes easier to identify which events contributed to the probability of mission success. The diversionary air strike significantly contributed to attaining relative superiority even before the assault force had reached the point of becoming vulnerable to the enemy's detection or deterrent methods. The HH-53 gunship's strafing run represented a significant increase in relative superiority, as did the arrival of the various ground assault force elements at the main objective. Relative superiority was gained when the A-1E's stuck the bridge, denying enemy reinforcements access to the ground assault force. Exfiltration had a minimal effect on raising relative superiority, but this was masked in the chart by the increase in danger associated with the airspace at the time. The distracting F-105s were in the

process of being eliminated, leaving the assault force more vulnerable. However, the air assault force managed to stay in a flight regime and engagement envelope that maintained relative superiority, if at a degraded level. Relative superiority was further gained as time, distance, and terrain were put between the assault force and the North Vietnamese military's effective engagement ranges.

The air assault force is susceptible to loss of relative superiority when their probability of detection increases or they are detected. When the SAM and AAA sites in the area started looking for threats around Son Tay, and then again when they started engaging, the airspace became more locally hostile and increased the vulnerability to the assault force. The entire assault force's survivability was at stake. In this case, the SAM strikes eliminated two of the protecting F-105 weasels from performing their roles as distractions. This, in turn, left the North Vietnam air defense operators in the area at a heightened state of alertness with fewer targets to monitor. The F-105s receive credit for keeping the North Vietnam assets engaged and distracted, but this scenario was not one that could be played out indefinitely and it highlights the excruciatingly critical need for speed during the exfiltration phase of the operation. The longer it takes, the more sacrifices may be required to make it happen.

The pattern also shows that assault airlift, when detected, are vulnerable to a lack of air superiority. When the enemy forces have the ability to strike the assault aircraft, the assault aircraft lose relative superiority quite quickly. This became apparent when the SAM sites started launching against the assault force helicopters directly. Now that detection and engagement avoidance were no longer possible, the assault airlift pilots had to directly confront the missile threats. They had to rely on their skill, training, intuition, and aircraft defensive systems to protect them in a split second and lethal game. Had they lost, the entire mission may have been viewed in a different light. Fortunately, they prevailed. And while their success is the desired outcome, one should not take it for granted. Instead, the lesson should be drawn that the best course of action is to avoid detection, followed by avoiding engagement. If forced into engagement, a pitted battle may not always end favorably. The skills and systems required to survive must be in

place long before the engagement is encountered. It is also an area where future technological resources can be expended to possibly better protect assets in the future.

4. Simplicity: How Was Assault Airlift Operationalized to Support the Principle of Simplicity?

"Simplicity is the most crucial" principle McRaven offers.[577] He reminds us that "There are three elements of simplicity critical to success: limiting the number of objectives, good intelligence, and innovation."[578] Air assault airlift relevantly interacted with two of these three elements: intelligence and innovation. In addition, airlift highlights a consideration that any assault force employing airlift would be keen to mind: redundancy.

Simplicity Paradox: The Son Tay mission seems simple enough: just get in, grab the POWs, and then get out. But this perspective fails to recognize the situation from a more holistic approach. The raid was simple from the perspective of the ground assault force, but not necessarily as simple for the air elements. The conventional deception operational piece, the diversionary air strike composed by the Navy and Air Force assets, was a large and apparently complicated operational aspect. McRaven acknowledges this point directly:

> The Son Tay raid does present a paradox of simplicity. On the one hand the actions by the raid force appear to have been simplified through proper application of intelligence and technology and the limitation of objectives. However, the raid also included one hundred other aircraft launched from seven air bases and three aircraft carriers, none of which had an opportunity to rehearse the mission ahead of time. Can this be called simple? It can if the operation was a matter of routine for those pilots, and it was. All of the flight profiles flown by the support aircraft had been flown dozens and in some cases hundreds of times by the aircrews. Constant practice had honed the pilots' skills to the point where their mission was not special and therefore didn't require additional training.[579]

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577 McRaven, *SPEC OPS*, 11.

578 McRaven, 11.

579 McRaven, 324–325.

McRaven's point seems to be aimed at describing what allowed the diversionary air strike to become more of a routine operation rather than a uniquely "special" operation. The conventional fighters were specifically trained to operate in this environment, on similar missions while performing comparable roles to those flown in the diversionary strike. This made the operation routine for them. It was simplified by the fact that they had essentially rehearsed it "dozens and in some cases hundreds of times."[580] In contrast, the tactics employed by the mission assault force air elements were obviously specialized, as acknowledged by the accounts of both McRaven and Gargus.[581] One could augment McRaven's assessment by adding to it that the advanced drafting tactics, deep clandestine airspace penetration, and intentional helicopter crash approach utilized by the air assault force were all novel innovations specifically developed and rehearsed for the Son Tay mission. This, again, speaks to the additional iterations of involvement and synchronization required between air and ground commandos who are going behind enemy lines as a unified force. It also highlights the required, but less tangible, connection between the assault force and supporting conventional forces. Conventional forces can effectively serve as both supporting and enemy-distraction mechanisms for special operations. Both of these tend to simplify the mission for an assault force.

Technological and Tactical Innovations: "Innovation simplifies a plan by helping to avoid or eliminate obstacles that would otherwise compromise surprise and/or complicate the rapid execution of the mission," McRaven advises.[582] McRaven's model categorizes airlift into the realm of innovation, as it simplifies the scenario throughout mission execution for the mission force. In fact, assault airlift allowed the mission force to simply bypass the massive quantity of North Vietnamese military assets staged all along the route and even massed in the objective area. This allowed the ground assault force to focus on getting out of the helicopter, getting the POWs, and getting back onto the helicopters. They only had to worry about the actions-on-the-objective. Accept for the final stages of the infiltration when the ground assault force integrated with the air assault

580 McRaven, *SPEC OPS*, 324–325.

581 Gargus, *The Son Tay Raid*, 52–56; McRaven, 324–325.

582 McRaven, 13.

force to provide suppressive fire, the ground assault force was not required to contribute to attaining or sustaining relative superiority during the transit phases of the operation. During the infiltration and exfiltration phases of the mission, this responsibility lay squarely on the shoulders of the air assault force.

The Son Tay air assault force assets certainly benefited from simplifying innovations. Some of these were represented by increases in technological capabilities and some of these were due to the simplification, or "down-teching" of normally available technological means. McRaven lists the "forward-looking infrared (FLIR), GAR/I beacons, the host of airborne command and control and SAM suppression assets."[583] Gargus also describes how a piece of aluminum foil was used to shield cockpit electronics from interference, representing an incredible example of "down-tech" solutions to challenges encountered.[584] Yet, the largest innovation for the air assault force may have been the empowerment they received from their leadership to improvise the tactics required to achieve mission success. "We were free to improvise and develop new tactics that allowed us to focus on the desired outcome of the mission without the constraints that had governed flight planning during our tours in Vietnam," Gargus explained.[585] These tactics blended previously utilized air refueling methodologies with previously untested drafting techniques. In the end, the combination created an air assault force that was capable, versatile, and flexible enough to contribute to the attainment and sustainment of relative superiority through the totality of mission execution.

Environmental Intelligence (Imagery Requirement): One impactful contribution from intelligence assets for SOF direct-action missions utilizing assault airlift is filling the need for accurate imagery of the infiltration and exfiltration sites associated with the objective areas. Vertical lift platforms require accurate imagery in order to deduce the most practical and feasible landing zones. Landing zones must be evaluated for their size,

583 McRaven, *SPEC OPS*, 324.

584 Gargus, *The Son Tay Raid*, 60.

585 Gargus, 69.

surface, slope, and suitability. The coverage for this analysis was made available for the Son Tay raid via drone flights and SR-71 Blackbird overflights, as McRaven relates[586]:

> These flights (primarily the SR-71) provided complete photo coverage of the raid force's inbound route as well as a detailed look at the POW compound. These photos were used by the CIA to produce a scale model of the compound for the operators to study. Photo interpreters who studied the drone pictures were able to determine precise details about the POW compound including the height of trees in compound, the composition of the buildings and what they were used for, the approximate number of guards, the [North Vietnamese Army] fighting positions, and the location of all telephone wires that might affect a helicopter landing. All of this intelligence contributed to simplifying the plan by eliminating unknown factors.[587]

But access to imagery alone is not enough for optimizing the benefits of utilizing assault airlift. Imagery can be old, may not take account of the growth of the local fauna, or it may not depict the most current situation. Often vehicles, animals, even small structures, can materialize seemingly overnight in areas that were open and empty when the imagery was obtained. Any mobile object of sufficient size to damage or block a landing zone can be sufficient to deny its use to assault airlift when the moment of execution arrives. This drives the need for reconnaissance to obtain recent and accurate environmental intelligence. It also drives the need for redundancy in assets and options. Alternate landing zones should be identified and given considerable consideration when during the planning and intelligence gathering processes to ensure options are available when primary plans fail to encompass the totality of a situation. This ability to flexibly adjust to an alternative landing zone was utilized during the Son Tay extraction when concrete utility poles fouled the primary extraction landing zone.[588]

Environmental Intelligence (Weather and Topography): An additional layer to the intelligence requirement for assault airlift utilization is the need for accurate weather forecasts. These forecasts must be accurately obtained in the objective area, along the

586 McRaven, *SPEC OPS*, 293.

587 McRaven, 323–324.

588 USAHEC, "Son Tay."

ingress routes, and in the vicinity of supporting air assets, such as the diversionary display the Navy and Air Force provided for Son Tay.[589]

Fortunately for the Son Tay raiders, the Vietnam theatre had been active quite extensively for some period of time and this meant the information they needed was available. Weather benefited from the fact that air operations had been sustained in theatre since 1961 due to the Vietnam War. This included the 1965 Operation ROLLING THUNDER bombing campaign in North Vietnam. By the 1970 execution of Operation KINGPIN, a full nine seasons had passed where the American forces had been able to observe and catalogue the weather phenomenon surrounding the Gulf of Tonkin and North Vietnam. This greatly contributed to the level of technical expertise and data availability the mission force was eventually able to take advantage of. Weather intelligence had been "regularized" in this way, through experience, and was not as challenging of a venture to obtain as other case studies will present (specifically Operation EAGLE CLAW in Iran).

Unfortunately, the organizational process which had allowed so many other aspects of the mission to be planned and coordinated on the authority of the JCS was not anticipated to be necessary for the gathering of relevant mission weather data.[590] Because of this, the mission assault force's weather liaison, Keith Grimes, faced challenges gaining access to classified weather data that was only available on a "need to know" basis.[591] Eventually this challenge was overcome, but it required direct interface between General Manor and United States Air Force Headquarters.[592] Leadership had to engage to synchronize the inefficiencies in the organizational ties that were prohibiting the mission from moving forward. This weather information was critical in Manor's call to execute the mission 24 hours earlier than initially planned.[593]

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589 Gargus, *The Son Tay Raid*, 114–116.

590 Gargus, 114–116.

591 Gargus, 114–116.

592 Gargus, 114–116.

593 Gargus, 142–143.

Fortunately, Manor understood the critical nature of weather intelligence in simplifying the mission variables for all involved air players and was able to intervene to obtain it. This greatly simplified the mission by avoiding the complications the operation would have experienced had it proceeded into an environment where weather could have interfered. Confronting unexpectedly bad weather could have increased the risk to the diversionary strike force or cancelled the deceptive strike altogether. Either of these cases could have resulted in discovery or destruction of the assault force. It could have also contributed to a decreased survivability rate for the conventional diversionary strike aircraft.

Adversarial Threat Intelligence: Adversarial intelligence was key to allowing the assault airlift assets to perform their duties and thus transfer their ability to attain relative superiority through the principles of simplicity, speed, and surprise to the mission force as a whole. Although Gargus's and McRaven's accounts are incongruent as to "how" the adversarial intelligence was operationalized to bypass the enemy's defenses, the need for the intelligence itself remains germane. McRaven indicated the intelligence provided knowledge of a radar "gap" that was exploited for the infiltration.[594] Gargus insists that no such timing methods were utilized; that detection avoidance was achieved via terrain-masking and low-level flight profiles.[595] In either case, it remains true that access to the threat intelligence allowed the assault force to bypass the enemy's defenses by understanding where the enemy assets were located and how they operated. This understanding enabled the assault airlift assets to penetrate the enemy's otherwise sovereign airspace utilizing tactical routing and flight profiles.

5. Speed: How Was Assault Airlift Operationalized to Support the Principle of Speed?

Bypass of Enemy Defenses: The helicopter assault force was able to get the ground assault team across the expanse of the enemy battlespace in the fastest possible manner congruent with the need for a direct infiltration, significantly decreasing the

[594] McRaven, *SPEC OPS*, 323.

[595] Gargus, *The Son Tay Raid*, 77–78.

amount of time the assault force had to be potentially exposed prior to their arrival at the objective area. This is especially important given that the assault force required the element of surprise in order to achieve relative superiority.[596] Therefore, every moment they were exposed during the infiltration was another moment that they could have been detected and the critical element of surprise lost. Using assault airlift as the mobility method allowed the assault force to translate the speed of insertion to be translated into the element of surprise.

Assault airlift allowed the mission force to bypass the enemy's defenses by traversing the en route distance in a timely enough manner to take advantage of the diversionary air strike provided by the synchronized conventional assets. It also allowed the operation to transpire in a single period of darkness. Considering Son Tay was located at a minimum of 64 miles from any North Vietnam border,[597] it is reasonable to deduce that alternative assault force insertion methods, via land, surface, or sub-surface, would have exposed the assault force to an increased level of risks of both detection and engagement. None of the alternative transportation methods would have enabled insertion, actioning the objective, and extraction within the prescribed window of opportunity provided by the cover of darkness and the synchronized conventional deception operation. Assault airlift was the only method capable of achieving the operational transportation requirements under these time-sensitive constraints.

Direct Infiltration: In addition to achieving a speedy ingress across enemy terrain, assault airlift also provided the SOF direct-action mission force with the ability to infiltrate directly inside of the POW compound at Son Tay, empowering the ground assaulters with the ability to reach the POWs within sixty seconds of their detection upon

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596 McRaven, *SPEC OPS*, 17.

597 "Sơn Tây, Hanoi, Vietnam: Measuring Distance Tool," Google Maps, accessed May 04, 2017, https://www.google.com/maps/place/21%C2%B008'40.6%22N+105%C2%B029'44.9%22E/@19.6612756,101.8452125,801831m/data=!3m1!1e3!4m20!1m13!4m12!1m6!1m2!1s0x3134f5fff8f581e9:0x5e22ee99588c41af!2zVHguIFPGoW4gVMOieSwgSGFub2ksIFZpZXRuYW0!2m2!1d105.4969964!2d21.1032279!1m3!2m2!1d104.6360638!2d20.6721984!3e4!3m5!1s0x3134f5fcb735a3c7:0xf88de9303754bd92!7e2!8m2!3d21.1446013!4d105.4957974.

arrival.[598] "The decision to land … inside the POW compound instead of outside showed that the planners had a thorough understanding of the need to move quickly on the target," McRaven states.[599] This precise and direct infiltration was critical to protecting the POWs from potential reprisals from their guards, and it was achieved via the use of SOF direct-action assault airlift.

The air assault force significantly decreased the amount of time required for the actions-on-the-objective by ensuring the ground assault force did not lose precious time going over or through the wall surrounding the compound. This enhancement to the speed required during the actions-on-the-objective portion of the mission's execution is what enabled this portion of the plan to be feasible. Without it, the ground assault force would have struggled to achieve access to the POWs in less than a single minute. The criticality of speed was emphasized when the assault force chose the larger HH-3 Jolly Green Giant helicopter over the smaller UH-1H Huey when, after a full-mission profile rehearsal, the ground assaulters lost "precious seconds" disembarking the Huey after a practice infiltration because their legs had fallen asleep during the three hour ingress.[600] This loss of time was not deemed acceptable by Simons.[601] He knew the ground assault force needed those seconds back to ensure the best chances of successfully executing their actions-on-the-objective and thus safely freeing the POWs from their captors. In the end, the actions-on-the-objective at Son Tay only took 26 minutes, and could have been accomplished in as little as 17, but the ground assault force wanted to ensure there was no chance they overlooked anything and took the extra time to confirm no POWs were present in the area.[602] This timely action was made possible, in part, by the speed assault airlift provided during the initial and critical stages of the actions-on-the-objective.[603]

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[598] USAHEC, "Son Tay."

[599] McRaven, *SPEC OPS*, 328.

[600] Gargus, *The Son Tay Raid*, 74–77.

[601] Gargus, 74–77.

[602] One eyewitness account attested that the assault force could have been out in 17 minutes, but that they delayed and stayed longer to ensure no POWs were accidentally left behind. "Firsthand Account of Son Tay Prison Raid."

[603] McRaven, 328.

Direct Exfiltration: The air assault force was also instrumental in providing the quick extraction that was required to get the assault force and their intended rescued POWs away from the dangers of the objective area. Assault airlift was able to take the assaulters over these agitated ground threats that had a higher probability of kill than the already menacing air defense network. The local area was crawling with enemy forces alerted from the raid, including some 12,000 North Vietnamese forces stationed at the nearby Citadel training facility.[604] Plus, the in-air refueling capabilities of the chosen HH-53s enabled the mission assault force to depart directly from the objective area and return toward their staging bases at Udorn and Takhli without stopping.[605] This significantly diminished the opportunity available to the North Vietnamese military to coordinate a response with their awaking assets.

Aerial Refueling: Aerial refueling significantly increased the speed of the operation without appreciably increasing the vulnerability of the mission force to the threats of the environment or enemy. Aerial refueling during transit allowed the mission assault force to traverse the enemy's airspace using the required vertical-lift assets (the helicopters) without the need to stop en route. This not only saved time but it also avoided unwarranted vulnerable exposure of the mission force to threats at an intermediate ground location. It avoided the potential mechanical failures associated with aircraft startup and shutdown operations (a historically opportunistic period when many aircraft malfunctions manifest themselves). All of these issues were mitigated by the development of specialized tactics that allowed the air assault force package to infiltrate with refueling platforms.

Aerial refueling en route increased the operation's speed and decreased overall exposure to threats, but it is a capability that is not achieved without much concentrated effort and resources. While a commonly employed tactic in the modern era, aerial

604 History's documentary indicated there were 15,000 troops with vehicles at the Son Tay Citadel, while Sergeant Buckler indicated "twenty to forty thousand NVA in the area." History, "Raid on Son Tay–Vietnam POW Rescue Story;" USAHEC, "Son Tay."

"Interview with Sergeant Terry Buckler …"

605 REDWINE security group of the ground assault force designated an alternate helicopter landing zone for APPLE 01 to land for the exfiltration due to concrete utility poles located at the primary landing zone extraction point. USAHEC, "Son Tay."

refueling remains susceptible to the currency and proficiency of the aircrew to achieve successful employment. Aircrew must constantly work to keep these technical skills honed. Parts of the skillset are like riding a bike and come back with ease after disuse, but other portions fade without use and require recent exercise to remain at peak performance levels. Aerial refueling requires aircraft operate on either the high (receiver) or low (tanker) end of their operating limits while flying extremely close to another dissimilar type aircraft. Not only are performance margins limited, but if the procedure is not expertly executed then the airflow of the tanker aircraft can wash across the flight surfaces of the receiver, disrupting the receiver's ability to maintain controlled flight. It requires a great deal of trust and precision by both tanker and receiver. To complicate the matter further for the Son Tay mission force, it performed these maneuvers while in the low-level environment, dodging terrain and avoiding enemy detection and engagement. This was especially important because of the less maneuverable state aircraft find themselves in during the actual aerial refueling procedure itself. With safety margins so limited, options and freedom to maneuver due to incoming enemy fire diminish. Still, the diminished maneuverability experienced during aerial refueling is a preferable state to the extreme vulnerability of a mission force refueling on the ground behind enemy lines.

6. Surprise: How Was Assault Airlift Operationalized to Support the Principle of Surprise?

McRaven perceives, "In a special operation surprise is gained through deception, timing, and taking advantage of the enemy's vulnerabilities."[606] By enabling the assault force to achieve infiltration without detection by the enemy, the air assault force permitted the mission assault force to fully exploit the element of surprise, yielding the highest possible impact and significantly increasing the survivability of the assault force. McRaven directly correlates the relative superiority gained through surprise with the survivability of the assault force when he tells us that "the element of surprise [at Son Tay] … prevented unnecessary casualties among the raid force and was instrumental in getting in and out alive."[607] The diversionary air strike and the air assault force's ability

606 McRaven, *SPEC OPS*, 17.

607 McRaven, 328.

to clandestinely infiltrate North Vietnam denied the enemy the opportunity to focus their attention or assets on the relatively smaller SOF direct-action assault force.

Had the NVA been able to focus their attention on the assault force, any number of assets could have been brought to bear against them. An ambush at the objective site could have been mounted within minutes. One of the nearby MiG interceptor bases could have easily launched their alert crews to intercept and either capture or destroy the slower MC-130s and helicopters. The air strike A-1E PEACHs were no match for the North Vietnamese MiGs. The area AAA sites could have even downed the vulnerable helicopters during their low level flight had they been ready when the air assault force passed by overhead at low level. Fortunately for the assault force, none of these options materialized for the North Vietnamese.

The deception tactics utilized, primarily the diversionary strike by conventional Navy and Air Force assets, was critical in distracting the enemy from noticing the infiltrating assault force or reacting to its presence. "Deception, when it works, either directs the enemy's attention away from the attacking force, or delays his response long enough for surprise to be gained at the crucial moment," McRaven states.[608] The use of firefight simulators diminished the timely response of conventional enemy forces in the objective area. The simulators also delayed an accurate perception of the assault force's location, a determination that was probably also confused by APPLE 01's landing at the Secondary School complex. However, it was primarily the diversionary naval strike that enabled the assault force's ability to exploit surprise.

The diversionary air strike kept the NVA early warning radar operators overly saturated and focused on an alternative action. In fact, McRaven goes on to use the naval diversionary strike in support of the Son Tay raid as his primary example of a "highly successful" diversion.[609] When all contributing aspects of relative superiority are taken into account, it is clear that the mission assault force received boosts in relative superiority from the diversionary tactics provided by both the Navy and Air Force

[608] McRaven, *SPEC OPS*, 17.

[609] McRaven, 17.

conventional fighters. Doubtlessly, there are additional contributors to the overall relative superiority achieved by the mission assault force, but the evidence provided here suffices to make the point that the achievement is not solely due to the actions accomplished by the ground portion of the assault force.

Suppressive Fire: Surprise acts as a sort of latent potential energy that can be stored up and expended at the moment most advantageous to the attacker. It is akin to potential energy that can be converted into kinetic energy. Surprise can be combined with other tenets of assault airlift or principles of relative superiority to maximize the amplitude of its effect.

The suppressive fire expended by APPLE 03 represents a decisive amplifier of the impact of surprise during the Son Tay raid.[610] It represents the expenditure of surprise at the moment of the mission assault force's choosing. It was at this moment that the mission assault force revealed their presence to their local adversary at both the time and means of their own choosing, thus maximizing their own utility against an otherwise more intrinsically powerful defensive position. This amplified the initial impact of surprise, allowing it to kinetically discharge the maximum amount of potential energy.

Suppressive fire was delivered decisively and precisely to the guard towers, allowing the attacking mission force to reveal its presence only at nearly point-blank range while concurrently delivering a devastating volume of firepower. This use of suppressive fire amplified the impact of the revelation of the assault force's presence to the point that the guard towers and any potential occupants within were instantaneously and permanently mitigated as potential threats to the assault force. This explosive use of suppressive fire was ideally executed, even in the case of the initial misfire against the Secondary School, where it was employed against ghost guard towers that would have been disintegrated by the ferocity of the barrage were they to have been present.

The importance of suppressive fire's bolstering effect to the impact of surprise is hard to overstate. Were the suppressive fire attack to have failed, the impact of surprise would have momentarily evaporated, leaving the assault force exposed. In such a

610 McRaven, *SPEC OPS*, 312.

scenario, it is possible that the guard towers would have represented a significant threat to the assault force on the ground.[611] This is precisely why redundant plans were devised to ensure suppressive fire was present to bolster the impact of surprise to such a violent extent that these threats would be irreversibly subdued.[612]

The element of surprise is crucial, but it is also fragile and fleeting. It can be spoiled by any number of flags that may telegraph one's intentions or actions. It can evaporate in a moment, leaving an assault force to deal directly with the full conventional might of an opponent. Accounts provided by McRaven and Gargus indicate just how fragile surprise was to the Son Tay raiders. "The Air Defense Officers Academy and the Hoa Lac Airfield both detected unidentified helicopters but were unable to report this fact to the Air Defense Command because the telephone lines had been cut."[613] This communication failure could have been due to the A-1E strike on the bridge which also took out the communications lines running alongside it. It could have been due to REDWINE's attack of the communications building. In either case, this communications denial on the part of the assault force proved crucial. It demonstrates how the fog and friction of warfare expressed by likes of Clausewitz and the tactical exploitation of an enemy's weaknesses articulated by Sun Tzu remain tactically relevant for SOF direct-action missions.[614]

7. Synchronization: What Factors Were Critical to Operationalizing the Joint Mission Force?

Synchronization: The Son Tay raid required a remarkable amount of synchronization, despite the fact that the Vietnam War had allowed years of military-organizational relationships to develop prior to its execution. Not only did the operation's leadership need to synchronize the air and ground assault forces, but General Manor was also required to coordinate the leadership of other commanders, without necessarily allowing them to understand the details of his own mission. Manor had to convince the

611 Gargus, *The Son Tay Raid*, 269–288.

612 Gargus, 269–288.

613 Gargus, 254.

614 Clausewitz and Graham, *On War,* 164–167; Sun Tzu, *The Art of War.*

naval and Air Force commanders to commit over "one hundred other aircraft launched from seven air bases and three aircraft carriers," to perform the diversionary air strike.[615] This was no small feat. In addition to the intrinsic significant risk of engaging the NVA integrated air defense network, Manor had to convince these commanders to lead their men into combat knowing that they would not be allowed to engage the enemy unless they were directly engaged first: a politically necessary but very restrictive rule of engagement. This required a great deal of trust between Manor and these counterpart conventional units: trust that was augmented by Manor's own credibility. Manor's credibility was significantly augmented by his rank, his organizational associations, and the executive leadership empowerment he had received from the highest levels in the government. But his ability to personally interact with these counterpart commanders to sway them to be motivated to support his effort should not be overlooked.

Leadership: After reviewing the Son Tay raid, leadership emerges as a prominent factor in being able to successfully operationalize assault airlift in SOF direct-action missions. Leadership must be intimately familiar with the transportation capabilities and limitations, to include logistical support, in order to effectively organize and operationalize McRaven's concepts. But most importantly, leadership must be credible, approachable, and trustworthy enough to operationalize an assault force that hails from dissonant conventional ancestral backgrounds.

The leadership qualities of expertise and humility can augment simplification of the mission plan and execution by providing flexibility and thus better options for the assault force to take advantage of. McRaven specifies that moral factors combat the fog and friction of war during mission execution to sustain relative superiority.[616] However, he also acknowledges the importance of "proper planning, preparation, and execution" in attaining and sustaining relative superiority.[617] This is where the leadership qualities of expertise and humility can mitigate the fog and friction of war. These qualities, if exercised during the planning and preparation phases of an operation, can increase the

615 McRaven, *SPEC OPS*, 324–325.

616 McRaven, 17.

617 McRaven, 322.

simplicity of the situation during mission execution by providing synchronized resources and capabilities that translate into options for the assault force.

Cohen and Gooch astutely note the importance of having the right leadership in place in their analysis of historical case studies of military failures in major campaigns. In their analysis of cases of military failures, failure to synchronize (or operationalize) the available organizational elements into a functioning mission force was a causal factor laid at the feet of the leadership. Cohen and Gooch detail that "organizational structures and habits that commanders created, accepted, or simply could not transform failed to match immediate or expected challenges" thus resulting in the failures they observed.[618] This assessment lends due credit to the importance of having the right leaders in the right place and empowering them with the appropriate level of authority in order to succeed.

In SOF direct-action, failure to synchronize and integrate a mission force to the degree necessary to achieve capabilities sufficient in bolstering relative superiority to overcome the inherent mission risks can lead to overall mission failure. Only leadership capable of effectively synchronizing and integrating a mission force produces a mission force adept at surmounting the risks inherent in SOF direct-action. Relationship-focused leadership best meets this mark in a conventional ancestrally disparate mission force makeup.

Relationship-focused leadership caters to the requirements of all functional assault force components without imbalanced distractions towards careerism or an overly domineering focus on achieving mission objectives. Relationship-focused leadership takes a more holistic and strategic approach to mission accomplishment that encompasses the effects of the mission on the mission force, the objective, and the contextual surroundings of the operation.

The mission operators preparing for the Son Tay raid specifically credited their success to the fact that they were empowered through their leadership to improvise the tactics required to achieve mission success. "We were free to improvise and develop new tactics that allowed us to focus on the desired outcome of the mission without the

618 Cohen and Gooch, *Military Misfortunes,* 232.

constraints that had governed flight planning during our tours in Vietnam," Gargus explained.[619] This level of empowerment is not typical in conventional organizations, nor is it desired. Sticking to what has worked is overwhelmingly an iconic tenet of military strategy where lives may hang in the balance when unknown variables and tactics are tried. Using what works is a staple of conventional combat. Empowering subordinates countermands this tenet. High levels of subordinate empowerment are also atypical for traditional leaders. Traditional leaders require high levels of personal control to ensure their specific motives are catered to. This often leads to insertion of leadership influence down to levels where the leader has not acquired the adequate level of expertise to be making tactical decisions. This leads to the lack of recognition of pertinent variables and factors and orders that do not take them into account. Only relationship-focused leadership empowers and supports subordinates through appropriate levels of trust to ensure technical expertise is lifted from the tactical level to the conscious attention of leadership. This level of mutual trust ensures leaders who are capable of affecting the plans and orders of an operation have access to all pertinent information. It means their plans take into account concerns their various functional operators have individually identified as necessarily relevant to the mission's success.

Competent Technical Expertise: Mitigation of the various mission parameters and factors in Operation KINGPIN were successfully accomplished by the competent technical expertise and humility of the operation's relationship-focused leader. Manor operationalized the competent expertise he understood as an airman. Contingency operations were devised by leaders and planners who were competent and experienced enough with the assets being utilized to anticipate the most likely interruptions. Manor and his staff knew that aircraft are not 100% reliable. There are mechanical failure-rates associated with airframes that can be anticipated based on past airframe performance coupled with current operating conditions. Having familiarity and experience with the equipment can be critical in making these calculations. This was especially important for the Son Tay mission, as with many SOF direct-action missions, because an overuse of excessive assets to mitigate mechanical risks could have posed a potential security threat.

619 Gargus, *The Son Tay Raid*, 69.

The logistics support alone to provide excessive resources to mitigate mechanical risks can draw attention to forces seeking to conceal the intent of their presence.

Another level of relevant experience Manor brought to the table was his understanding of the limitations his air assets faced regarding weather. He understood the impacts surrounding the approaching Typhoon Patsy.[620] He even arranged for a weather ship to scout a portion of the ingress route over Laos the evening prior to launch to ensure he had the most accurate information possible.[621] Manor was faced with the option of either executing one day early or several days late. In an effort to minimize the potentially disastrous consequences of a security breach, the likelihood of which increased dramatically with each passing day, Manor made the prudent call to execute the mission 24 hours ahead of the original schedule.[622] This call displays the appropriate respect for the environmental context in which an operation is executed, a level of attention that can be easily disregarded in SOF direct-action missions that are overly objective-oriented. The balanced approach Manor personified is typical of relationship-focused leaders.

Humility: Technical expertise was not the only leadership quality Manor displayed that enabled this operation to succeed. Manor displayed a humility that allowed him to seek the advice of experts in fields he was less personally familiar with. This empowered the personnel under his command to confront issues with solutions of their own. Gargus admired the empowering culture Manor fostered. It brewed success:

> All of our leaders, from Brigadier General Manor on down, showed completed confidence in our ability to accomplish every assigned task. Practically everything we needed … [was] made available to us. Manor was a frequent visitor to our work sessions. This gave us an opportunity to share with him everything we were doing and contemplating. He was a good listener and always made us feel that we had his full understanding and approval.[623]

620 Gargus, *The Son Tay Raid*, 142.

621 Gargus, 144.

622 Gargus, 143.

623 Gargus, 67.

Manor's judicial use of humility as a leader enabled members of his staff that had more refined depth of technical expertise than he to provide their inputs and thus anticipate and avoid or mitigate potential missteps during mission execution.

Who deserves the credit for the leadership employed to synchronize the efforts of the ground assault force, the air assault force, the supporting assets, and the conventional forces to culminate in the success associated with the Son Tay raid? Does General Manor deserve the credit as the overall operational commander and for his understanding of the needs of the air assets? Does Colonel "Bull" Simons deserve the credit for his expertise on how to properly plan, train, and employ the ground assault force? Or does the real leadership associated with the raid's success stem from General Blackburn, who wisely chose to bring these two men together?

General Blackburn, who had initially overseen the planning of the raid, foresaw the advantages that both Manor and Simons were able to bring to the fight. He knew that neither of their skillsets and depths of expertise could alone accomplish such a demanding mission. But Blackburn knew that together, these two men possessed the elements of leadership necessary to win the day: the depth of understanding both the needs of the ground and the needs of the air assault force elements, the relationships and understanding required to coordinate the required conventional force support, and the humility to seek the advice of the other or another when they themselves did not possess the answer to the question at hand.

Manor utilized his leadership position to synchronize the vast conventional Navy and Air Force assets in the region in order to support the Son Tay special operations forces. Manor coordinated to ensure "seven air bases and three aircraft carriers" were synchronized into the plan to provide the diversionary strike force.[624] Manor utilized face-to-face communications to ensure the security of his operation while soliciting the cooperation of these conventional forces. Manor's personality and character compelled the trust and support of the leaders and organizations involved. General Manor did all of this synchronization not to further his own career or even to increase the mission force's

[624] McRaven, *SPEC OPS*, 324–325.

ability to action-the-objective. Instead, he synchronized these vastly disparate organizations in order to provide the support his force needed to safely return home. He reached out to provide connections between organizational structures at multiple levels, creating stronger ties where weaker ones had once been; to create the opportunity for an integrated assault force to succeed (see Figure 62).

Figure 62. Lieutenant General Leroy J. Manor, United States Air Force Special Operations Forces Commander and Operational Commander of Operation KINGPIN[625]

Colonel Simons also brought a great deal of technical expertise to the table as second in command of the operation and the leader of the participating Army Special Forces.[626] Colonel Simons had the trust and credibility necessary to garner the respect of the Green Berets who joined in the raid. When he told them they were going to safely ride in a crashing chopper to the ground, they could trust him. He had a great deal of experience operating in the regional environment and was willing to invest himself into

625 Adapted from "Biographies: LIEUTENANT GENERAL LEROY J. MANOR," United States Air Force, February n.d., 1977, http://www.af.mil/About-Us/Biographies/Display/Article/106356/lieutenant-general-leroy-j-manor/; Airman 1st Class Alexa Culbert, "Gathering of Eagles Inspires Future Generation of Leaders," 42nd Air Base Wing, Public Affairs, Air Education and Training Command, June 03, 2016, http://www.aetc.af.mil/News/Article-Display/Article/791935/gathering-of-eagles-inspires-future-generation-of-leaders/.

626 Gargus, *The Son Tay Raid*, 11.

addressing the complicated details specials missions like these entail.[627] Simons superbly complemented General Manor's expertise, resulting in a joint leadership team that was versed in the details of both air and ground special operations. And despite his initial differences with Manor, Simons was able to respect the chain of command and under Manor's guidance he was able to help fully integrate "the task force's Army troops and Air Force crews, who never had worked together before, into a highly cohesive team," Vandenbroucke conveys (see Figure 63).[628]

Figure 63. Colonel Arthur D. "Bull" Simons, Deputy Commander of Operation KINGPIN and Leader of the Ground Assault Force[629]

Neither of these men had the innovative ideas and expertise required to accomplish the mission alone. But they had the enviable and rare leadership qualities required to rectify these deficiencies. They were willing and able to empower their forces to achieve success. So, in the end, it is possible that the Son Tay raid mission success owes itself to the leadership of General Blackburn: a man who knew leadership when he

627 McRaven, *SPEC OPS*, 300–301.

628 Vandenbroucke, *Perilous Options,* 59.

629 Adapted from Demerly, "Successful Failure."

saw it … a man who knew that the synchronization of a joint force begins, lives, breathes, ends, and dies with the character of those who lead it.

Synchronization of Air and Ground Forces: Fortunately for the Son Tay assault mission, General Manor and Colonel Simons were the perfect combination of leadership required to synchronize the requirements of both the air and ground assault force elements.

An additional aspect of leadership successfully executed during Operation KINGPIN, and in adherence to the assertions of Cohen and Gooch, was that the operation demonstrated an appropriate level of authority (enough to get the job done) being vested into the operation's commander, General Manor.[630] This proved critical to the successful planning and execution of the Son Tay raid.

"Our commander had the full authority to execute the rescue mission. He responded directly to the Joint Chiefs of Staff, and our plan could not be altered by those whose participation and support we needed," Gargus recalled.[631]

Buckley similarly relayed, "They had written a letter to Colonel 'Bull' Simons and to General Manor … anything they wanted, they got. And if there was ever a question they just laid that letter which was signed by the Secretary of Defense saying 'give them what they want, no questions asked.'"[632]

This level of authority may not always be warranted, but leadership should not be afraid to distribute it when the organizational structure is not conducive and synchronization must be accomplished despite it.

Balancing Security with Purpose: Not only was General Manor empowered with the authority to requisition all necessary resources to accomplish his mission, but he was also wise enough and supported well enough to ensure the distribution of this authority to all appropriate representatives to enable mission accomplishment. An example of this

630 Cohen and Gooch, *Military Misfortunes*, 232.

631 Gargus, *The Son Tay Raid*, 108.

632 USAHEC, "Son Tay."

authoritative matriculation was Manor's ability to count on Admiral McCain and General Clay to use this authority to compel conventional Navy and Air Force support for the raid. This distribution of authority and purpose, though vague, caused the Navy and Air Force organizations to lend their support to this otherwise mysterious plan. Even though these commanders were not made aware of the details of the Son Tay mission, they were provided with enough information to instill a sense of purpose. They were aware that they were participating in a diversionary strike that would be supporting a "highly classified special operation."[633] General Clay even went so far as to direct the following guidance, through a subordinate: "If [a] commander felt he should not, or could not, comply with the tasking, he was to immediately get in an airplane and fly to 7th Air Force Headquarters in Saigon. He was to go directly to General Clay to present his problem. He was to discuss the subject with no one other than General Clay."[634]

Organization and Operationalization: The organizations that Manor had to synchronize were generally accustomed to working in proximity to one another, but they were not adequately operationalizable in their current state. These dissonances soaked up much of the time and attention of the operation's leadership, while simultaneously representing some of the largest non-violent threats to the mission's success in the inception and planning phases (apart from operational security, which McRaven covers in adequate detail).[635]

While the Son Tay raid exemplifies the way a mission should be planned and executed, it did suffer from authority failing to make its way down into some of the depths of supporting elements. This was evident in the difficulties experienced by Grimes in his attempts to obtain necessary but compartmentally classified weather information.[636] Fortunately this issue was resolved, but the consequences of proceeding without understanding the necessity for the information could have allowed a minor authorities-matriculation issue to surface with much heavier consequences. Were the

633 Gargus, *The Son Tay Raid*, 105.

634 Gargus, 105–106.

635 McRaven, *SPEC OPS*, 287–331.

636 Gargus, 114–116.

mission to have been executed with less than supportive weather, the consequences could have been disastrous. This also highlights the need of intelligence personnel to ensure leaders are kept abreast of all relevant information so that their judgment can be utilized against the most current and accurate information realistically available.

There have also been criticisms of the intelligence community indicating it was an intelligence failure that prevented the raiding force from knowing the POWs had been removed from the camp prior to mission execution.[637] However, Gargus provides two important points for review here. First, the intelligence utilized at the moment of mission execution was actively being collected and remained conflicting.[638] It was not until the ground assault force relayed back "negative items" that command had a reliable first-hand account that proved the prisoners were not at Son Tay. The intelligence community was providing as much information as they had and were doing everything within their power to obtain the relevant information. The second point Gargus provides is that the North Vietnamese had most probably assessed the vulnerabilities of Son Tay on their own, according to several North Vietnamese accounts after the war.[639] These vulnerabilities, coupled with the seasonal and potentially aggravated flooding of the Tich

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637 McRaven, *SPEC OPS*, 318.

638 Gargus, *The Son Tay Raid*, 261.

639 One NVA account provided by Gargus stated:

> "the U.S. made a … raid by helicopter on Son Tay … the goal of the raid was to steal prisoners of war we were holding there … although we moved the prisoners to another location in time to avoid the raid, we did not fully anticipate the daring nature of the American plan. Because we were not vigilant, we were caught by surprise and did not deploy forces to fight back against the raid." Gargus, 242–252.

Another account provided in a revision of John Gargus's book notes at the end of chapter 5, *The Vietnamese Story About the Raid*, that the NVA determined Son Tay to be insecure and moved the POWs. Gargus, 242–252.

(Song Con) River that ran alongside the compound most likely lead to the POWs being moved several weeks, if not a few months, before the raid.[640]

Integration: The high levels of integration achieved by the assault force are typified by its ability to produce effective suppressive fire in the manner achieved. The assault force gained an adequate level of suppressive fire by employing an integrated plan that included both air and ground elements of the assault force, as well as two assault airlift platforms: a novel concept in and of itself. The plan called to have the HH-53 gunship, APPLE 03, dispense fire against two of the guard towers. Redundantly, and to ensure the successful achievement of the desired effect, suppressive fire would also be dispensed via BANANA. Not only would the mounted gun onboard BANANA be brought to bear, but the ten small arms CAR-15s employed by the BLUEBOY ground assault force were a significant bolster to this suppressive fire capability.[641]

The degree of integration required to accomplish this operationalization was no small feat. BLUEBOY group had to learn how to provide accurate fire in the dark while descending to land aboard the helicopter. Likewise, the pilots had to learn to position the aircraft to support the barrage of suppressive fire while also maneuvering around the compound's physical structure during a descent to a planned crash landing. These were significant challenges for the BLUEBOY group and pilots to overcome.

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640 Gargus refers to a "Weather Warfare" program carried out by the Central Intelligence Agency (CIA) that may have caused flooding in the Son Tay area on page 249 of his book. The CIA program "Operation POPEYE" was apparently focused on environmental modification, specifically cloud seeding over NVA. Once the program was exposed by the New York Times in 1972, the program was cancelled. Congress and the United Nations acted to ban Environmental Modification through the *Prohibition of Military or any other Hostile Use of Environmental Modification Techniques* treaty in 1977 with ratification in 1979. *The Convention of the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, Signed at Geneva on May 18, 1977*, United States Congress, accessed May 07, 2017, https://www.congress.gov/treaty-document/95th-congress/26; Michel Chossudovsky, "Weather Warfare: Beware the U.S. Military's Experiments with Climatic Warfare," Global Research, December 07, 2007, http://www.globalresearch.ca/weather-warfare-beware-the-us-military-s-experiments-with-climatic-warfare/7561; Gargus, *The Son Tay Raid*, 248–249; Seymour M. Hersh, "Rainmaking Is Used As Weapon by U.S.; Cloud-Seeding in Indochina Is Said to Be Aimed at Hindering Troop Movements and Suppressing Antiaircraft Fire Rainmaking Used for Military Purposes by the U.S. in Indochina Since '63," *New York Times*, accessed May 07, 2017, http://www.nytimes.com/1972/07/03/archives/rainmaking-is-used-as-weapon-by-us-cloudseeding-in-indochina-is.html?_r=0.

641 Gargus, 25–27.

Although suppressive fire had never been employed in this way before, this novel and successful employment was achieved through high levels of integration between members of the air and ground assault forces who developed trust and credibility with one another. These aspects of their relationship were honed through the synchronization created by their relationship-focused leadership and the integration achieved through persistent full-dress rehearsals. Manor ensured that each component of the mission force had its needs addressed as they jointly worked towards the best possible solutions for the accomplishment of the mission. This allowed the men of Operation KINGPIN to develop novel tactics and procedures that were successfully accomplished in a way that had never been tried before. Through the high levels of integration they achieved, they were able to train to the elevated level of proficiency required to achieve suppressive fire in this way.[642]

This novel implementation of suppressive fire was only achieved through the operationalization of the mission force made possible through high levels of mission force integration. By the time they descended into the dark of Son Tay, they were no longer distinct mission elements. No longer were the air and ground elements divested into the trivialities of their conventional ancestral backgrounds. Instead, they had been successfully integrated into a joint mission force whose diverse skills and unified sense of purpose combined to provide them with abilities none of them had been able to singularly contribute. The sum of the whole had become more than the sum of the parts. Their combined unique skillsets of flight and fire had been chiseled together in a novel way to support their shared mission. This created an impressively impactful expenditure of suppressive fire that was only achievable through the high levels of trust and credibility that joint rehearsals and synchronizing relationship-focused leadership can provide.

8. Survivability: How Was Assault Airlift Operationalized to Increase Mission Force Survivability?

McRaven acknowledges survivability of the mission force as the most significant outcome related to overall success of the Son Tay mission plan, apart from the primary

642 Gargus, *The Son Tay Raid*, 25–27.

and unachieved mission objective of rescuing the POWs themselves. "Not one soldier or airman was killed or seriously injured on the raid," McRaven heralds in his analysis.[643] And despite the failure of the mission to achieve the tactical mission objective of rescuing the POWs, it still managed to have strategically impactful positive results. It was the contributing tenets of assault airlift that made survival of the mission force and the overall strategic success of the mission more probable.

Flexibility and Versatility: The Son Tay case study demonstrates how the versatility of assault airlift can span the breadth of providing assault mobility, suppressive fire, timely infiltration and extraction, casualty evacuation, and even personnel recovery. The limits of versatility are not limited to these examples, but they demonstrate the qualities assault airlift brings to the table that can be focused and refined as the mission force requires. Despite these amazing contributions, it remains relevant to the holistic balance of the mission force that modification in any given direction comes at the cost of flexibility in another direction. Balancing these tradeoffs in a manner best suited to the success and survival of the mission force is where the guidance of leaders akin to General Manor and Colonel Simons come into play. Adequately operationalizing the versatility of assault airlift requires a seamless integration of the air and ground force elements.

An increased chance for survival of the force was achieved, in part, through the balanced operationalization of the inherent versatility of assault airlift while retaining sufficient levels of flexibility in the required functional areas. This is exactly why relationship-focused leadership is so important for these assault airlift SOF direct-action missions. Leaders of such missions must know when and how to balance functional component frictions. Leaders must become aware of circumstances where complexity can be mitigated with resources. Conversely, these same leaders must understand when the addition of such resources can reduce needed flexibility. Relationship-focused leadership was able to adequately assess the eclectic needs of the mission force and choose the best aerial platforms to make the mission feasible from the perspectives of all functional components. Although there was a strong drive to include UH-1H Huey, the needs of the

643 McRaven, *SPEC OPS*, 320.

ground assault force to quickly disperse from the platform overrode the innate desire of the Army to use this platform.[644] Similar balancing aspects played into the selection of the lead terrain-following penetration MC-130 aircraft, the HC-130P tankers, the slower but more flexible escort strike aircraft, the use of full tracer rounds fired from the HH-53, and even the ground assaulter's limited number of troops. All of these were balances weighed by the leaders to ensure the best possible chances of mission force survival and the highest chances of a successful extraction.[645]

Redundancy: Another aspect of survivability that directly relates to simplicity seems ironically complicated: operational redundancy. Alternate plans were made and practiced for every conceivable scenario. The concept of operational redundancy "was planned into every phase of the air elements."[646] Obviously adding redundancy plans complicates the planning and preparation phases of a mission, but rehearsals can iron out these complications to ensure they augment the mission rather than confuse it. Redundancy is a critical concept for the employment of assault airlift in support of SOF direct-action missions. It ensures the air assets retain the flexibility necessary to provide options to the assault force when contingencies and unforeseen factors complicate mission execution. And while some aspects of redundancy may require significant effort to achieve, such as obtaining current recon to map out alternate landing zones just before a mission launches, other aspects may be as simple as bringing extra iterations of a critically required asset. Of the five HH-53s in the assault force, two were empty and one of these was merely a spare. These could be used in case another aircraft aborted for maintenance reasons, for exfiltration in the event additional POWs were found, or for casualty evacuations.[647] All of these aspects directly increased the survivability of the assault force.

The loss of an airlift asset during the infiltration phase was the primary driver behind the development of contingency plans during the planning and preparation phases

644 Gargus, *The Son Tay Raid*, 74–77.

645 Michalke, "Son Tay Raid Remembered Nearly Four Decades Later;" Gargus, 27.

646 McRaven, *SPEC OPS*, 305.

647 USAHEC, "Son Tay."

of the Son Tay raid.[648] Son Tay employed the now common SOF tactic of using "three to make two." This concept essentially demands that if a given mission requires two of an asset, then, in order to ensure the success of the "no fail" mission, leadership will send three of the asset. This is done in anticipation that one of the three may end up unable to complete its portion of its assigned mission tasks. The extra asset will then fill in to provide the minimum required assets to accomplish the mission. This is true for all aspects of military ventures, though the balance required in SOF direct-action must take into account the necessarily smaller size of the attacking force. It is not always feasible to bring along an additional two or three of a given asset. Yet, some level of redundancy must be achieved in order to assure a chance at mission success. With aircraft, in particular, additional resources help to mitigate the risk of complex mechanical component failures, combat losses, or other interruptions due to the fog and frictions of war. And besides these resources themselves, the assault force must be prepared to deal with the prioritization of assets that ensures the loss of a single aircraft's worth of assets do not diminish the ground assault force's ability to prosecute the actions-on-the-objective. If a ground asset is seemingly required for mission success, it must be redundantly transported on multiple platforms or plans for its absence must be prepared.

A plan must not only be developed for the primary desired mission scenario, but plans must be developed based on the epistemological approach of identifying the most probable and worse case scenarios in order to ensure the mission assault force remains flexible enough to overcome foreseeable and unforeseeable potential challenges during mission execution.[649] Foreseeable and unforeseen complications, identified by McRaven as the "frictions of war," can compound over the duration of the mission.[650] These interruptions complicate the situation and can erode the mission assault force's degree of relative superiority. This erosion increases the amount of risk the mission force is exposed to and therefore decreases the probability of achieving mission success.

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[648] Gargus, *The Son Tay Raid*, 42–43.

[649] McRaven, *SPEC OPS*, 10–11.

[650] McRaven, *SPEC OPS*, 10–11.

Two-Way Mission: This cumulating complication effect is the reason exfiltration is often more complicated than either infiltration or actions-on-the-objective. During exfiltration, the compounded effect of all subsequent contingencies and unexpected factors must be mitigated with enough relative superiority to maintain the survivability of the mission force. By the time the mission force reached the exfiltration phase during Operation KINGPIN, two members of the assault force had been injured, one aircraft had been destroyed, the element of surprise had been lost, enemy air defenses were alert and ready to engage them, and local enemy conventional forces had been alerted to their presence.[651] Because of the way the mission had been designed (around the ability of assault airlift to adequately bolster relative superiority during the final exfiltration phase) these complications were adequately mitigated. The mission force did not suffer an unrecoverable loss of relative superiority and was able to achieve exfiltration.

Had relative superiority not been achieved to the degree that allowed for safe recovery of the mission force, the capture of the assaulters could have had negative strategic affects akin to those experienced by the United States when Gary Prowers's U-2 "reconnaissance [aircraft] … was shot down over the Soviet Union in 1960."[652] The results of this incident left a black eye on the perceived intelligence collection capabilities, the recovery capabilities, and the perceived virtue of the United States. Such an outcome is always a threat when operators physically penetrate hostile and otherwise sovereign domains with manned assets. Yet these are the risks that must often be mitigated when special operators are called upon to perform direct-action missions.

Medical Support: A final contribution assault airlift can be credited with here is providing on scene medical support and the versatility to perform casualty evacuation in an expedient manner. A medical doctor was able to accompany the assault force in order

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[651] Although conventional enemy forces in the area had been alerted to the presence of the Son Tay mission assault force by this time, these forces did not respond in a timely enough manner to become effective against the assaulters. This was due, in part, to the overall speed the assault force used to accomplish the mission as well as the hasty extraction from the compound made possible by the assault airlift utilized. Gargus, *The Son Tay Raid*, 106.

[652] Guenon, "Secret and Dangerous;" "U-2 Spy Incident," History, accessed May 04, 2017, http://www.history.com/topics/cold-war/u2-spy-incident; McRaven, 319;

to provide immediate care for both the assaulters and any rescued POWs.[653] In fact, two of the assault helicopters, APPLEs 04 and 05, were used after the raid to rescue downed F-105 pilots who had been hit by SAMs during the MiG Trap Scenario.[654] While alternative means of transportation may have also allowed medical care to be brought forward towards the objective area, they may not have readily provided a means of extracting casualties and isolated personnel. Ready access to medical care and casualty evacuation contributed to the survivability of the force by providing timely medical attention during the critical moments of the operation when injuries and casualties were most likely to occur. Addressing these issues on scene diminishes the severity of physical, operational, and political consequences. Assault lift not only allowed medical attention be brought directly into the objective area to care for POWs and any casualties incurred to assaulters during the mission, but it also increased the survivability of the supporting conventional assets … in this case, two pilots.

D. CONCLUSION

The raid at Son Tay fell short of achieving the desired primary mission objective of bringing the POWs home, but it still achieved significant strategic effects culminating in results that define the mission as a success.[655] The North Vietnamese government reacted to the raid by combining POWs from many smaller, arguably less survivable, detention camps into a single centralized location at the "Hanoi Hilton."[656] This served to boost morale and increase survivability for the POWs.[657] It allowed them to socialize, structure themselves, care for one another, and treat their wounded.[658] Morale would soar when they learned their fellow servicemen and government had not forsaken them, but had instead mounted such a daring effort to achieve their liberation.[659] The North

653 Gargus, *The Son Tay Raid*, 29, 92, 270.

654 Gargus, 228–230, 287.

655 Gargus, 258–260; McRaven, *SPEC OPS*, 318.

656 Gargus, 259.

657 Gargus, 259.

658 Gargus, 259.

659 Gargus, 258–259.

Vietnamese government was shaken by the boldness and machismo of such a grand gesture in the face of their most formidable defenses.[660] "The fact that American helicopters had been able to land troops at the gates of the Capital without being appropriately punished by our forces had a powerful impact on the Party and command levels of the armed forces and the civilian population," one North Vietnamese source relayed after the war.[661] Two years, two months, and a week after the Son Tay raid, the Vietnam War would end with Paris Peace Accords in January 1973.[662] The Son Tay raid had not ended the war by itself, but it was one of the factors that helped bring credibility to the United States at the negotiating table.

The Son Tay "incident" was an "embarrassing" international event for the North Vietnamese government.[663] Gargus relayed: "It showed them and the rest of the world how vulnerable they were to America's superior resources. The United States demonstrated that it had the means and determination to execute a surgical strike deep inside North Vietnam to free U.S. airmen whose internment was not in compliance with the Geneva Convention."[664]

Gargus even provides the perspective from one of the POWs who was held at Son Tay that states the failure to bring the POWs home may have been a "hidden blessing."[665] The former inmate "invites us to consider what kind of reaction a successful rescue … from Son Tay could have caused. POW captors in other camps might have reacted angrily and initiated severe reprisals."[666] From this perspective, the failure to achieve the primary mission objective may have actually increased the overall success of the effects produced by the Son Tay rescue attempt.

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660 Gargus, *The Son Tay Raid*, XI, 7.

661 Gargus, 234.

662 Tom Valentine, "What Was [sic] Paris Peace Accords?" The Vietnam War, May 22, 2013, http://thevietnamwar.info/what-was-paris-peace-accords/.

663 Gargus, 235.

664 Gargus, 234.

665 Gargus, 234–235.

666 Gargus, 259–260.

All in all, the strategic significance of the Son Tay raid enabled the mission to be recognized as successful despite the fact that the primary mission objective of freeing the POWs had not been achieved.[667] Even when President Nixon approved the raid, he knew that the mission's overall successful strategic impact did not hinge upon retrieval of the POWs alone.[668] He knew the risks were warranted as long as the plan was good enough to get the assault force in and back out in one piece, and it was. The mission's overall success rests on the backs of the transportation that enabled the assault mission force to infiltrate to the objective area and return safely home again without incurring significant casualties. It was assault airlift's contribution to the survivability of the mission force that allowed this mission to achieve strategic significance regardless of the failure to achieve the primary mission objective.

[667] Gargus, *The Son Tay Raid*, XI, 258–260; McRaven, *SPEC OPS*, 318.

[668] USAHEC, "Son Tay."

III. CASE STUDY #2—"OPERATION EAGLE CLAW"

The Iran Hostage Rescue Attempt

A. INTRODUCTION

> To you all, from us all, for having the guts to try.
>
> These words were inscribed on a note that was quietly delivered, along with two cases of beer, to the surviving members of the Operation EAGLE CLAW assault force by two British Airmen (see Figure 104).[669]

On 4 November 1979, Islamic militants seized the U.S. Embassy and Ministry of Foreign Affairs in Tehran, imprisoning 52 hostages onto the embassy grounds and three hostages, to include U.S. ambassador Bruce Laingen, at the Ministry of Foreign Affairs building.[670] The President, James E. "Jimmy" Carter, Jr., had a personal and political interest in ensuring the hostages were returned home safely.[671] Hostage rescue in denied territory was not a mission the U.S. military had been preparing for.[672] The integrated relationships that had made possible the extraordinary operations of the Military Assistance Command, Vietnam – Studies and Observation Group (MACV-SOG) during the Vietnam War had perished over the near decade since their last use.[673] Nonetheless, the President believed the rescue of the hostages was strategically necessary and ordered the Department of Defense (DOD) to prepare a rescue attempt. The "cobbled together" *ad hoc* force that would attempt the raid would rail against organizational, environmental,

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669 Senior Airman Ryan Whitney, ""To you all, from us all, for having the guts to try"--30 Years Later," 1st Special Operations Wing, Public Affairs, April 29, 2010, http://www.afsoc.af.mil/News/Article-Display/Article/162914/to-you-all-from-us-all-for-having-the-guts-to-try-30-years-later/.

670 William L. Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt and its Implications for Conflict Management," *The Centre for Digital Scholarship Journals*, 1990, https://journals.lib.unb.ca/index.php/JCS/article/viewFile/14890/15959; Guidry, "Operation EAGLE CLAW;" Adams, *U.S. Special Operations Forces in Action,* 164; Guidry, "Operation EAGLE CLAW."

671 Bowden, "The Desert One Debacle."

672 Adams, *U.S. Special Operations Forces in Action,* 164.

673 Adams, 116–150; Guidry, "Operation EAGLE CLAW."

and logistical odds, culminating in mission abortion and catastrophic extraction failure.[674] The resultant catastrophe would not only fail to rescue the hostages, but it would see the loss of eight lives of members of the rescue assault force (see Figure 64).[675]

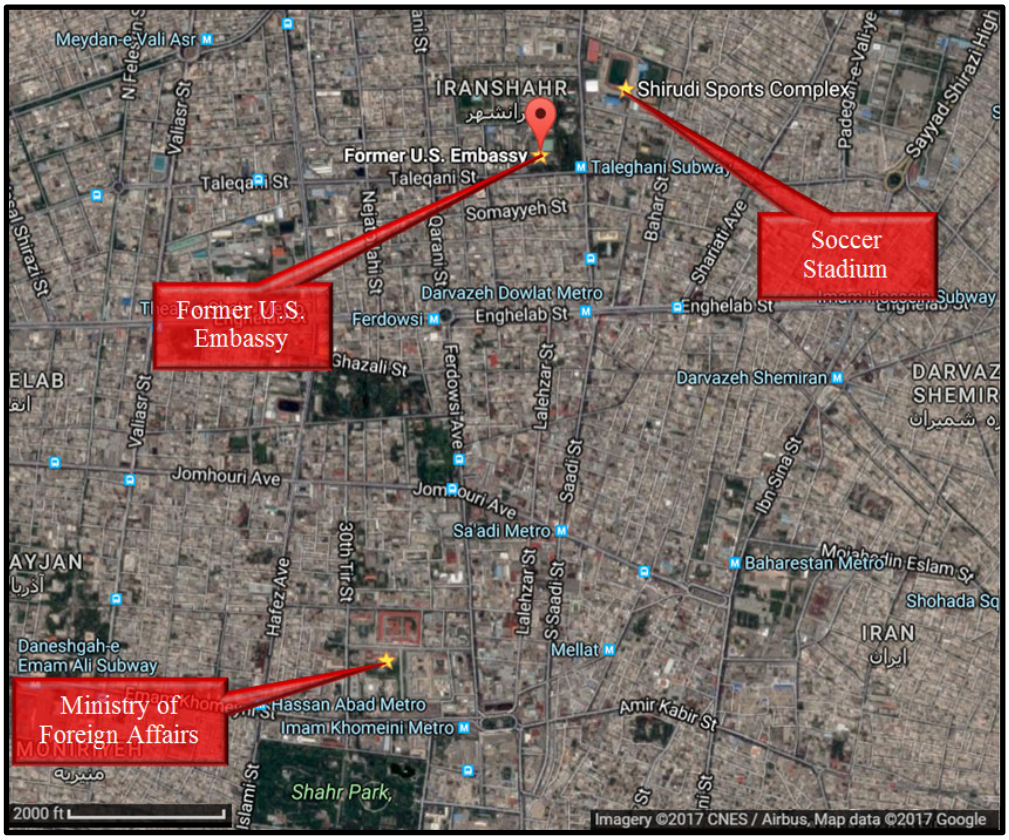

Figure 64. Former U.S. Embassy, Ministry of Foreign Affairs, and Soccer Stadium Locations in Tehran[676]

674 The term "*ad hoc*" was used to describe the mission force structure by multiple authors and analysis, a few of which were Thomas K Adams in "US Special Operations Forces in Action," and William L. Waugh, Jr, in "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt and its Implications for Conflict Management." Adams, *U.S. Special Operations Forces in Action,* 164; Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

675 Adams, 164.

676 Adapted from "Former U.S. Embassy, Tehran," Google Maps, accessed June 15, 2017, https://www.google.com/maps/@35.6935034,51.3905124,14418m/data=!3m1!1e3?authuser=1; Guidry, "Operation EAGLE CLAW."

As President Carter watched the events unfold surrounding the Iran hostage situation, he knew that a peacefully negotiated solution was the best possible option. However, he also believed that the release of the hostages must be achieved regardless of the success of political and diplomatic overtures.[677] President Carter equated the well-being of the hostages with the vital national interests of the country, Mark Bowden, author of "The Desert One Debacle," iterated.[678] In order to ensure the release of the hostages, President Carter ordered the DOD to commence preparations for a rescue attempt.

The political environment inside the DOD was not conducive to the joint nature such an operation would necessitate. The strong relationships that had enabled the synergistic successes of conventional and special operations forces during the Vietnam War had dematerialized. "By the end of the 1970s, the U.S. ability to conduct unconventional warfare was virtually nonexistent," Thomas K. Adams articulates in his book, *U.S. Special Operations Forces in Action: The Challenge of Unconventional Warfare*.[679] The organizations and specialty focuses of special operations forces had been disband or reabsorbed into conventional roles or mindsets in the intervening time period. "US capacity in this area had 'withered into virtual uselessness (quote from Shackley, 1983)."[680] Instead, there was a predominant mindset suggesting that special operations forces "were most appropriately employed as assets directly supporting conventional combat units."[681] The rescue force would have to be established without the benefit of a dedicated command or organizational SOF structure.

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677 Of note, the situation in Iran had roots in American involvement, adding additional complexity to the situation and driving up the potential costs of mission failure. The Central Intelligence Agency had driven the "1953 Iranian coup d'état" with Operation AJAX, a feat detailed by Mark J. Gasiorowski in his 1987 journal article, "The 1953 coup d'etat in Iran." Mark J. Gasiorowski, "The 1953 coup d'etat in Iran," *International Journal of Middle East Studies* 19, no. 03 (n.d. 1987): 261–286.

678 Mark Bowden, "The Desert One Debacle," *The Atlantic*, May 2006 Issue, accessed May 18, 2017, https://www.theatlantic.com/magazine/archive/2006/05/the-desert-one-debacle/304803/

679 Adams, *U.S. Special Operations Forces in Action,* 163.

680 Theodore Shackley (retired CIA operations officer), *The Third Option,* (New York: McGraw-Hill, 1983), 19; Adams, 163.

681 Adams, 163.

For the ground assault force, the Army's new Special Forces Operational Detachment (SFOD) Delta, built and commanded by Colonel Charlie A. Beckwith, was nearly ideally suited to accomplish the task.[682] They were the best of the best, a newly established unit of special operators ready and willing to prove their skills. Inopportunely, Beckwith had only been charged with building a ground assault force element, and Delta Force retained no transportation assets to get themselves in and out of Iran.[683] There were no existing military units prepared to provide the requisite level of clandestine enemy airspace penetration that would be required to deliver Delta Force to the objective area. As Adams relates in his book, "no provision had been made for the sort of support required to deliver the Delta troopers to the midst of a hostile country half-way around the world."[684]

Not only would the Iranian hostage rescue effort require a SOF direct-action assault force to develop a novel means of insertion and extraction, it would require this capability to be developed covertly without the ability to rely upon any of the preexisting military infrastructure taken for granted during the Vietnam, Korean, and World War II.

Without a dedicated transportation element of the assault rescue force, an *ad hoc* assault force would need to be "cobbled together."[685] The disjunctive nature and inability of the disjointed force would diminish the SOF direct-action assault force's ability to identify their own needs or cope with the dynamic environment they would be obligated to operate in. The mission would terminate in disaster, taking the lives of eight American service members and injuring several others. It would terminate in an abortion of mechanical failures punctuated by a tragic aircraft collision. The "would be rescuers" would be forced to withdrawal so dramatically that they would leave their dead behind,

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682 Adams, 164; Bowden, "The Desert One Debacle."

683 "No provision had been made for the sort of support required to deliver the Delta troopers to the midst of a hostile country half-way around the world," Thomas K. Adams relayed in his book. Adams, 164.

684 Adams, *U.S. Special Operations Forces in Action,* 164.

685 The term "*ad hoc*" was used to describe the mission force structure by multiple authors and analysis, a few of which were Thomas K Adams in "US Special Operations Forces in Action," and William L. Waugh, Jr, in "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt and its Implications for Conflict Management." Adams, 164; Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

along with five of their assault helicopters, burning aircraft, and a treasure trove of secret documents exposing the methods and plans of the raid itself.[686]

The failure of Operation EAGLE CLAW is exactly what makes it necessary for studying in the context of relative superiority and how best air mobility can support mission success. During the operation, the ground assault force was never even given the opportunity to display their impeccably honed skills tactical prowess at the objective area. That portion of the mission never materialized. The assault force was never delivered to the objective area because of the lack of minimum required force, a reality brought on by mechanical failures stemming from environmental threats that struck at the vulnerabilities of the air assault force during infiltration. Somehow the assault force lost relative superiority without ever coming into contact with the enemy's threats. Furthermore, the devastating explosion and loss of life following mission abortion were directly linked mission's overall failure. This incident occurred after mission abortion during air assault force repositioning required for the extraction phase of the operation. These factors, along with the resulting SOF organizational, operational, and innovational progress achieved in the aftermath of this failure make it an imperative for it to be examined here. As Eliot A. Cohen and John Gooch assert in their book *Military Misfortunes*, studying failure can help us avoid such causes in future endeavors.[687]

B. EVENT SUMMARY

1. Planning

The hostage rescue attempt would be planned and prepared under the codename Operation RICE BOWL (as reported by Rovitot in "The Hangar Queen: The Failure of RH-53D Helicopters in Operation EAGLE CLAW").[688] The actual challenge for the mission was the transportation. With Colonel Beckwith's SFOD Delta Force ground assault team already selected and ready to focus on the mission tactical details, the real challenge

686 Adams, 164.

687 Cohen and Gooch, *Military Misfortunes*.

688 Rovitot (rovitothis201), "The Hangar Queen: The Failure of RH-53D Helicopters in Operation EAGLE CLAW," WordPress, April 05, 2014, https://rovitothis201.wordpress.com/2014/04/05/the-hangar-queen-the-failure-of-rh-53d-helicopters-in-operation-eagle-claw/#_ftn5.

would lie in preparing a delivery and extraction means for the ground force. "There were the vast distances, nearly 1,000 miles, of Iranian wasteland that had to be crossed, then the assault itself … in the middle of a city of 4,000,000 hostile folks," accounted Beckwith and Donald Knox in their 1983 book, *Delta Force: The Army's Elite Counterterrorism Unit* (as related by Rovitot in "The Hangar Queen").[689] The embassy itself only had a single area large enough for a helicopter landing force to ingress, and the Iranians had been smart enough to block that area with vehicles.[690] In order to reach the hostages in the heart of Tehran, the determination was made that the assault force would have to be infiltrated through a series of rendezvoused and offsite staging locations via a mixture of air and ground methods. The extraction plan would be only slightly less complex.

Mission Objectives and Constraints: The requirements for the mission levied on the assault force planners by the commander-in-chief were staggering. Colonel Roland D. Guidry, then commander of the 8th Special Operations Squadron and a pivotal member of the air assault force, relayed how these restrictions included a laundry list of "needs" and "wants," all tangled together and dropped into the lap of the joint task force planners for development into a viable and executable plan (see Figure 65, Figure 66, and Figure 67).[691]

689 The term "elite" is not condoned as an appropriate descriptor of special operations forces. More accurate terms, such as "specialized," are considered more appropriate. Yet, the term "elite" has been utilized to identifying specialized mission units in the writings of other authors. Its repetition here does not constitute an acceptance or promotion of an elitist mentality on the part of this author. Charlie A. Beckwith, and Donald Knox, *Delta Force: The Army's Elite Counterterrorism Unit,* (New York: Harcourt, Brace, Jovanovich, Inc., 1983), 188; as related by Rovitot, "The Hangar Queen."

690 Guidry, "Operation EAGLE CLAW."

691 Guidry, "Operation EAGLE CLAW."

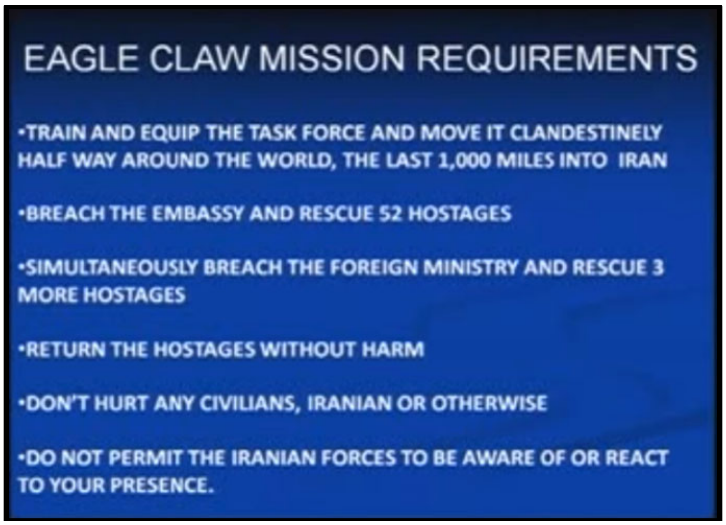

Figure 65. Operation EAGLE CLAW Mission Requirements (1 of 3)[692]

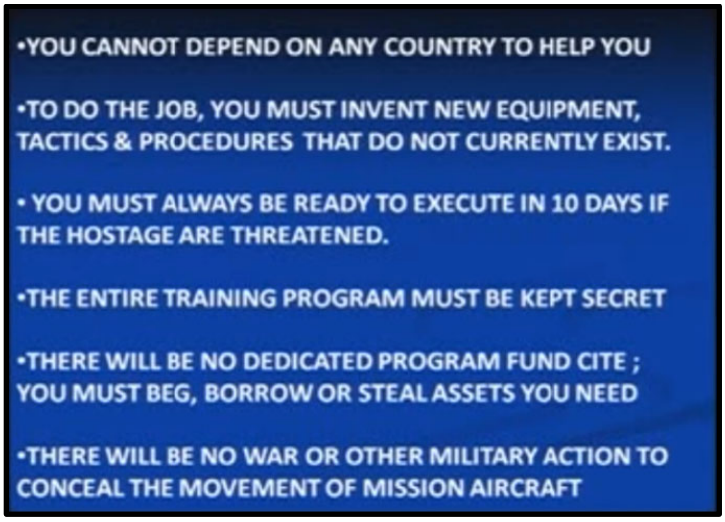

Figure 66. Operation EAGLE CLAW Mission Requirements (2 of 3)[693]

692 Adapted from Guidry, "Operation EAGLE CLAW."

693 Adapted from Guidry, "Operation EAGLE CLAW."

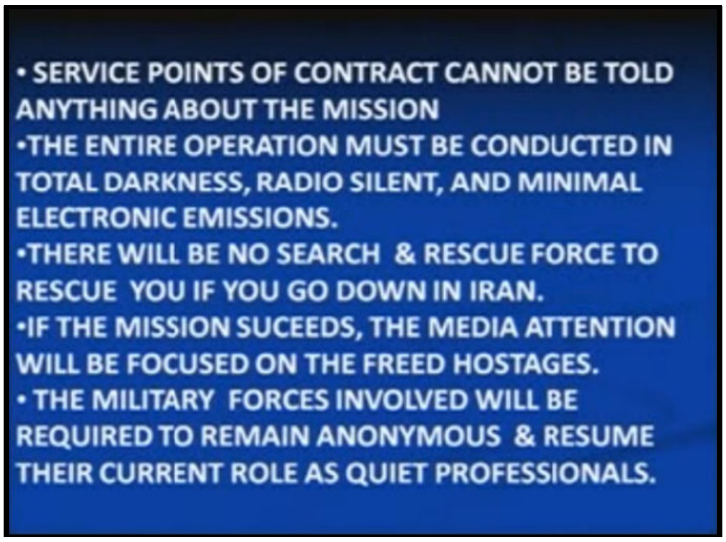

Figure 67. Operation EAGLE CLAW Mission Requirements (3 of 3)[694]

The Transportation Challenge and a Complicated Solution: The tyranny of distance would be a significant challenge. To cope with and overcome it, the disjointed governmental and military departments attempted to build a complicated transportation plan. Options were explored, such as airdropping a ground assault force into the Caspian Sea, but this proved too risky. An overland infiltration option would take several days, given the distance, and it would take too long to execute. If discovered, it would either meet a perilous demise or require enough conventional support to comprise a full-scale invasion force. The only viable option would be a covert air assault. This plan would ultimately evolve to be overly complicated and technically overreaching. The plan was rather succinctly summarized by Mark Bowden, author of the Atlantic article, "The Desert One Debacle," as follows:

> It was a two-day affair with a great many moving parts and very little room for error—one of the most daring thrusts in U.S. military history. It called for a nighttime rendezvous of helicopters and planes at a landing strip in the desert south of Tehran, where the choppers would refuel before carrying the raiding party to hiding places just outside the city. The whole force would then wait through the following day and assault the embassy compound on the second night, spiriting the hostages to a nearby soccer stadium from which the helicopters could take them to a seized airstrip

694 Adapted from Guidry, "Operation EAGLE CLAW."

outside the city, to the transport planes that would carry them to safety and freedom. With spring coming on, the hours of darkness, needed to get the first part of this done, were shrinking fast [see Figure 68].[695]

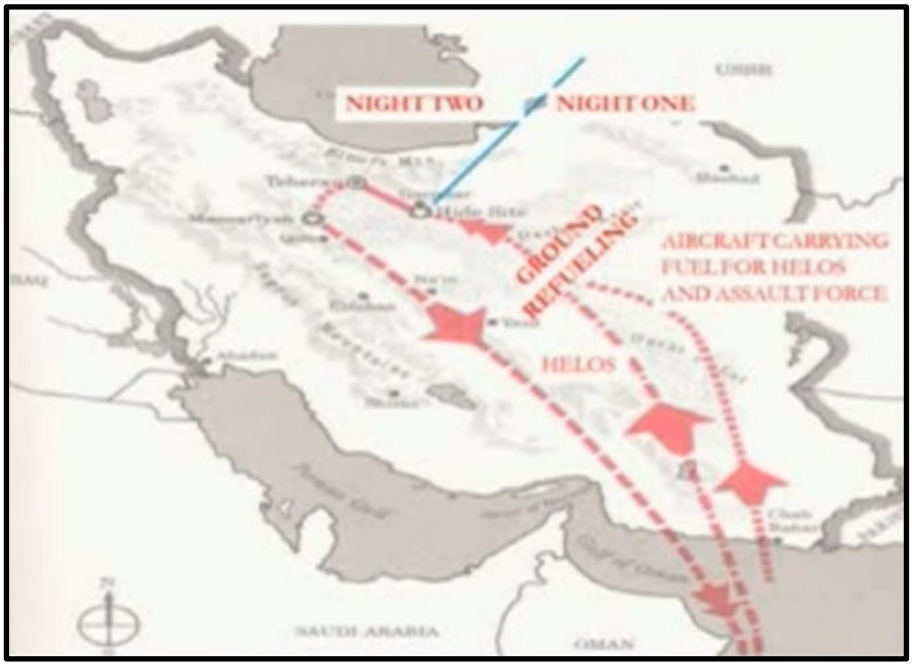

Figure 68. Operation EAGLE CLAW Original Mission Concept, as Presented by Colonel Guidry[696]

This was far from the simple plan developed for execution during the rescue attempt at Son Tay. It involved multiple large footprints of U.S. troops on the ground behind enemy lines at multiple sites across thousands of miles. These troops would be exposed for two days, significantly driving up the probability of detection even at the most remote sites. There were two distinct targets, the embassy and the ministry, located 1.4 miles apart from each other. Neither of these targets was favorable for direct air assault infiltration or extraction.[697] The situation further demanded these targets be prosecuted simultaneously.[698]

695 Bowden, "The Desert One Debacle."

696 Adapted from Guidry, "Operation EAGLE CLAW."

697 Guidry, "Operation EAGLE CLAW."

698 Guidry, "Operation EAGLE CLAW."

The plan also had to encompass potential failure or reprisals. William L Waugh, Jr, elaborates in his journal article, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt and its Implications for Conflict Management."

> Other Americans, including journalists, were in Iran and could be taken hostage if those in the Embassy were rescued, violence against Iranians civilians might precipitate violence elsewhere, and a strong military response might force Iran into an alliance with the Soviet Union.[699]

This "elaborate plan" would not benefit from the large amount of pre-staged resources and logistical support that had been present in the Vietnam theatre for General Manor and his assault force to take advantage of.[700] In part because of these limitations, this plan would require a more significant risk be taken on the part of the assault force.

The president himself was made aware of these potential risks, but deemed them necessary given the political and diplomatic constraints he faced. Economic sanctions had stifled and ineffective. The United Nations diplomatic solutions had merely proven that international law was not enforceable enough to provide the release of the hostages.[701] Secret negotiations in Paris were not going well, and failure threatened to drive the Iranians into the company of the Soviets at a very inopportune time for the Americans.[702] Going ahead with the development of a military solution was the only viable alternative left on the table. "It was risky; but … the president had few options" Bowden relayed.[703] "Peaceful efforts to resolve the crisis were at an impasse."[704]

Given the urban environment surrounding the objective area, direct air infiltration was ruled out. Instead, the ground assault force would be covertly deposited by the air assault force to a hide site just outside of Tehran, a location that would become known as

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699 Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

700 Bowden, "The Desert One Debacle."

701 Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

702 Bowden, "The Desert One Debacle;" Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

703 Bowden, "The Desert One Debacle."

704 Bowden.

the Laager site. From here, the ground assaulters would finish their last leg to the objective area in trucks. While infiltration presumably allowed for this indirect air delivery, exfiltration did not. A direct vertical air assault would provide the quickest possible extraction means once the shooting started. Helicopters for this portion would be a must.[705]

The staging point for the assault force became another problem brought on by the tyranny of distance. Turkey refused to cooperate, as it relied on Iran for a majority of its petroleum products. Problematically, the objective area was 1,100 miles from the nearest possible staging point for a helicopter assault force, even if an aircraft carrier were utilized for their launch.[706]

The planners chose to cope with this challenge by planning to launch the helicopters from outside of Iran, from the USS Nimitz aircraft carrier. Prestaging locations for the other air assault force elements to use for marshalling in theatre were acquired at Wadi Kena, Egypt and Masirah Island, Oman. The dispersed force would then travel forward to congregate and refuel at an intermediate rendezvous site in the Iranian desert that would come to be known as Desert One. The planners would have intelligence analysist identify a suitable site in a remote desert location, but even an abandoned Iranian airfield would suffice for this refueling site, if required (see Figure 69 and Figure 70).

[705] Guidry, "Operation EAGLE CLAW."

[706] Guidry.

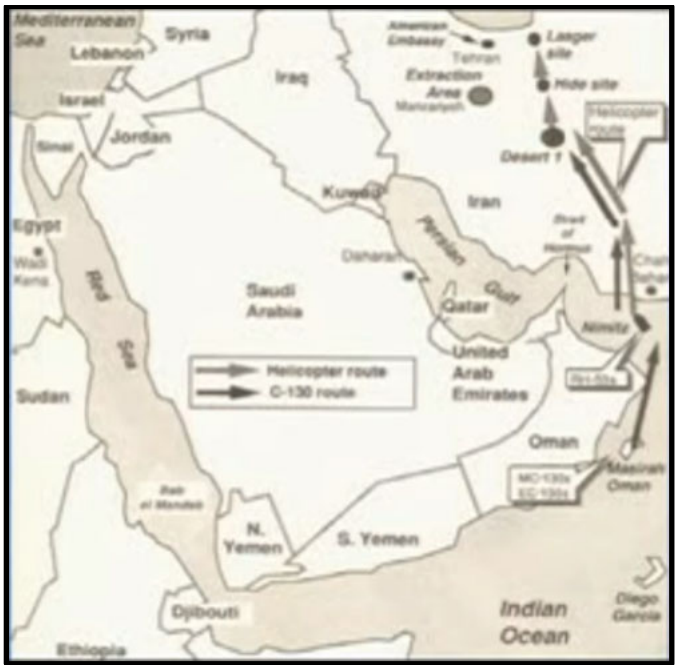

Figure 69. Operation EAGLE CLAW Ingress Sites and Routes, as Presented by Colonel Guidry[707]

From Desert One, the force would move forward to a hide site, known as Desert Two, where they could covertly remain until the timing was right for delivery of the ground assault force. On Night Two, the helicopters would leap forward to deposit the Delta Force ground assault force at the third Iranian site, the Laager site, where undercover operatives would have trucks waiting for their use.

The ground assault force would proceed on to the objective area via truck while the assault helicopters would go back to Desert Two to await extraction. Supported by the close fire support of an AC-130 gunship, the Delta Force assaulters would simultaneously rescue the hostages at the embassy and the ministry building. They would also secure a nearby soccer stadium to be used as an extraction landing zone for the helicopters. The helicopters would land in the stadium, extract the freed hostages and the ground assault force, and transport all to an extraction rendezvous site.

707 Adapted from Guidry, "Operation EAGLE CLAW."

An airfield called Manzariyeh Air Base, located about 35 miles southwest of Tehran, could be seized by the Delta Force operatives and used for the extraction of the force and the refugees. The helicopters would be abandoned there and the extraction would complete aboard C-141 Starlifters and the C-130 aircraft that had been initially used to insert the assault force at Desert One.[708]

Figure 70. Wadi Kena, Egypt: Prestaging Base for Operation EAGLE CLAW's Air Assault Force Fixed-Wing Assets[709]

At Manzariyeh Air Base, the helicopters would trans-load the hostages and any injured personnel onto C-141 Starlifters. The helicopters would be abandoned and destroyed onsite. The ground assault force would collapse the perimeter and all remaining personnel would exfiltrate on MC-130 aircraft under the cover of AC-130 fire support (see Figure 71).[710]

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708 Guidry, "Operation EAGLE CLAW."

709 Adapted from "26°33'23.4"N 33°07'18.1"E," Google Maps, accessed July 02, 2017, https://www.google.com/maps/place/26%C2%B033'23.4%22N+33%C2%B007'18.1%22E/@29.4087064,37.0877563,2741395m/data=!3m1!1e3!4m13!1m7!3m6!1s0x14368976c35c36e9:0x2c45a00925c4c444!2sEgypt!3b1!8m2!3d26.820553!4d30.802498!3m4!1s0x0:0x0!8m2!3d26.5565932!4d33.1210327; Guidry, "Operation EAGLE CLAW."

710 Guidry, "Operation EAGLE CLAW."

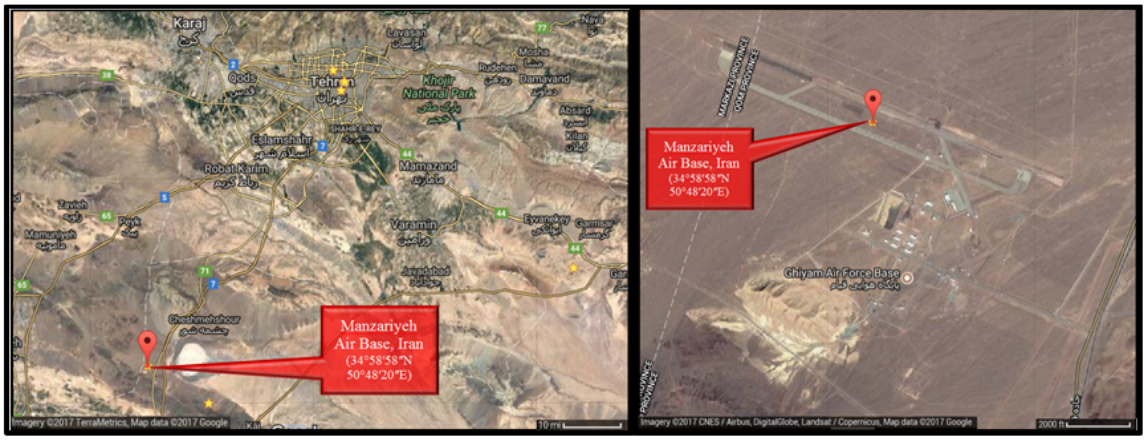

Figure 71. Manzariyeh Air Base, Iran: Possible Exfiltration Site for Air Assault Force Assets[711]

The planners and intelligence analysist began the process of selecting a suitable ground refueling site to act as Desert One. It would have to be far enough north that the helicopters could proceed to Desert Two, remain over day, then continue on to Tehran for the raid, and then on to an extraction location. The helicopters would have to retain enough fuel that they could return to the aircraft carrier to the south in the event the mission was cancelled during execution by the President.[712] An abandoned and derelict airfield near Nain (also known as Naein, or Naeen), Iran, and approximately 220 miles to the southeast of Tehran was one possibility. Other alternatives included the desert lands to the southeast. Imagery analysts scoured satellite footage looking for a suitable site for the clandestine operation. The site would have to be remote, isolated, and topographically suitable for the landing of fixed-wing refueling and transport aircraft (see Figure 72, Figure 73, and Figure 74).

711 Adapted from "34°58′58″N 50°48′20″E," Google Maps, accessed July 02, 2017, https://www.google.com/maps/place/34%C2%B058'58.0%22N+50%C2%B048'20.0%22E/@34.9827778,50.8033669,629m/data=!3m2!1e3!4b1!4m5!3m4!1s0x0:0x0!8m2!3d34.9827778!4d50.8055556; Guidry, "Operation EAGLE CLAW."

712 Guidry, "Operation EAGLE CLAW."

Figure 72. Nain Military Airport, Iran: Abandoned Airfield Considered as an Alternative Site for Desert One during Operation EAGLE CLAW[713]

They settled on a dry lakebed with a rough dirt road running through it as the most likely site to pan out. The site was at least ten miles from any inhabited areas, as would later be reported by Jon Snow, purportedly "the first Western journalist to report" from location in the aftermath of the rescue attempt.[714] "The planners" abstracted it would probably suffice "to support the weight of [the MC and EC-130]" aircraft.[715] Reconnaissance would be required to confirm the location's suitability, but the mission force could rehearse seizing an airfield instead until the reconnaissance mission validated the site. The plan allowed for the reconnaissance mission to be accomplished as late as feasible to avoid its potential discovery, which could disrupt diplomatic negotiations.[716]

Little attention was paid to the small dirt road traversing the selected Desert One site in their photographs. The planners assumed traffic on the road would be light. They failed to realize that the "Iranians often traveled by night to avoid the heat of the day."[717]

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713 Adapted from "33.083087, 53.417848," Google Maps, accessed July 01, 2017, https://www.google.com/maps/place/33%C2%B004'59.1%22N+53%C2%B025'04.2%22E/@33.0830915,53.4156593,615m/data=!3m2!1e3!4b1!4m5!3m4!1s0x0:0x0!8m2!3d33.083087!4d53.417848?authuser=1; Guidry, "Operation EAGLE CLAW."

714 "*Jon Snow: First on Scene at Iran Hostage Crisis Crash*," YouTube, 4:49, posted by Channel 4 News, May 12, 2015, https://www.youtube.com/watch?v=xQib8qY2yWI.

715 Guidry, "Operation EAGLE CLAW."

716 Guidry.

717 Quote by Professor Arquilla. Dr. John Arquilla, Thesis Review, Naval Postgraduate School, Monterey, CA, 2017.

The plan would be to simply detain any "random" passerby's for long enough for the operation to be completed and then deposit them at the extraction site, Manzariyeh Air Base, during the final stages of the operation.[718]

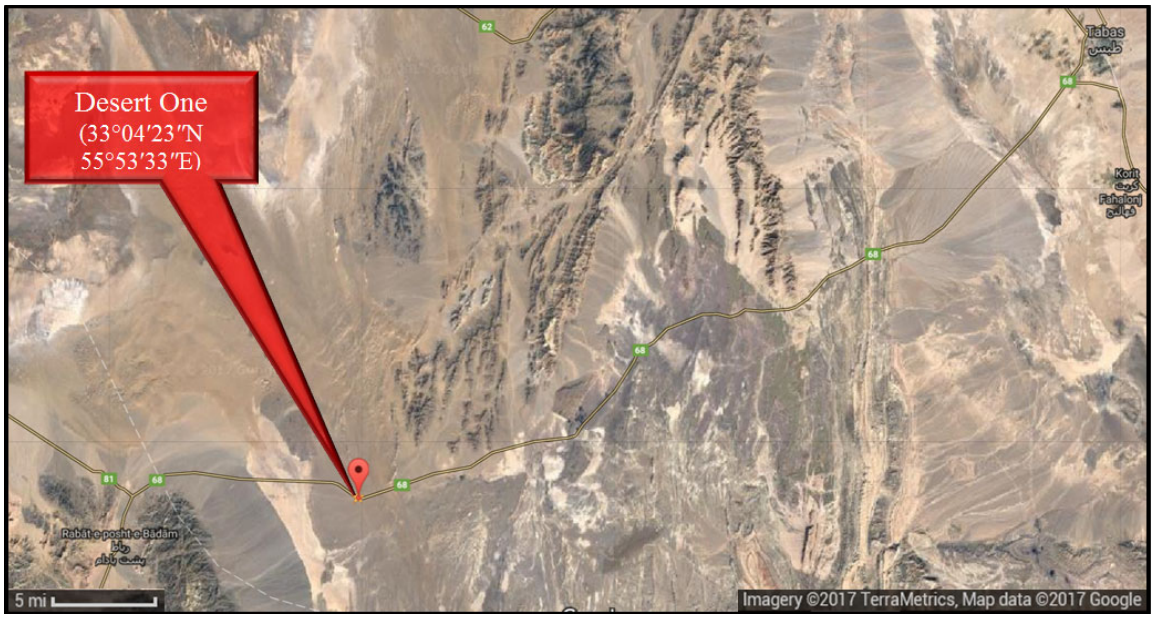

Figure 73. Desert One: 900+ Miles from Masirah and the USS Nimitz[719]

718 Guidry, "Operation EAGLE CLAW."

719 Adapted from "33°04′23″N 55°53′33″E," Google Maps, accessed June 28, 2017, https://www.google.com/maps/place/33%C2%B004'23.0%22N+55%C2%B053'33.0%22E/@33.2827596,56.2174423,85657m/data=!3m1!1e3!4m5!3m4!1s0x0:0x0!8m2!3d33.0730556!4d55.8925; Guidry, "Operation EAGLE CLAW."

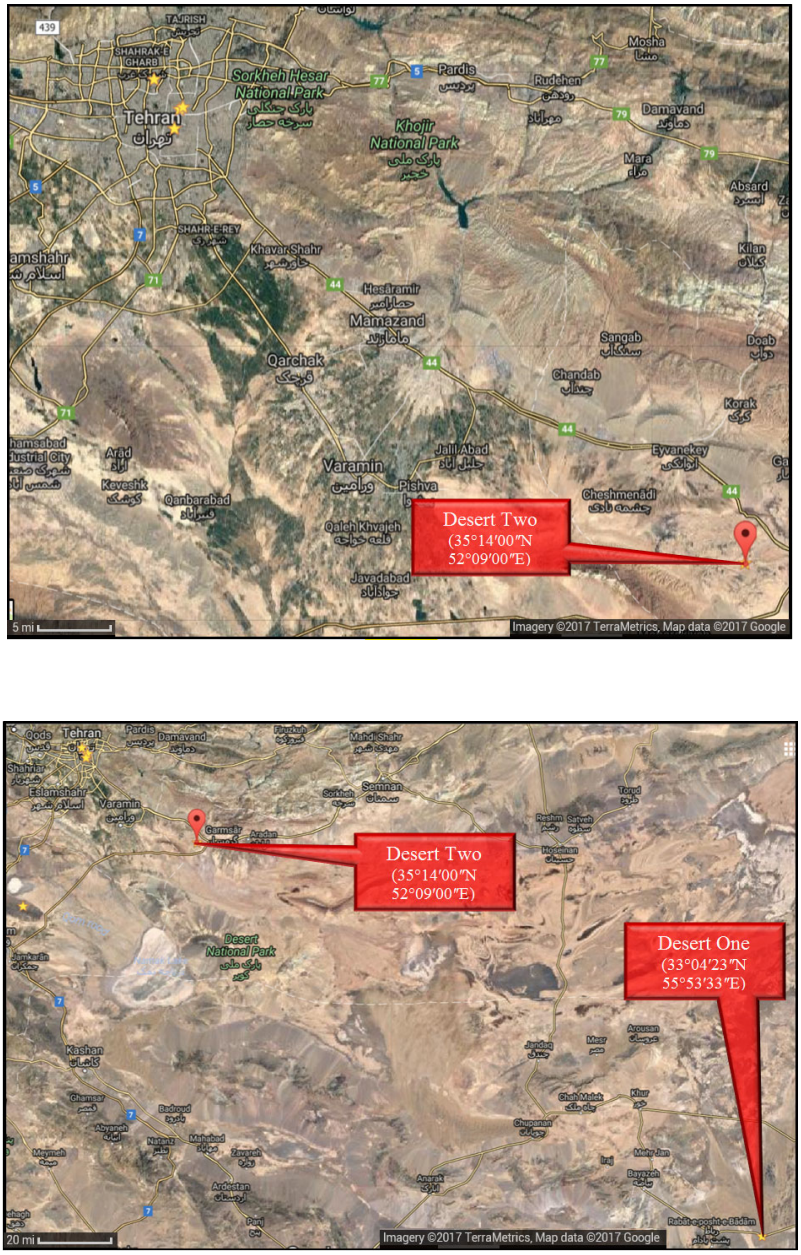

Figure 74. Desert Two: 260 Miles from Desert One and 52 Miles from the United States Embassy in Tehran[720]

720 Adapted from "35°14′00″N 52°09′00″E," Google Maps, accessed November 05, 2017, https://www.google.com/maps/place/35%C2%B014'00.0%22N+52%C2%B009'00.0%22E/@35.2420634,52.0496275,33270m/data=!3m1!1e3!4m5!3m4!1s0x0:0x0!8m2!3d35.2333333!4d52.15; "33°04′23″N 55°53′33″E;" Guidry, "Operation EAGLE CLAW."

Without a formal military structure prepared to perform the infiltration and exfiltration portions of the mission, an *ad hoc* Joint Task Force would have to be assembled. It would be under the command of Major General James B. Vaught, who would report directly to the Joint Chiefs of Staff.[721] The command structure did not organize the task force based on function but rather catered to the conventional mindset that segregated the task force based on the providing parent service. The Air Force units were field commanded under one element led by USAF Colonel James H. Kyle, while the naval and Marine Forces, consisting of both carriers and helicopters, would be under a separate command element without a senior field command representative. In contrast, the ground assault force elements were all combined under a single field commander, COL Beckwith (see Figure 75).[722]

Guidry points out the lack of a unified Air Forces Commander. Instead, the Air Force, Navy, and Marine forces remained under separate command elements based on their conventional parent services. They were never functionally synchronized or integrated for operationalization.

Figure 75. Operation EAGLE CLAW Command Structure[723]

721 Guidry, "Operation EAGLE CLAW."

722 Guidry.

723 Adapted from Guidry, "Operation EAGLE CLAW."

2. Preparation

Mission preparation began in earnest. The President required the assault force be ready to execute at any moment, so the assault force knew that any rehearsal could be their last. The Delta Force was essentially prepared for a SOF direct-action mission, so their rehearsals focused on gathering intelligence to refine specific tactics. The air assault force, on the other hand, having not been preassembled, suffered from a lack of coordination. It was a significant challenge. The relationships that had made SOF so capable during the Vietnam War had since eroded, leaving them without much continuity. This means their tactics and training suffered from a failure to learn obvious lessons that had already been learned in the past.[724]

The Ground Assault Force: The ground assault force Beckwith had created had been honed to a fine cutting edge. There was not a single detail of their portion of the mission that they did not have squared away. They went over their part of the plan and covered all of their ground assault contingencies over and over again. "[Beckwith] and his men had been rehearsing the mission for so long that they could have done it in their sleep, and they were going to make history," Bowden observed.[725] Beckwith was "focused entirely on mission. He had created such a force, choosing the best of the best and training them to perfection. They were not just good, they were magnificent. And now he would lead them into battle."[726]

With their skills solidly proficient, the ground assault force focused on gathering the most current and accurate intelligence available. There were no longer any human intelligence assets available in Tehran.[727] The task force would have to collect all of their intelligence through other means. One of these means, oddly enough, was by having intelligence analysts examine the footage from the evening news depicting video footage of the compound, the guards, and occasionally, the prisoners.[728] One of these means was

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724 Cohen and Gooch, *Military Misfortunes*, 23–28.

725 Bowden, "The Desert One Debacle."

726 Bowden.

727 Guidry, "Operation EAGLE CLAW."

728 Guidry.

also fulfilled by retired Richard J. "Dick" Meadows, a legend in the SOF community who had been on the raiding party during the Son Tay raid in 1970.[729] With the help of the Central Intelligence Agency, Meadows was able to infiltrate Tehran under the guise of a businessman and began to provide the intelligence and coordination the ground assault force would need. Meadows was their man on the inside (see Figure 76).

Because of the lack of additional solid human intelligence, Beckwith remained skeptical about the intelligence that had been gathered by other means. In order to mitigate the risks of these probable "unknowns," he chose to expand the size of the ground assault force. It was expanded from 70 to 120 men, to include the addition of Army Rangers.[730] This would allow the ground assault force more firepower in order to prosecute assaults on both the embassy and the ministry building simultaneously. "A separate thirteen-man Army Special Forces team would assault the foreign ministry to free the three diplomats being held there"[731] It would also help protect the assault force at the interim stops along the way. Bowden relayed how "soldiers from the 75th Ranger Regiment, out of Fort Benning, Georgia, … would block off both ends of the dirt road that angled through Desert One and man Redeye missile launchers to protect the force on the first night in the event it was discovered and attacked from the air."[732] However, this increased ground assault force size would come at the cost of increasing the defined "minimum" size of the assault force, a factor that would come into play later. This would diminish the flexibility of the air assault force elements while also increasing the demand on them.

While their intelligence requirements were being handled as best as able, the Delta Force assaulters focused on fine-tuning their actions-on-the-objective. In order to blend in, the Delta Force assaulters wore "loose-fitting, many-pocketed field jackets … dyed black," Bowden relayed. There "were just like the ones favored by young men in Iran." To comply with the Geneva Conventions, which states soldiers must wear

729 McRaven, *SPEC OPS*, 287–331; Guidry, "Operation EAGLE CLAW."

730 Guidry, "Operation EAGLE CLAW."

731 Bowden, "The Desert One Debacle."

732 Bowden.

identifying insignia during combat, the assaulters wore "matching black knit caps and on their jacket sleeves had American flags that could be covered by small black Velcro patches." This would keep the assault force members in compliance with international laws of war while also allowing them the flexibility to modify their appearance, decreasing the probability of detection and increasing confusion during infiltration.[733]

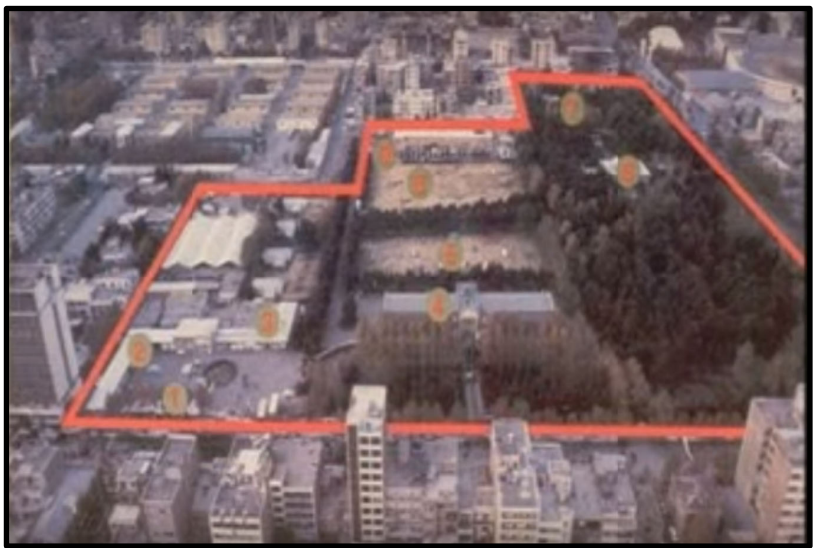

Figure 76. The Objective Area: U.S. Embassy in Tehran, Where the Iranian Hostages Were Held[734]

Four AC-130 gunships were prepared to provide close air support during Night Two of the operation. They would provide fire overhead the embassy in Tehran, as well as over Manzariyeh Air Base to assist the ground assault force in seizing the airfield. These gunship crews coordinated with Delta Force to ensure their tactics were synchronized for the strike.[735]

The Air Assault Force: The air assault force focused on building the team it would need to get the assault force in and out of Iran safely. With all of the DOD service departments insisting on being involved in the potentially high-profile mission, the

[733] Whittle, *The Dream Machine,* 59–69; Bowden, "The Desert One Debacle."

[734] Adapted from Guidry, "Operation EAGLE CLAW."

[735] Guidry, "Operation EAGLE CLAW."

conventional forces remained dominant in the planning and force selection process. Adams relayed in his book how "an *ad hoc* support force was cobbled together" from the conventional military departments in order to compliment the Delta force operators for the rescue mission.[736]

The misalignments of organizational and operational responsibilities were prevalent everywhere in the air assault force. The air assault force would be composed of a hodge-podge of assets from the Air Force, Navy, and Marine conventional forces. Marine minesweeping pilots were trained by Air Force pilots to fly Navy aircraft for night low-level infiltration and exfiltration operations. C-141 Starlifter crews were trained by MC-130 pilots, a traditional SOF direct-action asset dating back to the Son Tay raid, for airfield seizure operations. EC-130 pilots would be required to operate as both penetration assets, for which they were ill equipped, as well as ground refueling stations for the helicopters. The MC-130 squadron commanded by Colonel Guidry, the 8th Special Operations Squadron, became the *de facto* training unit for the air elements. While all of these cross-community tactics were shared and developed for employment, other critical mission requirements like communication and environmental intelligence went unfulfilled.

Despite the organizational and operationalization misalignments the air assault force faced, Guidry and his air commandos charged ahead to develop solutions to the technical and tactical challenges the mission entailed. They had to find a way to provide some 6,000 gallons of fuel at a ground refueling point for the helicopters. One of the first suggestions was to airdrop in the required fuel. Guidry's MC-130s crews practiced airdropping 450 gallon fuel blivets. Guidry recollects the experience in one word, "Disaster."[737] Realizing they would be forced to fly and land the fuel directly to the ground refueling site, they chose to "resurrect" a system that had been used during the Vietnam War. 3,000 pound rubber fuel bladders were loaded into the floor of the C-130 fuselage section (see Figure 77).

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[736] Adams, *U.S. Special Operations Forces in Action,* 164.

[737] Guidry, "Operation EAGLE CLAW."

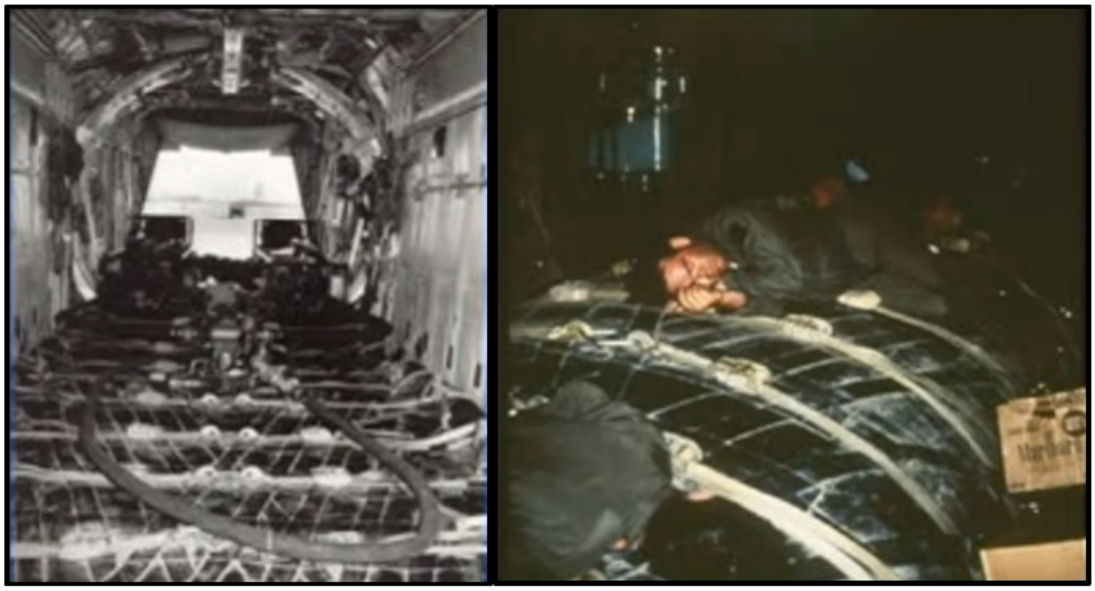


Figure 77. Rubber Fuel Bladders (or Blivets) Utilized on EC-130s to Transport Fuel for Ground Refueling of the Helicopter Assault Force[738]

Because the MC-130 aircraft had a smaller fuselage section than the standard C-130s, the C-130 fleet would necessarily be composed of three MC-130s and three EC-130s.[739] This would allow both the penetration equipment and the payload capacity required to mobilize 6,000 gallons of fuel for the helicopters and the ground assault force. The MC-130s, a traditional SOF direct-action asset dating back to the Son Tay raid, were equipped with terrain following radar. They would lead the C-130 formation into Iran and would carry command and control elements, security and logistics personnel, and the required peripheral supplies and equipment required by the ground assault force. The EC-130s, known as Airborne Battlefield Command and Control Center (ABCCC) aircraft, would transport the main ground assault force and the rubber fuel bladders in their fuselages. These fuel blivets would provide enough fuel to refuel and infiltrate the helicopter assault force from Desert One to the objective area. The EC-130s were also

738 Adapted from Guidry, "Operation EAGLE CLAW."

739 Bill Walton, "The Operation That Some Say Led to the Reagan Era," AvGeekery.com, April 24, 2017, http://www.avgeekery.com/the-operation-that-some-say-led-to-the-reagan-era/.

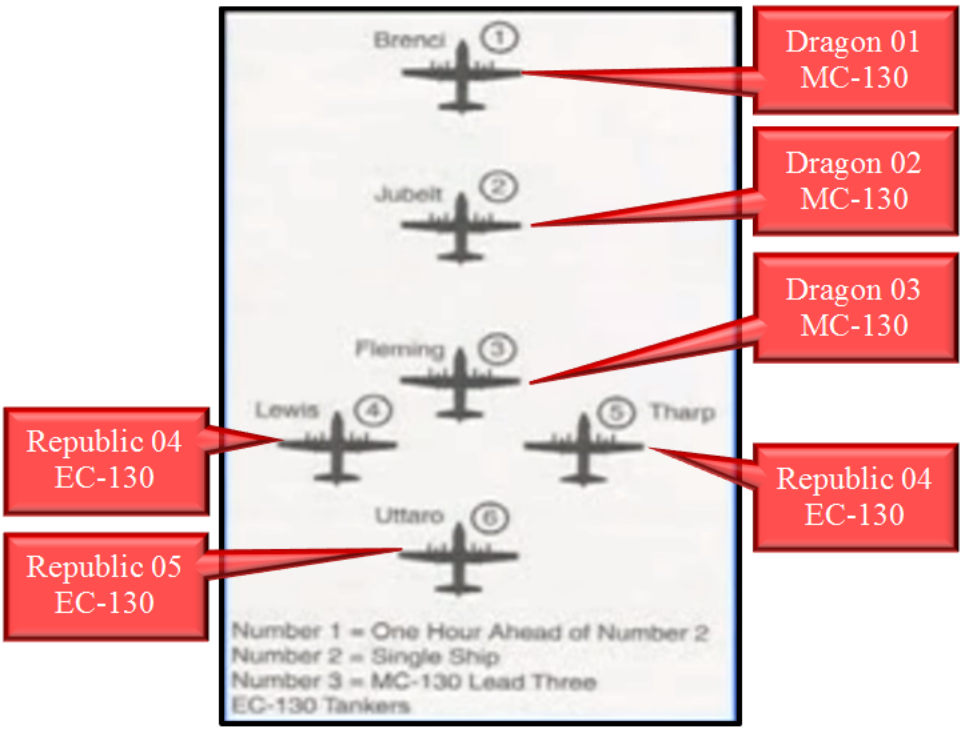
capable of aerial refueling, allowing them even greater flexibility inflight, were it to be required.[740]

The air assault force would therefore be organized as follows: There would be three MC-130 Combat Talons, three EC-130Es, and eight RH-53D Sea Stallion helicopters. The MC-130 Combat Talons, DRAGON 01, 02, and 03, would be able to penetrate Iran at low altitude using their terrain-following radars through a slice of diminished radar coverage along the coast. DRAGON 01 would penetrate Iran an hour ahead of DRAGON 02. Both would penetrate single-ship. The first MC-130 would go in one hour ahead of the other aircraft to ensure that if the landing site was unsuitable, no other force elements would be subject to becoming mired in the desert of Iran. The third, DRAGON 03, would lead a formation of three additional EC-130Es, REPUBLIC 04, 05, and 06. While the DRAGON aircraft would carry logistical support equipment and extra fuel, the REPUBLIC aircraft would carry the ground assault force and the "6,000 gallons of jet fuel in [fuselage carried] collapsible [rubber] bladders to refuel the Navy helicopters" at Desert One, as described by Iron Modeler in the blog "Another One of 'Those Anniversaries'…."[741] Four of the MC-130 aircrews were provided by the 8th Special Operations Squadron, and two more were provided by the 1st Special Operations Squadron (see Figure 78).[742]

740 Guidry, "Operation EAGLE CLAW."

741 Iron Modeler, "Another One of 'Those Anniversaries'…," *Iron Modeler* (blog), April 25, 2015, http://www.ironmodeler.com/2015/04/another-one-of-those-anniversaries.html.

742 Guidry, "Operation EAGLE CLAW."



The names presented with the aircraft are those of the aircraft commanders.

Figure 78. Operation EAGLE CLAW Fixed-Wing Assets[743]

Lastly, there would be eight RH-53D Sea Stallions, call signs BLUEBEARD 01–08, repurposed minesweeping helicopters launched from the USS Nimitz aircraft carrier in the Gulf of Oman. These helicopters would initially travel empty to Desert One in a loose formation of two-ship elements. Once there, they would marshal with the rest of the assault force, refuel, and continue on with the mission together (see Figure 79).[744]

743 Adapted from Guidry, "Operation EAGLE CLAW;" Iron Modeler, "Another One of 'Those Anniversaries'…."

744 Iron Modeler, "Another One of 'Those Anniversaries'…."

Only six aircraft are shown here. The assault force utilized eight for Operation EAGLE CLAW.

Figure 79. BLUEBEARD RH-53D Sea Stallion Helicopter Assault Force Formation[745]

Planning for Redundancy: Rotary-wing assets traditionally have a lower mission capable rate than fixed-wing assets. Helicopters require more maintenance and are more likely to experience maintenance issues due to the austere environments they operate in. Helicopters generally experience higher vibration levels, higher mechanical power loads, and more particulate dust ingestion than do planes. Because of this reality, the assault force planned for the inevitable. Bowden explained:

> The men expected breakdowns. In their many rehearsals, they had determined that six choppers were essential for carrying all the men and equipment from Desert One to the hide sites. The load was finely calibrated; every assaulter had an assigned limit and was weighed to make sure he met it. Not all six choppers would be needed to haul the hostages and assaulters from the stadium the next night (two would do in a pinch), but some of the aircraft that made it to the hideouts were expected to fail the next morning. If seven were enough, eight provided comfort.[746]

Selecting a Ground Refueling Site: Aircraft reliability was not the only variable in the calculus of how best to employ the air assets. To add to the uncertainty of accuracy during rehearsals, the air assault force did not know if the remote Desert One location would be suitable or if they would be forced to seize and use an airfield for the

745 Adapted from Walton, "The Operation That Some Say Led to the Reagan Era;" Guidry, "Operation EAGLE CLAW."

746 Bowden, "The Desert One Debacle."

infiltration. Their C-130 aircraft would be well over their maximum allowable gross weight of 165,000 pounds, weighing in at 190,000 pounds for the operation. This exacerbated both aircraft performance issues as well as the need for a suitable landing site that could support this excessive aircraft weight.

There was a risk of having a C-130 becoming bogged down in the sand at Desert One if the remote site was used. Reconnaissance was required to determine the site's suitability, but that had not been accomplished yet. The required reconnaissance mission was delayed until the last possible moment to ensure that its possible detection did not compromise the diplomatic efforts that were ongoing.

Because of the delay in gathering Desert One's environmental intelligence, the air assault force trained to seize the two airfields, one on the first night and one on the second night of the planned operation. The air assault force completed unilateral training on a nightly basis to hone their tactics. Additionally, they performed five night training missions to practice seizing the derelict Nain airfield in the event they were unable to use the remote Desert One site. During these five missions, the air mobility train, consisting only of the C-130 aircraft, would depart Hurlburt Field, Florida, seize an airfield similar to Nain on the first night, and then they would proceed to seize an additional airfield the following night to simulate the extraction portion of the mission on Night Two. They used the Indian Springs airstrip to simulate Manzariyeh for the extraction seizure during these rehearsals. None of these missions focused on training for the remote conditions that would be encountered if Desert One panned out.

Whichever site ended up being used for Desert One, the MC-130, EC-130, and RH-53D pilots would need to be able to infiltrate deeply into Iran undetected on Night One. In order to perform the low-level night infiltration flight, the pilots would rely on early generation night vision devices, the Air Force PVS-5 goggles.[747] These goggles were designed for ground operations and had merely been adopted for flight to enable night low-level and aerial refueling missions. They fitted directly to the face of the pilot, disallowing the use of peripheral vision or cues from the normal range of visible light,

[747] Guidry, "Operation EAGLE CLAW."

both critical during the operation of aircraft. The PVS-5 night vision goggles (NVGs) were declared by the test and evaluation community to be "too dangerous to fly with," Guidry recollects.[748] General Vaught barked, "I don't care what the report says," and ordered the aircrews to develop tactics to land using the night vision goggles (see Figure 80).[749]

Note the lack of peripheral vision available to the pilot.

Figure 80. Air Force PVS-5 Night Vision Goggles (NVGs)[750]

It would take a great deal of training to become proficient with these new tools. It would take an immense amount of training to become familiar with the confrontation of risks usually mitigated with the almost subconscious use of peripheral vision. Flying at only a few hundred feet above the desert floor without a clearly discernable horizon, without normal visual cues, and while navigating via a printed map for hours on end in the dark was a considerable undertaking for even the most experienced low level pilots. It

748 Guidry, "Operation EAGLE CLAW."

749 Guidry.

750 Adapted from Guidry, "Operation EAGLE CLAW."

was to be an especially "daunting task for converted minesweeping guys," Guidry recalled.[751]

Airfield Seizure: During the extraction phase on Night Two, C-141 Starlifters would be used to exfiltrate the hostages and to provide casualty evacuation for any injured assault force operatives from Manzariyeh Air Base. The rest of the assault force would depart on the C-130s, who would rendezvous at Manzariyeh Air Base for their extraction.[752] This meant the C-141 pilots had to be specially trained for their high risk mission into the just-seized airfield, as their mission set did not normally include such close-to-combat operations. They would be required to land with minimal lighting and without instrumentational aids. Techniques to mitigate these risks were familiar to the MC-130 pilots, and Guidry, as commander of the 8th Special Operation Squadron, became responsible for having the C-141 pilots trained for their special part of the mission.[753]

Airfield seizure required the aircrews to land without any friendly support into a hostile location. Problems that are usually easily resolved for pilots, like finding the runway using landing lights, were suddenly astronomically high risk operations. The aircraft involved in the airfield seizure would be forced to land without any visible lights onto black runways in the dark using the newly operationalized NVGs. But NVGs alone would only allow limited visibility. It would still be hard to determine where the runway surfaces and taxiways were in the murky green darkness.

One of the key innovations allowing this technique to become effective was the invention of covert infrared landing lights for the aircraft. Using a light filtering film provided by the Central Intelligence Agency, the aircraft landing lights could be modified so that they only emitted light visible through night vision goggles. The film could be placed onto the landing lights between two layers of tempered glass, effectively creating a light filter that only allowed NVG compatible light through. This meant that the assault

751 Guidry, "Operation EAGLE CLAW."

752 Guidry.

753 Guidry.

aircraft could turn their landing lights on for landing and that only the pilots, with their night vision goggles, would be able to see the landing light. The landing lights would remain invisible to the naked eyes of any Iranian personnel in the local area.[754]

It would be imperative for the airfield seizure that the aircraft land on their first attempt. Going around for a second attempt if the first landing attempt were spoiled would require high power settlings on the engines. While low or idling power settings during landing greatly reduced the noise signature of aircraft, a go-around would require high power settings and would create an excessive amount of noise. This would significantly increase the probability of alerting the Iranians to the presence of the aircraft before the assault force had the chance to deploy a defensive ground assault force perimeter. Furthermore, a go-around would delay the air assault force's ability to provide instantaneous and surprising mass directly to the objective area (in this case, Manzariyeh Air Base as the airfield to be seized). Instead, a go-around could spoil the element of surprise and leave both the air and ground assault forces vulnerably exposed during the critical landing and subsequent rollout. This would almost surely result in a significant decrease in the survivability of the force. To mitigate these risks, it was imperative that the aircrews train fervently enough so that they could ensure they were able to land their aircraft the first time under these harsh conditions. To further mitigate the noise signatures of the aircraft during the landing roll, the engines would be kept at idle power. All of these tactics and techniques would enable the airfield to be seized via landing, as opposed to the previously developed techniques supporting airdrop. This air-land option provided a more precise and potentially timelier delivery of mass on the objective area.[755]

Settling on the Remote Site for Desert One: It was not until 01 April, a mere three weeks before the mission would be executed, that the environmental reconnaissance of the Desert One site, conducted by Major John Carney, a combat controller, and two Central Intelligence Agency pilots, was accomplished.[756] Carney's reconnoiter provided

[754] Guidry, "Operation EAGLE CLAW."

[755] Guidry.

[756] Guidry, "Operation EAGLE CLAW."

soil samples substantiating that the site would support the weight of the over-grossed C-130 aircraft. Carney pre-positioned remote control landing lights to support the infiltration aircraft. The lights, which could be activated by the approaching aircraft, would help ensure the C-130s landed on the area that had been surveyed as able to support their excessively high weight (see Figure 81 and Figure 82).

Figure 81. Colonel Guidry's Depiction of the First Set of "Box-and-One" Landing Lights Provided by Carney at Desert One[757]

With only weeks to go after this crucial environmental intelligence was gathered, the assault force finally knew that they would be able to conduct the Night One rendezvous at the remote desert location. However, there was no time left to conduct a full-mission profile rehearsal with a synchronized air and ground assault force. Instead, a parking and marshalling plan for the ground refueling procedure was loosely assembled and disseminated. No remote site austere environment rehearsals were conducted. No full-mission profiles of the mission were conducted after this vital environmental intelligence was gathered.

757 Adapted from Guidry, "Operation EAGLE CLAW."

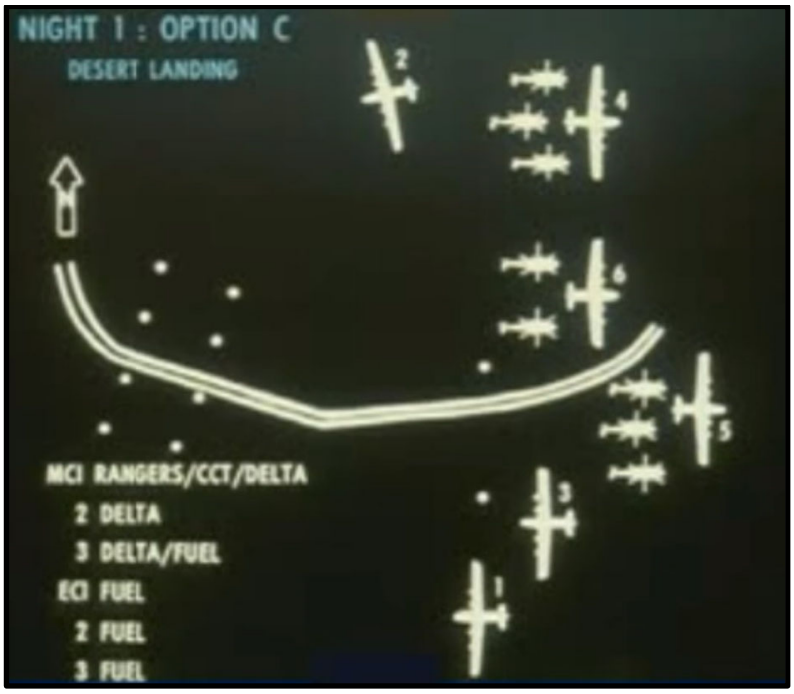


Figure 82. Operation EAGLE CLAW: Night 1 Option C—Desert One Remote Desert Location Marshalling Plan[758]

The Challenge of Covertly Launching the Helicopter Assault Force: While the fixed-wing air assault force and ground assault force prepared stateside, the helicopter assault force faced their own challenges. Russian trawler recon vessels were tracking the movements of the U.S. ships in the Persian Gulf. There was a fear that these trawlers may detect the launch of the rescue mission's eight Sea Stallions from the USS Nimitz, potentially compromising the security of the mission from the start. There was a high probability that the Russians would be more than willing to betray the operation to the Iranians, alerting the Iranian defense forces to the timing and the means of the assault force insertion, making the mission's execution nearly impossible.

To mitigate this threat, a pattern of maneuver was developed to dupe the Russian trawlers and create a launch window for the helicopter assault force. The U.S. ships would maintain a standard slower speed with the Russian reconnaissance ships in shadow pursuit. The U.S. carrier would then suddenly accelerate. The trawlers would give chase,

758 Adapted from Guidry, "Operation EAGLE CLAW."

but the more powerful carrier could outrun the trawlers. The carrier would eventually disappear over the horizon and then practice launching the helicopter assault force. After the helicopters had launched and returned, the carrier would allow the Russian trawlers to close their distance and regain pursuit (see Figure 83).

Figure 83. Sea Stallions Being Stowed aboard the USS Nimitz for Operation EAGLE CLAW[759]

[759] Adapted from Walton, "The Operation That Some Say Led to the Reagan Era."

This process was repeated night after night, building in a predictable pattern of life for the Russian ships. The chase diminished the fuel capacity of the smaller Russian trawler vessels. Realizing that the carrier would only keep up the cat and mouse game for a limited period of time before allowing themselves to be caught by the trawlers, the trawlers were encouraged and lulled into delaying their sprint to catch the carrier. This appeared to save fuel for the trawler and allowed them to "best" the carrier maneuver with minimal effort. It also covertly allowed the carrier to practice launching the Sea Stallions, and eventually allowed the helicopter formation to launch undetected for the actual mission.[760]

Communications: In addition to novel tactical and technical employment, communication innovations were required to meet the assault force requirement for secure beyond line of sight communications with their command center in Wadi Kena, Egypt, where General Vaught would direct the operation from. Bowden explained the necessity of secure beyond line of sight communications for this mission:

> One thing President Carter had insisted on was the option of calling off the raid right up to the last minute: right before they were to storm the embassy walls. To make sure they could get real-time instructions from Washington, a satellite radio and relay system had been put in place at Wadi Kena.[761]

At the time, satellite communications were in their infancy, Guidry remembers. The antennas and radios to use satellite communications were not available on all C-130 aircraft. However, there was a special Dorne Margolin antenna developed that could be used in the place of one of the fuselage upper escape hatches, otherwise used for emergency water egress. In exchange for essentially losing the hatch as an escape route, an aircraft could gain the ability to communicate securely through satellites across great distances.[762] This was an essential capability for command and control, but it was not

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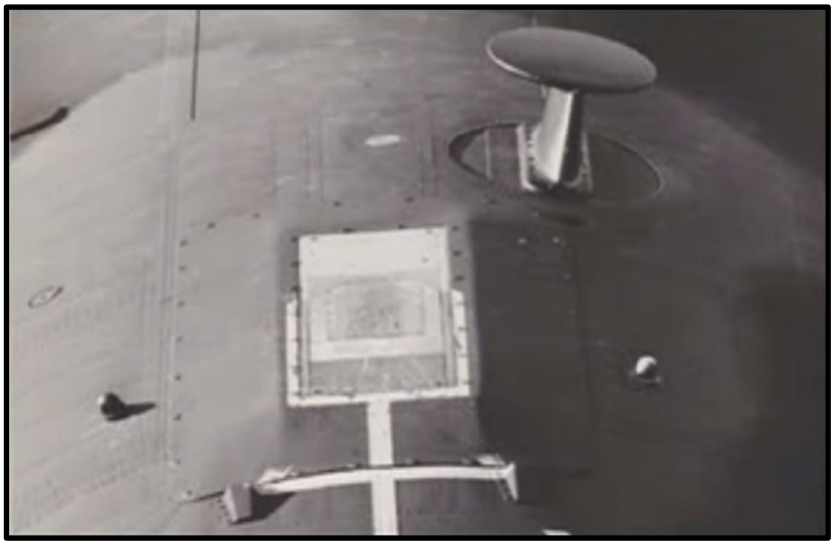
[760] Guidry, "Operation EAGLE CLAW."

[761] Bowden, "The Desert One Debacle."

[762] The hatch mounted antennas could be removed for water egress, but the weight and cable connections to the hatch antenna significantly degraded their use as an emergency escape route. The result was that although the hatch mounted antennas could technically be used for emergency egress, they were not a practical means of doing so. The author has flown with and used these types of antennas on a number of missions, both in training and in combat.

provided to all aircraft in the rescue force, as the antennas were in limited supply. Neither would all of the helicopters have the ability to communicate securely beyond line of sight (see Figure 84).[763]



The hatch-mounted Dorne Margolin Antennas allowed beyond line of sight communications for at least two of the six C-130 aircraft of the air assault force in Operation EAGLE CLAW.

Figure 84. C-130 Hatch-Mounted Dorne Margolin Antenna[764]

The Route: The helicopters and planes would need to infiltrate the Iranian coast through a detected gap in the Iranian early warning radar system "between Chabahar and Bandar-e-Jask."[765] The best chance of avoiding visual detection while optimizing the amount of darkness with which to accomplish the ground refueling operation and proceed to the Desert Two hide site put departure time at sunset. Bowden extrapolated on the route and timing development as designed to avoid detection by Iranian sources:

> The route had been calculated to exploit gaps in Iran's coastal defenses, and to avoid passing over military bases and populated areas. Major Wayne Long, Delta's intelligence officer, was at a console in the telecommunications plane with a National Security Agency linguist, who

763 Guidry, "Operation EAGLE CLAW."

764 Adapted from Guidry, "Operation EAGLE CLAW."

765 Guidry, "Operation EAGLE CLAW."

was monitoring Iranian telecommunications for any sign that the aircraft had been discovered and the mission compromised.[766]

Logistical Constraints: The helicopter assault force presented its own set of unique problems. The logistical trail for helicopters is rather extensive, and the planners did not benefit from any larger military operations in the region by which to mask their support. It was determined that the RH-53D Sea Stallions, an H-53 helicopter variant designed for minesweeping operations, could be transported to and stationed on the USS Nimitz in the Persian Gulf. These airframes could be folded up and stored in the belly of the carrier. This would allow a less publicized means of obtaining vertical lift assets while also providing a plausible reason for their existence in theatre. It would also enable their presence so that they could be immediately called upon anytime the President may order the mission executed (see Figure 85).[767]

"RH-53D minesweeper Sea Stallions, in sand camouflage aboard USS *Nimitz*."

Figure 85. BLUEBEARD Formation Prior to Mission Execution[768]

[766] Bowden, "The Desert One Debacle."

[767] Guidry, "Operation EAGLE CLAW."

[768] Adapted from Jon, "Operation CREDIBLE SPORT: C-130s Modified with Rockets for Hostage Rescue," Homemadetools.net, January 14, 2017, http://www.homemadetools.net/forum/operation-credible-sport-c-130s-modified-rockets-hostage-rescue-56564.

Pilots and Pies: The pilots for the RH-53Ds were another issue. There were two primary options. The first was to draw upon the surplus of SOF H-53 pilots the Air Force had accumulated and trained throughout the Vietnam War. These pilots were combat hardened and very experienced in such missions. However, pentagon politics began to interfere as each of the conventional services attempted to ensure they had their own "piece of the pie." The Marines and Navy saw no reason that their own minesweeping pilots could not fly their own aircraft for the mission. After all, how hard could it be to fly on night vision goggles while navigating at low-level, something the minesweeping pilots were not trained to do. Neither were the minesweeping pilots trained to deal with the versatile types of combat and assault force roles that could be thrust upon them on an assault mission. They were not trained in casualty evacuation or close combat operations roles. They had never been called in for a hot extraction or been forced to face off against conventionally superior forces in order to extract a SOF direct-action element. Nonetheless, politics won out over reason and the decision was made by those less familiar with the multifaceted complexities of air assault mobility to let the Marines provide pilots for the RH-53Ds. Besides, the Air Force was already participating with their MC-130 and EC-130 aircraft. The Marine minesweeping pilots would merely have to be trained on the intricacies of air assault during the few months they would end up having. Surely that was not such a big deal. So it was settled.[769]

The Marines would be providing the helicopter pilots—pilots "who had no real experience flying in deserts where sandstorms [and] dust in the air [were] frequent problems."[770] They would be required to fly eight Navy RH-53D Sea Stallions helicopters. These RH-53Ds, call signs BLUEBEARD 01–08, were usually used as mine sweepers for their carrier group. However, in this case they would be commandeered by the assault force to provide in-theatre access to the vertical-lift technology required to infiltrate the confined urban spaces of Tehran. There was discussion of utilizing the Air Force MH-53s, another traditional SOF asset dating back to Vietnam, but none of these

769 Guidry, "Operation EAGLE CLAW."

770 Quote from Professor Arquilla. Dr. John Arquilla, Thesis Review, Naval Postgraduate School, Monterey, CA, 2017.

helicopters were in theatre. It was feared that the logistical processes of moving them into theatre may alert the Iranians to the operation and compromise surprise. Past SOF direct-action success missions, like the one at Son Tay, had been able to accomplish many of these logistical moves under the shroud of activity associated with an ongoing war effort. That raid had also benefited from being able to use aircraft that were already available in theatre that the mission-specific trained pilots were intimately familiar with many of them were even from the same units. Without this shroud, it was feared that the risk of compromising operational security by bringing in the MH-53s was too great. So the decision was made to have conventional Marine CH-53 pilots fly the Navy's RH-53D minesweeping helicopters from the Countermeasures Squadron (HM)-16 Seahawks and HM-14 Vanguard. These RH-53D Sea Stallions were repositioned aboard the USS Nimitz aircraft carrier, CVN-68.[771] The training process was grueling, and multiple pilots had to be replaced due to an inability to proficiently perform under these unusually demanding constraints (see Figure 86).[772]

These helicopter pilots would be required to go into the heart of Iran and land alongside the Delta Force ground assaulters. Delta Force would be divided into three teams: RED, WHITE, and BLUE. These teams would infiltrate on the trucks provided by Meadows and proceed to prosecute their own individual targets: subduing the guards at the embassy gate, freeing the hostages at the embassy while simultaneously freeing the hostages at the ministry building, and blowing a hole in the fence alongside the soccer stadium across the street from the embassy, through which the freed hostages would be rushed onto the waiting Sea Stallion helicopters for exfiltration.

771 Walton, "The Operation That Some Say Led to the Reagan Era."

772 Rovitot, "The Hangar Queen;"

Items such as these scaled models and photographs would have provided the misison planners and operators an opporutnity to understand the scale of the operational components.

Figure 86. Overhead Photograph of the Infamous Soccer Stadium, Located across the Street from the U.S. Embassy, and a to-Scale Model of RH-53D Sea Stallions Overlaid onto the Soccer Stadium Photograph[773]

The Final Plan: As the plan details solidified, its complexity became even more apparent. This complexity necessitated the substantial reliance on conventional support assets being utilized in nontraditional roles to mitigate the increased risks to the otherwise less-than-self-sufficient SOF direct-action assault force. Iron Modeler's 2015 recount of the plan described it as follows:

> Three USAF EC-130E's (call signs REPUBLIC 04, 05, and 06) would carry the members of the Army's new … Delta Force and some 6,000 gallons of jet fuel in collapsible bladders to refuel the Navy helicopters. Three USAF MC-130E Combat Talon aircraft (call signs DRAGON 01, 02, and 03) would carry logistical support equipment. Eight RH-53D Sea Stallion helicopters from the aircraft carrier USS Nimitz (call signs BLUEBEARD 01 through 08, located in the Persian Gulf, would rendezvous with the C-130's at Desert One. Once at Desert One, the Delta Force would embark on the RH-53's and be flown to another remote landing site, Desert Two. There they would spend the next day. Come nightfall, Delta Force would drive into Tehran in trucks brought to Desert Two by CIA operatives. The helicopters would reposition to a nearby football stadium and wait. Delta force would storm the Embassy and any other holding sites, neutralize the Iranian guards, and free the Americans. Other members of the ground

773 Adapted from Guidry, "Operation EAGLE CLAW."

combat force would destroy power stations to keep the Iranians pinned down. USAF AC-130 gunships would be orbiting over the area to add close air support, and Army Rangers were to neutralize and capture the nearby Manzariyeh Air Base, where USAF C-141 Starlifters would land. The ground forces and freed hostages would rendezvous with the helicopters and the football stadium and would be flown to the air base. They would then board the C-141's and be flown to safety [see Figure 87, Figure 88, and Figure 89].[774]

A camouflaged RH-53D Sea Stallion, as it would be hidden at the Desert Two site over-day between Night One and Night Two of Operation EAGLE CLAW to avoid detection.

Figure 87. Camouflaged RH-53D Helicopter[775]

[774] Iron Modeler, "Another One of 'Those Anniversaries'…."

[775] Adapted from Guidry, "Operation EAGLE CLAW."

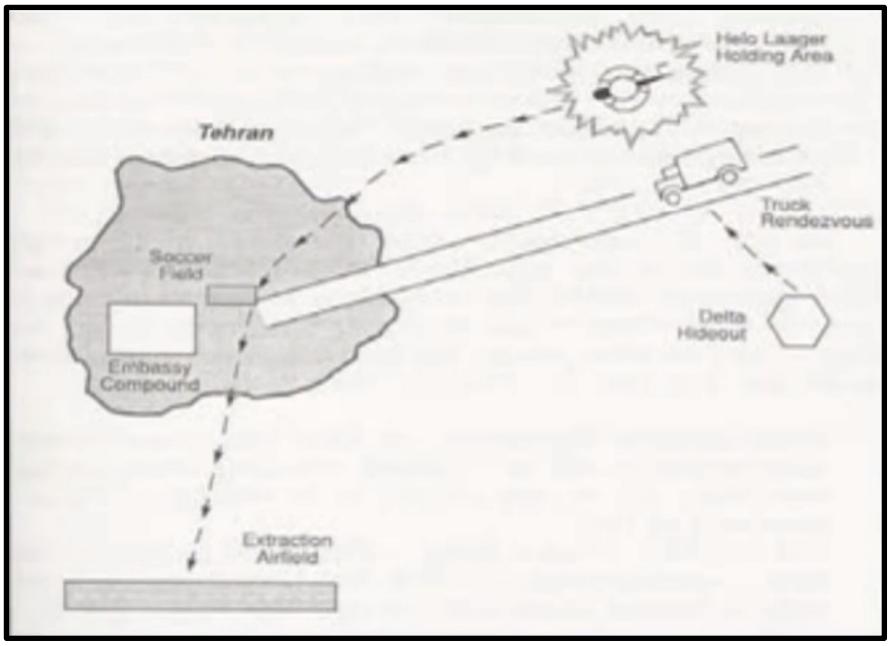
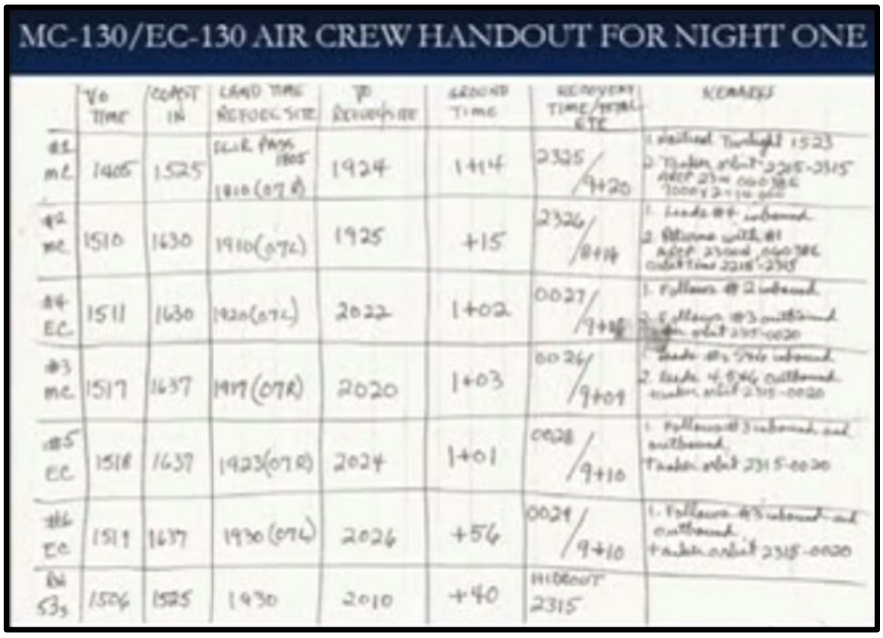


Figure 88. Day Two Plan for Operation EAGLE CLAW[776]


MC-130/EC-130 AIR CREW HANDOUT FOR NIGHT ONE

	Vo Time	COAST IN	LAND TIME REFUEL SITE	TO DEVIL/SITE	GROUND TIME	RECOVERY TIME/TOTAL ETE	REMARKS
#1 MC	1405	1525	SLICK PARK 1805 1810 (07R)	1924	1+14	2325 / 9+20	1. Refuel Twilight 1523 2. Tanker orbit 2315-2315 ADCP 23m 000 384 3000'x 2+14 000
#2 MC	1510	1630	1910 (07L)	1925	+15	2326 / 8+14	1. Leads #4 inbound. 2. Rejoins with #1 ADCP 23mid 000 384 orbit time 2315-2315
#4 EC	1511	1630	1920 (07L)	2022	1+02	0027 / 9+15	1. Follows #2 inbound. 2. Follows #3 outbound. orbit 2315-0020
#3 MC	1517	1637	1919 (07R)	2020	1+03	0026 / 9+09	1. Leads #5/#6 inbound. 2. Leads 4,5/6 outbound. orbit 2315-0020
#5 EC	1518	1637	1923 (07R)	2024	1+01	0028 / 9+10	1. Follows #3 inbound and outbound. Tanker orbit 2315-0020
#6 EC	1519	1637	1930 (07L)	2026	+56	0029 / 9+10	1. Follows #5 inbound and outbound. Tanker orbit 2315-0020
#4 53s	1506	1525	1930	2010	+40	HIDEOUT 2315	

Figure 89. Actual MC-130/EC-130 Aircrew Mission Planning Card, Handed Out for Night One of Operation EAGLE CLAW[777]

776 Adapted from Guidry, "Operation EAGLE CLAW."

777 Adapted from Guidry, "Operation EAGLE CLAW."

There were no full-scale rehearsals.[778] There was no full-mission profile integrated synchronization between the air assault force elements and the ground assault force elements of all the participating conventional and SOF units. Operation EAGLE CLAW would be executed with an assault force comprised of a sharpened and skilled ground element transported by a "cobbled together" air mobility collage of conventional personnel and equipment who had not received specialized training or equipment for their mission.[779] The air element would go in with a plan focused solely on supporting the requirements as defined by the ground assault force within the confines of the rules of engagement specified by the highest executive levels. The plan would not emphasis the inherent speed or surprise made capable by the air mobility assets, nor would it utilize the synchronization lessons learned during the Son Tay raid, some nine years before.[780] The plan would instead rely on conventional assets to be utilized in unconventional forums based only on their authority to do so, without providing them with the intelligence, technology, or logistical support required for SOF direct-action air mobility to positively contribute to attaining and maintaining relative superiority.

Pulling the Trigger: As other options to release the hostages waned, President Carter summoned Colonel Beckwith to brief the details of the mission at the White House. Resolute that his ground assault force could accomplish its mission flawlessly, Beckwith confidently touted the mission to his commander-in-chief. "He had spent a career selling the idea of his elite unit, and now that it existed, he was eager to show what miracles it could perform," Bowden recalled.[781] Following the briefing, Beckwith was convinced "he had sold the mission," Bowden relates. Beckwith returned to Ft. Bragg, North Carolina, where he addressed his Delta Force. "You can't tell anybody," he

778 The lack of a full-scale rehearsal was, in part, due to operational security concerns that "fed this problem." Dr. John Arquilla, Thesis Review, Naval Postgraduate School, Monterey, CA, 2017.

779 Adams, *U.S. Special Operations Forces in Action,* 164.

780 The Son Tay raid was executed on November 21, 1970. McRaven, *SPEC OPS*, 287–331.

781 The term "elite" is not condoned as an appropriate descriptor of special operations forces. More accurate terms, such as "specialized," are considered more appropriate. Yet, the term "elite" has been utilized to identifying specialized mission units in the writings of other authors. Its repetition here does not constitute an acceptance or promotion of an elitist mentality on the part of this author. Bowden, "The Desert One Debacle."

cautioned. “Don’t talk about this to anyone. But the president has approved the mission, and we’re going to go on April 24.”[782]

In the days leading up to the operation, the mission assault force was “flown from Florida to Wadi Kena, Egypt on big Army jet transports.”[783] Because of the mission’s highly classified nature, the pilots of the transports had not been told where they would be going. They had not been able to perform their normal mission planning routines. Fortunately, their destinations en route were not austere and the resources and equipment were readily available to provide them the no-notice support they would need. But the incident did shed light onto Beckwith’s apparent disdain for assets he considered to be conventional, supportive, or subordinate to his “elite” force. When the transport pilot asked Beckwith “‘Where are we going?’ [Beckwith] answered, ‘Just shut up and fly, and I’ll tell you when to stop.’”[784]

The assault force, with the exception of the Sea Stallions aboard the USS Nimitz, were moved forward from Wadi Kena, Egypt to Masirah Island, Oman.[785] Masirah would act as their final staging base before the operation commenced. The AC-130 gunships were moved non-stop from Hurlburt Field, FL to the staging base to ensure operational security was not compromised. This long distance global reach was only made possible by the use of multiple in-flight aerial refuelings provided by KC-135 tankers who supported the operation from Diego Garcia.[786] They were now cocked and locked. The operators awaited the final decision to go.

“The final decision [came] … after Dick Meadows, Delta’s advance man, broadcast a signal from Tehran that all was ready.… They had spent that day reconnoitering all of the various hide sites, the embassy, the foreign ministry, and the soccer stadium,” Bowden relates.[787] While the President retained the authority to cancel

[782] Bowden, “The Desert One Debacle.”

[783] Bowden.

[784] Bowden, “The Desert One Debacle.”

[785] Bowden.

[786] Guidry, “Operation EAGLE CLAW.”

[787] Bowden, “The Desert One Debacle.”

the mission at any time, it was still finally a go. Guidry recalled the President's final directive before the assault force launched: "Execute mission as planned. Godspeed." It had been five months since the hostages had been captured, and the rescue attempt was finally ready and authorized to go.[788]

3. Execution

The hostage rescue attempt would be executed under the codename Operation EAGLE CLAW. At dusk, approximately 6:45 PM on 24 April 1980, the lead MC-130, DRAGON 01, took off from the island of Masirah in the Gulf of Oman.[789] Bowden describes its contents:

> Seventy-four men … a Jeep, five motorcycles, two long sheets of heavy aluminum (to wedge under the plane's tires if it became stuck in desert sand), and a bulky portable guidance system that would help the other planes and helicopters find their way to Desert One.[790]

a. Infiltration

The C-130 Assault Force: It would be a "four-hour flight over the Gulf of Oman and across Iran to Desert One."[791] Desert One was in the "Dasht-e-Kavir salt desert, fifty-eight miles from Tabas, the nearest town."[792] In order to achieve coastal penetration, the aircraft would have to be as low as only 250 feet above the ground. As the aircraft moved further inland, they could climb to avoid the rising terrain. Bowden describes how, "the land rose up abruptly in row after row of jagged ridges—the Zagros Mountains," necessitating their climb.[793] Fortunately, intelligence reports indicated the Iranian radar in this area was unable to achieve resolution below 3,000 feet.[794] They would most likely remain undetected as long as they stayed under that altitude.

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788 Guidry, "Operation EAGLE CLAW."

789 Bowden, "The Desert One Debacle."

790 Bowden, "The Desert One Debacle."

791 Bowden.

792 Bowden.

793 Bowden.

794 Bowden.

The terrain following radar of the MC-130s were ideally suited for this kind of mission, but even they struggled to interact between the flat coast, smooth desert floor, and the serrated mountainous peaks. Bowden relayed that the MC-130's "terrain-hugging radar was so sensitive that even though the plane was safely above the peaks, the highest ridges triggered the loud, disconcerting horn of its warning system." This forced the co-pilot to constantly silence the associated warnings and ensured the crew remained vigilant throughout.[795]

The counterintelligence operatives and linguists onboard one of the C-130s anxiously monitored "the Iranian telecommunications for any sign that the aircraft had been discovered and the mission compromised. None came."[796]

On board DRAGON 01 alongside Beckwith and the command team was Carney, the "Air Force major … that had slipped into Iran weeks earlier to scout the desert landing strip and bury infrared lights to mark a runway."[797] Carney and a small combat control team would setup a second runway on the other side of the dirt road traversing Desert One to assist with aircraft landings. They would also oversee the almost artistically complex maneuver of taxiing aircraft to and from the landing areas and their refueling pits.

Bowden describes how the assault force was transported en route:

> [The subsequent five C-130s were] carrying most of the remainder of Beckwith's assault force, which now numbered 132 men; three serving as 'bladder planes,' each one's hold occupied by two gigantic rubber balloons filled with fuel; and a back-up fuel plane carrying the last Deltas and pieces of sophisticated telecommunications-monitoring equipment.[798]

795 Bowden.

796 Bowden.

797 Bowden, "The Desert One Debacle."

798 Bowden.

The command center in Masirah, call sign RED BARN, relayed the successful helicopter assault force launch to Kyle and Beckwith aboard DRAGON 01: "Eight off the deck."[799] This was comforting as it had previously been reported that they may only have seven due to mechanical problems that now apparently seemed to be resolved.[800] Their relief might have been tempered had they also received any updates on the weather they would encounter ahead.

Haboob: A haboob is dust storm native to the desert that violently manifests itself as a wall of swirling sand that can reach several thousand feet above the ground. Although haboobs are possible in desert climates around the world, they are especially renowned for their ferocity in the Middle East. The suspended dust particles in the air insulate and hold the heat of the desert in the storm, causing blisteringly high temperatures that can wear at both man and machine. The particles also represent a substantial threat if prolonged exposure allows it to penetrate and permeate mechanical equipment. It can degrade and erode engine turbines, eventually resulting in diminished performance and even catastrophic failure over time (see Figure 90).

[799] Bowden.

[800] Bowden.

Figure 90. Images of Haboobs[801]

Of those aboard the assault force aircraft, Carney was the only one who had ever even heard of a "haboob" before. The CIA pilots who had helped him reach the Desert One site had described the phenomenon to him, but failing to see its relevancy, he had neglected to mention it to the command element or the air assault force pilots.[802]

As DRAGON 01 droned on through the desert night, it faced just such a phenomenon. It encountered two waves of the haboob, the second significantly more menacing than the first.[803] While this deep wall of dust was uncomfortable for the C-130 aircraft and their crews, it did not represent a critical threat to them. Their terrain

801 The top two images were adapted from (left) Pinterest "Haboob or Sandstorm? Arabic Weather" and (right) Pinterest "James Aydelott: Big Dust Storm in the TX …" The bottom image was adapted from CNN's "Massive Sand Storm Hits Sudan." Adapted from "Massive Sand Storm Hits Sudan," CNN, 2017, accessed July 03, 2017, http://www.cnn.com/videos/world/2017/06/07/sudan-haboob-sandstorm-weather-khartoom-orig.cnn; "Haboob or Sandstorm? Arabic Weather," Pinterest, accessed July 03, 2017, https://www.pinterest.com/pin/487796203375159766/; "James Aydelott: Big Dust Storm in the TX…," Pinterest, accessed July 03, 2017, https://www.pinterest.com/pin/255227503854276181/.

802 Bowden, "The Desert One Debacle."

803 Bowden.

following radar, speed, and altitude options diminished their exposure to the damaging and choking effects of the airborne dust. But these walls of "suspended dust" represented a significantly more potent threat for the following helicopters.[804]

As the temperature inside DRAGON 01 began to climb, Kyle, onboard the lead aircraft, understood the threat this environmental hazard posed to the follow-on aircraft.[805] He ordered radio silence be broken to establish contact with the operational command center in Wadi Kena to relay the warning to the helicopter assault force. Assuming that his orders had been followed, Kyle was satisfied that he had done all that he could to help them. The fog of dust protruded for a hundred miles along DRAGON 01's flight path. Eventually, they broke out.

Desert One: Nearly four hours after their departure from Masirah Island, DRAGON 01, flown by Guidry and commanded by his squadron Director of Operations, Lieutenant Colonel Bob Brenci, approached Desert One for a planned overflight prior to landing in order to conduct a clearing pass. Such overflight procedures are common at unsecured locations where landings in the dark could encounter animals or objects unexpectedly. Such an encounter could result in unacceptable damage to an aircraft during landing. As they approached, Carney activated the landing lights.

During the clearing pass, one of the MC-130 navigators spotted "a bright light" on a dirt road.[806] "It turned out to be a vehicle" traveling on the road between Tabas to Yazd … the same dirt road that traversed the Desert One landing site.[807] DRAGON 01 overflew the site and determined to make another clearing pass prior to attempting to land. By the time their orbit took them overhead for a second clearing pass, the vehicle, which appeared to be a commercial fuel truck, had departed from the immediate area.[808] This information was passed to the Rangers in the back. Upon landing the Rangers could pursue and apprehend the truck and its occupants to ensure the operation was not

[804] Guidry, "Operation EAGLE CLAW."

[805] Bowden, "The Desert One Debacle."

[806] Guidry, "Operation EAGLE CLAW."

[807] Quote is from Guidry. Guidry, "Operation EAGLE CLAW;" Channel 4 News, "*Jon Snow*."

[808] Guidry, "Operation EAGLE CLAW."

prematurely exposed. During the next pass, the landing zone was verified clear. DRAGON 01 made a low power downwind approach for a landing on their box and one.[809]

DRAGON 01 landed at Desert One at approximately 10:30 PM, local time. The aircraft slowed to a halt on the desert floor, its engines drafting a billowing dust cloud behind it that soon engulfed the aircraft itself. The smooth and hard surface Carney had observed several weeks prior was now buried beneath several inches of fine dust, dust with "the consistency of baby powder."[810] The dust began to infiltrate the aircraft: blowing into the back, coating the interior, and becoming ingested into the engine air intakes. It added to the already difficult task of maneuvering the aircraft in the dark without significant visual references (see Figure 91).

Figure 91. Photograph of MC-130 Tracks Left in the Thick Powdery Dust Coating the Desert Floor at Desert One[811]

809 Bowden, "The Desert One Debacle."

810 Bowden.

811 Adapted from Guidry, "Operation EAGLE CLAW."

As the back of the aircraft opened its mouth, the wall of dust eagerly waved in to meet the men. The Rangers, undeterred, immediately gave chase the previously spotted vehicle with their Jeep and one of the motorcycles.[812] The other men began to disembark (see Figure 92).[813]

A depiction of the ground assault force discharging from the MC-130 after a practice landing.

Figure 92. Operation EAGLE CLAW Partial-Operation Rehearsals[814]

Complicit Exposure: DRAGON 01 had not even down-sped its engines to ground idle yet when another vehicle arrived to meet it through the dust.[815] Bowden relayed how Fitch, one of the members of the ground assault force, was "shocked" to see a bus

812 Bowden, "The Desert One Debacle."

813 Bowden.

814 Adapted from Guidry, "Operation EAGLE CLAW."

815 Guidry, "Operation EAGLE CLAW."

heading directly at him in the swirling dust storm created by the aircraft's engines.[816] The bus was a fully loaded commercial passenger vehicle with some odd forty Iranians on board.[817] The ground assault force quickly engaged with the situation, ensuring the bus and its passengers were successfully detained to prevent their escape and exploitation.[818]

Moments later, and within only minutes of DRAGON 01's landing, a giant fireball exploded in the distance.[819] Immediately, the entire operation was basked in the yellow glow of the enormous blast. The Rangers had caught up to the truck they had been pursuing. In an effort to prevent its escape it, they had launched a light anti-tank weapon at it, causing it to erupt in a fiery display that sharply contrasted the surrounding night.[820] The dramatic display was sure to have caught the attention of anyone within sight or earshot of the huge explosion. The assault force's critical element of surprise was seemingly compromised before the second aircraft had even arrived at the refueling site (see Figure 93).[821]

The fireball was so bright that Bowden describes that, "It burned like a miniature sun … The men with night-vision goggles removed them."[822]

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816 Bowden, "The Desert One Debacle."

817 Bowden.

818 Channel 4 News, "*Jon Snow*;" Guidry, "Operation EAGLE CLAW."

819 Channel 4 News, "*Jon Snow*."

820 Guidry, "Operation EAGLE CLAW."

821 Bowden, "The Desert One Debacle."

822 Bowden.

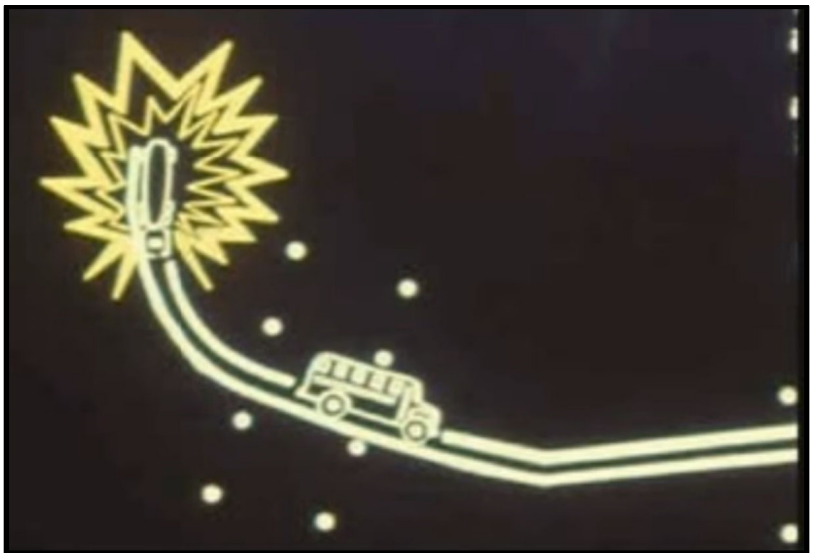


Figure 93. Depiction of the Passenger Bus and Fuel Truck Explosion Relative to the Desert One "Box-and-One" Landing Zones[823]

One of the occupants of the burning fuel truck escaped and got into a pickup truck that was apparently trailing it along the dirt road. The pickup truck sped away, attempting to escape what must have seemed a nightmare to those inside.[824] A Ranger chased them on the motorcycle, but he was unable to catch the truck and was eventually forced to turn back (see Figure 94).[825]

This part of the plan had not been rehearsed. Within minutes of their landing the assault force had encountered three vehicles directly in their landing zone: the loaded passenger van, the fuel truck, and its accompanying pickup truck escort. While the assault force plan had included the potential for encounters with Iranian citizens, it had not planned to deal with this abrupt and substantial level of publicity.[826] The original plan had been to make any haphazardly encountered Iranians "guests of the United States government" for as long as the mission persisted.[827] These guests would be transferred to

[823] Adapted from Guidry, "Operation EAGLE CLAW."

[824] Guidry, "Operation EAGLE CLAW."

[825] Bowden, "The Desert One Debacle."

[826] Guidry, "Operation EAGLE CLAW."

[827] Guidry.

Masirah Island and then deposited at Manzariyeh Air Base, to be abandoned with the helicopters on Day Two of the operation.[828]

In the days following the Desert One incident, Snow was the first Western journalist on the scene.[829]

Figure 94. Vehicles at the Desert One Site in the Aftermath of the Operation[830]

Additional shots rang out.[831] Shots rang into the night as several of the Rangers expended rounds into the bus engine compartment and tires in an attempt to disable the vehicle from attempting escape. The Delta Force operatives already disgusted with the level of advertisement the assault force was providing to anyone who may be compelled to notice, were not necessarily thrilled with this. They took control of the bus and passengers from the Rangers in order to handle it themselves. They systematically removed the passengers from the bus and searched them and their luggage for weapons. None were found.[832]

The chain of command matriculated the Iranian bus passenger dilemma all the way up to the President. President Carter eventually concurred that the best course of action would be to fly the captured Iranians out of Desert One on a C-130. They could be

828 Guidry.

829 Channel 4 News, "*Jon Snow*."

830 Adapted from Channel 4 News, "*Jon Snow*."

831 Channel 4 News, "*Jon Snow*."

832 Bowden, "The Desert One Debacle."

returned to Iran the following day once the rescue operation had been executed.[833] The operation was still a "go."

Just after midnight the other C-130s began to land. They arrived to a surprising scene. The blazing fuel truck was still lighting the "hidden" desert rendezvous. The blaze had been so bright that the approaching aircraft were at first confused as to its purpose. Was it intended as a landing beacon, or was this the correct sight at all? The situation unfolded to be even worse once they disembarked on the ground, only to learn that the "clandestine" assault force was now in control of some forty Iranian hostages who were bewilderingly watching as the operation unfolded before them.[834]

Given the circumstances, with the assault force's distractions on the ground and the reduced visibility and communications brought on by the blowing sand in the dark, it took nearly an hour to taxi the aircraft into their predesignated locations. Bowden summarizes:

> The unloading had gone pretty much as planned, with one exception: the second C-130 had landed a few thousand feet farther away from the landing zone than expected, so the job of transferring the camouflage netting from it to the choppers was correspondingly bigger. The netting would be draped over the helicopters at their hiding places at daylight. It was not an especially warm night in the desert, but all the men were overdressed in layers of clothing, and they were sweating heavily with exertion. Moving through the loose sand made the task even more difficult. The Air Force crews struggled to unfurl hundreds of pounds of hoses from the parked tankers, for fueling the choppers. The bus would have to be moved, so all the passengers were herded back on.[835]

"Within the hour, all three C-130 bladder planes were positioned and parked, along with the communications plane. The first two C-130s would return to Masirah before the arrival of the helicopters, clearing space at the landing site," Bowden explained.[836] Then they would be ready for the arrival of the helicopters, the critical last leg of air mobility required for the assault force to infiltrate their objective area. Once the

[833] Bowden.

[834] Bowden, "The Desert One Debacle."

[835] Bowden.

[836] Bowden.

underestimated task of marshalling and preparing the site for the helicopters had been accomplished, DRAGON 01 and DRAGON 02 departed to reduce the amount of congestion, noise, and dust.[837]

The helicopters were already a few minutes late and their tardiness threatened to expose the assault force to daylight during their transit to their remain-over-day hideout site at Desert Two, "a hidden cave outside Tehran," in the foothills of the Elburz Mountains.[838] Beckwith called RED BARN to inquire about the status of the helicopters.[839] Instead of answering Beckwith's inquiry, a strained helicopter assault force called back seeking weather conditions at Desert One. They needed to know if the haboob would let up or if the risks they were taking were warranted. The weather at Desert One was reported as amiable. BLUEBEARD 01, the only helicopter with secure beyond line of site communications, responded that they were "Fifty minutes out and low on fuel."[840]

The refueling crews were ready to refuel the late helicopters upon their arrival, but they would be pressed for time. It would take ten minutes to refuel each chopper, and that meant that every minute that passed was one more minute of daylight that the assault force would be exposed while flying to their hide site in the mountains.[841]

The C-130s waited with their engines running at idle power for the helicopters to arrive. They had grown accustom to the wait during rehearsals, during which the helicopter assault force had not managed to achieve the stringent timeline. Bowden relayed, "they had been late in every one of the rehearsals, so no one was surprised," when they were late during mission execution.[842] What they had not become accustomed to during their limited rehearsals was the immense amount of particulate matter in the area. Between the dust and the running engines, it meant that the area remained a

[837] Guidry, "Operation EAGLE CLAW."

[838] "The Lessons of Operation EAGLE CLAW Part 2."

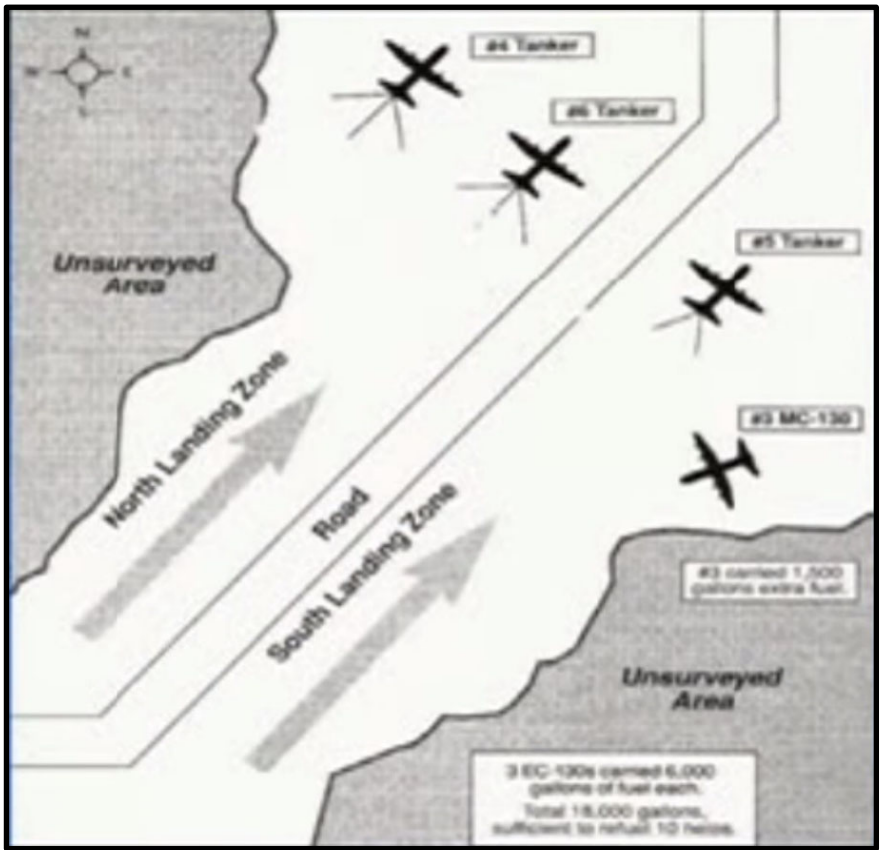
[839] Bowden, "The Desert One Debacle."

[840] Bowden.

[841] Bowden.

[842] Bowden.

deafeningly loud and swirling dust storm, further infringing upon communication and decreasing the comfort, efficiency, and effectiveness of the force in waiting. But they had no choice but to let the tactically precious time slip away as they waited on the rest of the assault force to arrive (see Figure 95).



Note: DRAGON 01 and DRAGON 02 have already departed to make room for the arriving helicopters.

Figure 95. The Parking Plan at Desert One as the C-130 Aircraft Awaited the Arrival of the BLUEBEARD Helicopter Assault Force[843]

The Helicopter Assault Force: As the helicopters coasted into Iran from the sea of night, they flew in pairs.[844] Of the eight that had initially departed the aircraft carrier, only six would make it to Desert One. BLUEBEARD 06 would experience a rotor blade

[843] Adapted from Guidry, "Operation EAGLE CLAW."

[844] Guidry, "Operation EAGLE CLAW."

warning that would force it to make a forced landing in the desert. The crew would be rescued by BLUEBEARD 08, but they were forced to abandon the helicopter where it was.[845] BLUEBEARD 05 became separated from the formation in the dust and dark of night. Flying solo and experiencing flight equipment failures, he would be forced to return to the carrier. Lastly, BLUEBEARD 02 experienced a failed hydraulic stage. If he lost his other stage he would lose control and crash. Given the inability to achieve secure communication en route, the pilot chose not to report this issue and continued on to Desert One, but his helicopter would not be able to continue with the mission from there.[846]

Just after dusk, as they departed the Nimitz, the BLUEBEARD helicopter assault force formation slid into the Iranian coast at 200 feet above the water and then dropped down to penetrate the mainland at 100 feet. This allowed them to keep visual contact with the ground and aided in the already difficult navigation across unfamiliar terrain.[847] The choppers took a slightly deviated route from that of their fixed-wing counterparts, "crossing into Iran between the towns of Jask and Konarak, and flying even closer to the ground than the planes," (see Figure 96).[848]

[845] Guidr.

[846] Guidry, "Operation EAGLE CLAW."

[847] "Two of the choppers were having difficulty with their navigation equipment," Bowen relayed in his account. Bowden, "The Desert One Debacle."

[848] Bowden, "The Desert One Debacle."

Figure 96. RH-53D Sea Stallions Departing the USS Nimitz at Dusk for Operation EAGLE CLAW[849]

Only one of the helicopters, BLUEBEARD 01, retained the ability to communicate with beyond line of sight secure communications. Given the tactical considerations that could compromise the mission if they were detected, the other helicopters were to remain incommunicado for the duration of the mission. "They were not allowed to communicate over their non-secure radios, lest they be overheard by Iranian defenses," Bowden relayed.[850] Instead, they relied on light signals as a means of communication. This is an old aircraft communications method, and is even common among vehicular traffic today. It would function as long as visibility and proximity allowed, but was insufficient to pass unanticipated or complex messages. "They flew in a staggered line of four pairs," Bowden describes (see Figure 97).[851]

849 Adapted from Guidry, "Operation EAGLE CLAW."

850 Bowden, "The Desert One Debacle."

851 Bowden.

Figure 97. Colonel Guidry's Depiction of the Helicopter Assault Force Ingress Path into Desert One[852]

Approximately "140 miles into Iran … one of the choppers had trouble."[853] BLUEBEARD 06 experienced a Blade Indicating Mechanism (BIM) warning light. This meant that the helicopter's rotor blades, which were hollow and pressurized with nitrogen in order to detect stress fractures or damage from debris impacts, had experienced a drop in the nitrogen pressure. Damage to a rotor blade could result in catastrophic loss of aircraft control, and the Marine procedures for the CH-53 required the aircraft be landed immediately. The Navy procedures for the RH-53D differed, as their blades were not the same as those of the older CH-53. Their more robust blades allowed flight to be continued with the BIM warning as long as more significant indications of a problem did not emerge.[854] The checklist procedural discrepancy had been encountered during rehearsals, but it had never been resolved. Not knowing whether or not one of his blades

852 Adapted from Guidry, "Operation EAGLE CLAW."

853 Bowden, "The Desert One Debacle."

854 Walton, "The Operation That Some Say Led to the Reagan Era."

had been damaged or cracked, and fearing a potentially lethal consequence, the pilot elected to follow his Marine procedures and set the aircraft down on the desert floor. BLUEBEARD 07 and 08 saw the descent and followed him down. On the ground they conferred and determined that one of the blades was "in fact badly cracked."[855] The crews left the unserviceable helicopter and mounted BLUEBEARD 08.

Inside the Haboob (Midnight): Sixty miles after the BLUEBEARD 06 experienced the blade mechanical failure, the helicopter formation encountered the haboob.[856] Lieutenant Colonel Edward Seiffert, the helicopter formation leader and aircraft commander of BLUEBEARD 01 "realized that it was suspended dust only when he tasted it and felt it in his teeth. If it was penetrating his cockpit, it was penetrating his engines."[857] Not only did the haboob represent a particulate threat, but it also represented a thermal threat. The suspended dust in the air both threatened to disintegrate the engine turbines and to overheat the aircraft avionics and hydraulic systems. Within moments of encountering the bizarre weather phenomenon the temperature inside the aircraft "rose to 100 degrees" Fahrenheit.[858] Then, the crews and aircraft experienced a temporary respite as they departed the first wave of the haboob. Visibility improved and things seemed better for a moment.

What the C-130 crews knew, but had failed to successfully relay to their helicopter assault brethren, was that there was a second, larger, and more menacing haboob following the initial encounter. Although Kyle had ordered radio silence broken to warn the helicopter formation, the lack of secure beyond line of site communication meant that any communication would have had to transpire in plain language, across an open channel. This would almost surely allow the enemy to detect the assault force presence and potentially allow triangulation of its position. Furthermore, there were no code words predesignated to describe anything familiar to the unanticipated haboob. There were no predesignated code words remotely capable of describing the

855 Bowden, "The Desert One Debacle."

856 Bowden.

857 Bowden.

858 Bowden.

unanticipated environmental threat. The radio operator aboard DRAGON 01, unable to relay the message via a tactically acceptable means, "decide[d] against making the report."[859]

The remaining seven helicopters in the assault formation, having successfully navigated the preceding haboob, proceeded with courage to engage the second. As the dust cloud thickened and closed in around them, the pilots attempted to compensate as best they knew how. Unfamiliar with the option of climbing over the haboob, and unable to share potential solutions with each other due to degraded communications, they attempted to directly penetrate the wall of earth. They brought up their overt lights, recognizing the threat of separation or midair collision was greater than detection in this impervious veil. But as the cloud grew thicker, they were eventually unable to maintain visual contact with either the ground or each other. Lt Col Seiffert, formation lead and pilot of BLUEBEARD 01, chose to turn the formation around so they could land and confer and discuss their options.[860]

As he turned his aircraft back, only his wingman, BLUEBEARD 02, followed. In the diminished visibility, they had become separated from the rest of the formation. BLUEBEARD 01 and 02 proceeded together back and out of the haboob to land and evaluate their options. Without secure communications and in the reduced visibility, they had no way of relaying this intent to their formation partners. Once out of the haboob and safely on the ground these two crews faced a disheartening reality. The formation had not followed them. Alone and unable to communicate with their departing formation comrades, the crews of these two helicopters decided they should re-attempt penetration of the haboob on their own. They lifted and proceeded to attempt to navigate through the second haboob for a second time.[861]

The "fog and friction" of war had manifested in a wholly tangible fashion. The disappearance of BLUEBEARDs 01 and 02 was attributed to decreased visibility by

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[859] Bowden, "The Desert One Debacle."

[860] Bowden.

[861] Bowden.

BLUEBEARD 03, now leading the remaining five helicopters in the assault formation. Unable to visually de-conflict their flight profiles from that of their formation partners, BLUEBEARD 03 executed a lost-visual maneuver, designed to spatially separate the formation aircraft both laterally and vertically. The maneuver would allow them to avoid a potential mid-air collision by creating space in between the aircraft that would act as a buffer zone until visual contact could be reestablished.[862]

Major Jim Schaefer, the aircraft commander of BLUEBEARD 03, eventually experimented with altitude deviation in an effort to seek cleaner air and escape the blinding inferno. They climbed to one thousand feet and dove to below two hundred, but they were only able to achieve occasional visibility with the ground. “For three hours they flew like this, on nerves and instruments. The cockpit was overheated, and the men in it were increasingly tense,” Bowden conveys.[863]

Three hours into their blinded and now solo flight, Blackbeard 03 began a climb to six thousand feet to avoid the as-of-yet unseen Zagros mountain range. With visibility and navigation so impaired, the likelihood of controlled flight into unseen terrain was genuine. As they climbed, they broke free of the haboob’s grasp. The temperature began to drop just as suddenly as it had risen. They were still an hour from the Desert One rendezvous. They were late, separated, and still incommunicado with each other, but they drove onward. Once they had cleared the mountains, and in an effort to avoid being detected by the Iranian radar systems, the helicopter chose to descend back into the wall of dust and press onward. Bowden relayed how BLUEBEARD 04, 07, and 08 performed comparably.[864]

BLUEBEARD 05 was not so lucky. Their aircraft, commanded by Lieutenant Commander Rodney Davis, was eventually overcome by the environmental threats associated with the haboob. Their compass was inoperative. Their other navigational avionics had become unreliably degraded by the heat. Once visibility was lost with the

862 Bowden, “The Desert One Debacle.”

863 Bowden.

864 Bowden.

other helicopters in the assault formation, Davis had lost his only means of successfully navigating the jagged mountains that jutted up from the desert floor. Without another aircraft to follow, he had no way to avoid these obstacles. BLUEBEARD 05 unsuccessfully attempted to regain situational awareness by descending or climbing to escape the cloud. As they approached the point of no return, Davis began to converse with "Colonel Chuck Pitman, the ranking officer of the entire formation," who happened to be aboard his aircraft.[865] If they did not turn back now, they would not have the fuel to make it back to the carrier. Under the assumption that all seven of the other helicopters had been able to successfully navigate the haboob, they knew that their individual failure would not compromise the mission's overall chances for success. With this being the best information they had available to them at the time, and in recognition of their inability to successfully navigate the terrain in their degraded state, the crew reluctantly turned back.[866]

At approximately 1:00 AM local, the first helicopters, BLUEBEARDs 03 and 04 arrived at Desert One after five hours of a torturous flight. They were about an hour late from their original schedule.[867] They joined the four C-130s they had anticipated to see. What they had not anticipated was the "giant pillar of flame" illuminating the supposedly clandestine rendezvous site.[868] As they descended for landing, the seemingly smooth ground erupted in a dust storm underneath the billowing vortex of the helicopter's rotor blades. The dust, while dormant, had hidden obstacles and ruts in the ground from the pilot's vision during his initial approach. Now, the dust rose again to diminish the pilot's visibility and again obscured the obstacles during the descent to land. As Schaefer brought BLUEBEARD 03 in to land, the aircraft contacted obscured ruts in the terrain, hidden by the dust. The helicopter's tires were ripped from its rims.[869]

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865 Bowden, "The Desert One Debacle."

866 Bowden.

867 Guidry, "Operation EAGLE CLAW."

868 Bowden, "The Desert One Debacle."

869 Bowden.

As Schaefer dismounted his aircraft he was confronted by Colonel Beckwith. Having been isolated from the conversations in the cockpit during transit, Beckwith remained uninformed about the haboob. He was frustrated with the tardiness of the helicopter formation and wanted an explanation for their failure to perform. The lack of integration and trust between the air and ground assault elements began to perceptibly manifest itself.[870] Richard Whittle described the confrontation in his book, *The Dream Machine: The Untold Story of the Notorious V-22 Osprey*:

> Beckwith greeted [Schaefer] by growling, "Where the hell is everybody?" Schaefer told [him] … "It's been a hell of a night…. They're either going to be here or they're on the side of a mountain."[871]

Eventually "two more choppers arrived," BLUEBEARDs 01 and 02. BLUEBEARD 02 "had been flying with a warning light on in the cockpit that indicated trouble with one of the hydraulic systems."[872] The aircraft commander, Captain B.J. McGuire, believed his remaining redundant "hydraulic system was sufficiently trustworthy for him to continue" and press forward with the mission.[873] When he was asked where the rest of the helicopters were, McGuire replied, "I don't know. We don't have any communication."[874]

Finally, a half hour later, the last two helicopters that were able to surmount the challenges of the haboob arrived: BLUEBEARD 07 and 08. The ten aircraft's engines whined and spit dust in the desert night. This made their minimum required force of six helicopters feasible, if it included the hydraulically challenged and damaged landing gear birds, BLUEBEARD 03 and 02, respectively. There would barely be enough time to complete the refueling of the helicopters and transport the assault force to Desert Two before daylight illuminated their activities. The helicopter pilots began the delicate dance of maneuvering the helicopters into position for ground refueling from the C-130 tankers.

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870 Bowden, "The Desert One Debacle."

871 Whittle, *The Dream Machine,* 62.

872 Bowden, "The Desert One Debacle."

873 Bowden.

874 Bowden.

It was a messy and discombobulated process that required additional time to execute. Bowden provides a provoking description of the environmental challenge of taxiing and air taxiing the RH-53Ds:

> Their wheels made deep tracks in the fine sand, and the turning rotors whipped up violent dust storms. The rotors and propellers were deafening, and all around the aircraft were fierce little sand squalls. The truck fire was still burning brightly.[875]

As more valuable time slipped away from him, Beckwith angrily confronted the Seiffert with his "impatient to get his men aboard the choppers and be off." The management of the integration between the air and ground assault forces continued to degenerate with the escalation of Beckwith's mission-driven impatience. Normal safety protocols prevented non-essential personnel from being present onboard a refueling helicopter on the ground, but given the time constraints that the mission faced, Seiffert capitulated and allowed Beckwith to load his men.[876]

As Beckwith moved amid the confusion to instill a sense of urgency in the stalled force, it came to his attention that one of the RH-53 Sea Stallions had shut its engine down. Beckwith's loss of trust with the air assault force metastasized. In his eyes, the equipment and tactical challenges were indications that their sense of purpose was not strong enough to overcome the friction they were encountering. This visibly frustrated him.[877] "Beckwith didn't see mechanical problems with the helicopters; he saw faltering courage in the men who flew them. He said as much … grumbling that the pilots were looking for excuses not to go," Bowden continues.[878]

Beckwith's attitude chaffed Kyle and the other air assault force officers. From their perspective, they were all in this together, behind enemy lines and deep inside enemy territory. Bowden describes their attitude saying that the air commandos believed they "had the same kind of responsibilities that Beckwith had, and they were responsible

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[875] Bowden, "The Desert One Debacle."

[876] Bowden.

[877] Bowden.

[878] Bowden.

for getting their own crews in and out safely. No one knew their machines better than they did, because they literally bet their lives on them every time they flew."[879] Beckwith was interpreting the air limitations as cowardice. The air assaulters were portraying their limitations as technical expertise. Bowden's later observation in this area went unresolved at the time, and the mission force continued to wrestle with the resource limitations at hand.

Seiffert determined, as the helicopter assault formation commander, that the single hydraulic pump on McGuire's helicopter was not sufficient for the helicopter to be safely flown. If the remaining pump had any malfunctions, the aircraft flight controls would become inoperative, leaving the aircraft in an unrecoverable position. He grounded BLUEBEARD 02's Sea Stallion.[880] It would never fly again.

4. Abort: Pivoting from Infil to Exfil

The abort criteria called for seven helicopters to depart the carrier and for six to depart from Desert One. This provided the air assault force with enough flexibility to ensure the mission would continue even if additional assets were lost as inevitable maintenance issues continued to degrade their available resources over the next day and a half of the mission.[881]

Once BLUEBEARD 02's hydraulic issue was determined to be a "grounding" issue, the assault force was effectively down to only five of the required six helicopters with which to depart Desert One. This hinted strongly towards a decision to abort, but no one wanted to take that course of action. They were all looking desperately at ways to continue forward with the resources at hand.

879 Bowden, "The Desert One Debacle."

880 Bowden.

881 Guidry, "Operation EAGLE CLAW."

Without the predetermined minimum helicopter assault force of six choppers, Beckwith realized that he would not be able to complete the mission.[882] He believed he needed every last man he had selected for the mission and without them all he would have to abort. The ground assault portion of the plan was "finely wrought, with such a delicate balance between risk and opportunity that asking Beckwith to omit any piece was too much. 'I need every man I've got and every piece of gear,' Beckwith said finally. 'There's no fat I can cut out.'"[883] The size of the assault force Beckwith demanded to mitigate risks was ultimately too large to be transported by the now limited number of air assets that were available. It is true that the rescue mission leg from the soccer stadium to the extraction point at Manzariyeh Air Base could be accomplished with only two helicopters, but Beckwith anticipated comparable failure rates or higher once the helicopters shut down their engines at the Desert Two site. Beckwith recommended mission abort.

His prerogative would carry heavy weight, but given the level of oversight and the uncoordinated chain of command, the decision was not his alone to make. "Kyle and the chopper crews said they were ready to proceed with five helicopters, but that would require trimming the assault force by twenty men. Beckwith refused," Bowden describes.

Beckwith and the other mission commanders gathered around one of the prized secure beyond line of site satellite radios aboard on of the C-130s.[884] They relayed their dilemma through the chain of command. Eventually, it escalated to the White House. The White House replied that "if they [the commanders on the ground] were prepared to go ahead with only five choppers, they had White House approval."[885]

Beckwith's decision was relayed up the chain of command to President Carter, who concurred. The mission was officially an ABORT.[886] President Carter consoled himself and his staff, "At least there were no American casualties and no innocent

882 Bowden, "The Desert One Debacle."

883 Bowden, "The Desert One Debacle."

884 Bowden.

885 Bowden.

886 Bowden.

Iranians hurt."[887] As long as the assault force remained intact, they could achieve a tactical withdrawal and reattempt the mission at a later point in time.

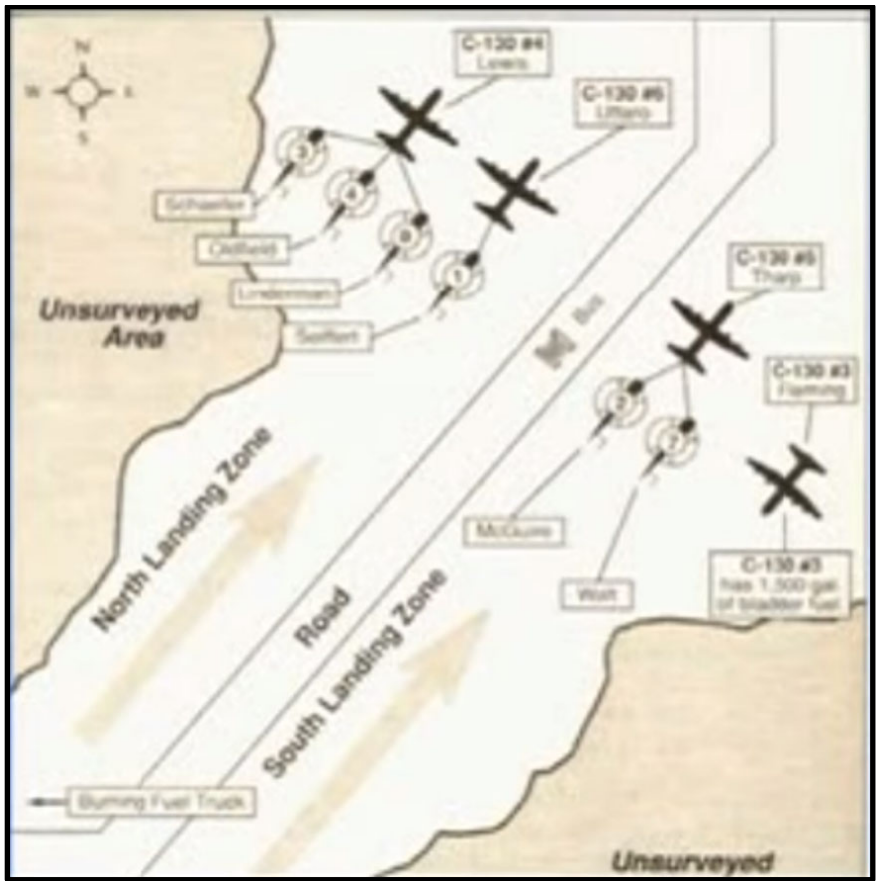
The abort plan required the ground assault force to exfiltrate via the tanker C-130s. From there, they would be transported back to Masirah, while the empty helicopter assault force, or at least those of them that were flight worthy, would return to the USS Nimitz aircraft carrier. The goal shifted to extraction in order to salvage the helicopters and diminish the chances of the assault force having been discovered. The men began loading onto the aircraft, scrambling in atop the rubber fuel bladders in the fuselage carrying the remainder of the fuel meant for the helicopters. Once the aircraft were refueled and repositioned away from each other, the C-130s would depart followed shortly by the helicopters.[888]

REPUBLIC 04 had already refueled three of the helicopters and had no additional fuel to give without compromising its own exfiltration capability. Schaefer had been partially fueled, but he was told to get the rest of the fuel he needed from REPUBLIC 06. To get there, he would have to hover taxi his Sea Stallion to a parking spot on the other side of BLUEBEARDs 04, 08, and 01. His landing gear was in no condition to ground taxi after the damage his tires had taken during the landing (see Figure 98).[889]

887 President Carter, as quoted by Bowden. Bowden, "The Desert One Debacle."

888 Guidry, "Operation EAGLE CLAW."

889 Guidry.



The actual positioning of the aircraft on the ground did not match this plan and did not facilitate refueling, so they had to be remarshalled into position for refueling.

Figure 98. The Parking Plan at Desert One as the C-130 Aircraft Refuel the BLUEBEARD Helicopter Assault Force[890]

Around 2:00 AM, as Major Schaefer commanded the aircraft to lift, it kicked "up an intense storm of dust that whipped around" the only visible reference he could still make out on the ground … a combat controller.[891] "The combat controller was the only thing Schaefer could see below, a hazy black image in a cloud of brown, so the pilot fixed on him as a point of reference."[892] It is a common technique in degraded visibility hovering scenarios for a pilot to visually reference a stationary object as a point of reference to judge whether or not he is drifting one direction or another. Unfamiliar with

890 Adapted from Guidry, "Operation EAGLE CLAW."

891 Bowden, "The Desert One Debacle."

892 Bowden.

the unplanned yet critical role he was playing in the hovering maneuver, the combat controller backed away from the erupting storm of dust biting at him from the helicopter's downwash. Schaefer, focused on maintaining a relatively stationary position, unintentionally drifted his aircraft along, following the combat controller towards the C-130 tanker that had just refueling him, now completely obscured by the swirling dust cloud. Unbeknownst to Schaefer, BLUEBEARD 03 was now hovering "almost directly above the plane."[893]

5. Disaster: "Everything Went Wrong"[894]

"Desert One was a maelstrom of noise and dust," Whittle tells.[895] Somewhere in the swirling and deafening confusion of dust, rotor blades, men, and fuel, metal collided.[896] There was a "metallic whack," followed by a hissing detonation.[897] Bowden describes it as "sharper-edged, more piercing and particular, like the shearing impact of giant industrial tools."[898] BLUEBEARD 03's main rotors sheared into the fuselage of the C-130, "metal violently smashing into metal in a wild spray of sparks."[899] The helicopter lurched forward by the twisting forces of the collision, slicing further into the metal of the C-130's fuselage. It crushed into the fuselage, crashing directly behind the plane's cockpit. The sparking metal ignited the fuel soaked disaster. A "lung-emptying thump … suck[ed] all the air out of the desert. A huge blue ball of fire formed around the front of the C-130, and a pillar of white flame rocketed 300 feet or more into the sky, turning the scene once more from night into day."[900] The force of the blast

893 Bowden, "The Desert One Debacle."

894 Bowden.

895 Whittle, *The Dream Machine,* 59–69.

896 Guidry, "Operation EAGLE CLAW."

897 Bowden, "The Desert One Debacle."

898 Bowden.

899 Bowden.

900 Bowden.

knocked men off of their feet who were "more than a hundred feet away" (see Figure 99).[901]

Figure 99. Parking Plan at Desert One during the Timeframe of the Collision between BLUEBEARD 03 and REPUBLIC 04[902]

901 Bowden, "The Desert One Debacle."

902 Adapted from Guidry, "Operation EAGLE CLAW."

Inside the C-130, men scrambled in confusion for their lives. Flames engulfed the front of the aircraft. Cutoff from the front exit, they attempted to escape through the left aft troop door, but escape was denied by "a solid wall of flame."[903] They knew they only had moments before the fuel bladders they were stumbling across exploded. They moved to attempt escape through the main aft ramp, but as it lowered more flames poured in. They were out of time. They moved toward their last and only hope, the right aft troop door. As it was opened it was "blessedly free of flames," Bowden notes. The men, desperate for survival, clamored through the inadequate opening. As they fought for enough self-control to expedite the evacuation, flames spread, licking across the ceiling of the fuselage. They began to move down the walls, engulfing and consuming the men. The men as best they were able, but it became apparent that not everyone would make it.

Outside the aircraft, those who escaped joined those who had witnessed the blast. Together they looked on, helpless. The intensity of the heat prevented their intervention.[904] They "watched the tower of flame engulfing the plane, the downed chopper perched on top of it like a giant metal dragonfly … [they] saw men running from the fireball … they … watch[ed] with horror."[905] They witnessed an "awesome and ugly sight: the chopper, its rotors still turning, had clearly crashed down on the front of the plane."[906]

One man jumped out of the blaze, his flight suit burning around him. Onlookers rushed to his aid. Then, Bowden describes how the ammunition started "cooking off":

> All the grenades, missiles, explosives, and rifle rounds on both aircraft [ignited] causing loud, cracking explosions and throwing flames and light. The Redeye missiles went off, drawing smoke trails high into the sky. Finally, the fuel bladders ignited, sending a huge pillar of flame skyward in a loud explosion that buckled the fuselage. All four propellers dropped

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[903] Bowden, "The Desert One Debacle."

[904] Channel 4 News, "*Jon Snow*."

[905] Bowden, "The Desert One Debacle."

[906] Bowden.

> straight down into the sand and stuck there, as if somebody had planted them.[907]

Schaefer, who had been knocked unconscious in the cockpit of the burning wreckage that had been BLUEBEARD 03, finally regained consciousness, only to realize he was alone in a version of hell. "The chopper was listing to one side, and flames engulfed the cockpit."[908] He unbuckled from his seat and egressed through his pilot-side window as the flames burned at him. Schaefer just escaped from the exploding aircraft.[909] Bowden elucidates:

> The exploding aircraft and ammo sent flaming bits of hot metal and debris spraying across the makeshift airport, riddling the four remaining working helicopters, whose crews jumped out and moved to a safe distance.… The air over the scene was heavy with the odor of fuel, so it wasn't hard to imagine that all the other aircraft might burst into flames as well. The remaining C-130s began taxiing in different directions away from the conflagration.[910]

The remaining force clambered aboard the remaining C-130s in an effort to escape from the disastrous event as quickly as they could manage. The sense of urgency combined with the wildly uncontrolled fire led to the conclusion that it would not be possible to retrieve the bodies of their fallen comrades. They would have to leave without them … a decision that would haunt these men and USSOCOM for years to come. They disabled the Iranian bus and released its passengers just before the assaulters slipped into the night, departing the site in ruins (see Figure 100).[911]

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907 Bowden.

908 Bowden, "The Desert One Debacle."

909 Bowden.

910 Bowden.

911 Bowden.

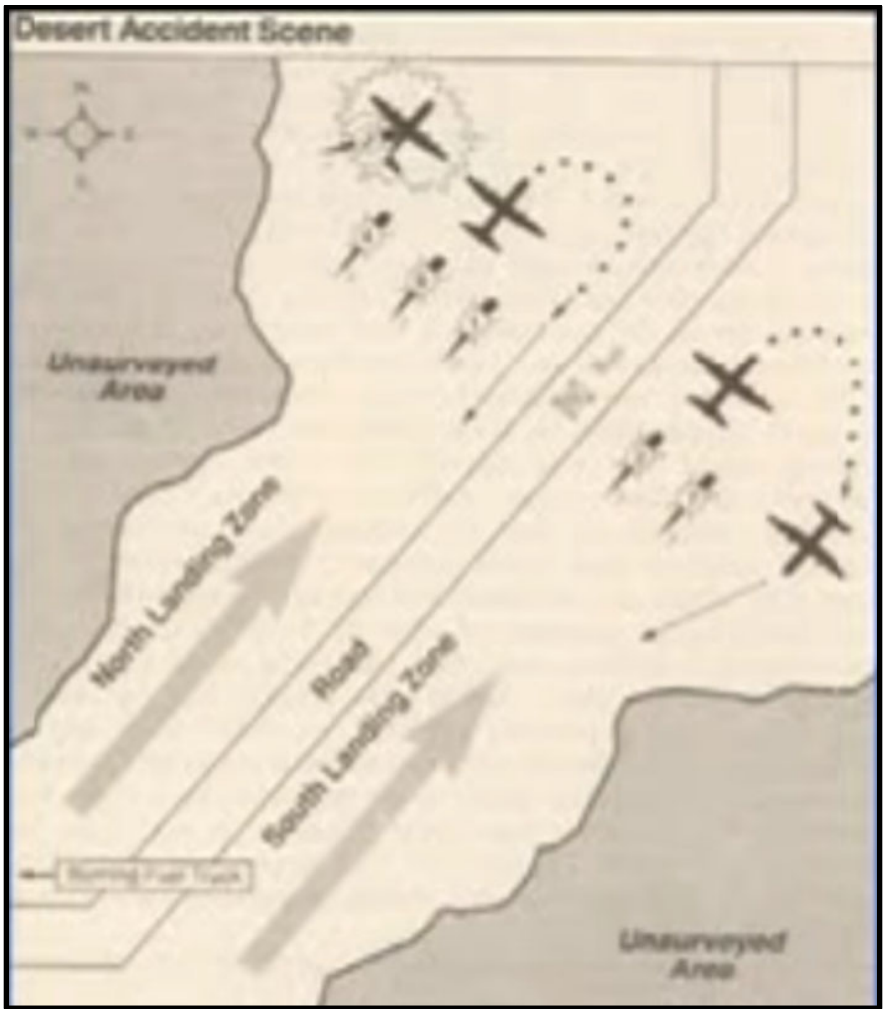

Figure 100. The "Accident Scene" at Desert One during the Egress of DRAGON 03, REPUBLIC 05, and REPUBLIC 06[912]

That evening, at 6:00 PM local, word of the tragic failure reached President Carter in Washington, DC, "America's … rescue force had lost eight men, seven helicopters, and a C-130, and had not even made contact with the enemy," Bowden punctuated (see Figure 101, Figure 102, and Figure 103).[913]

912 Adapted from Guidry, "Operation EAGLE CLAW."

913 Bowden, "The Desert One Debacle."

Figure 101. One of the RH-53D Sea Stallions Destroyed in the Iranian Desert at Desert One during Operation EAGLE CLAW[914]

BLUEBEARD 03 and REPUBLIC 04 were destroyed in the Iranian desert during the crash at Desert One during Operation EAGLE CLAW. BLUEBEARD 01 rests in the background.

Figure 102. The Remains of BLUEBEARD 03 and REPUBLIC 04[915]

914 Adapted from "A Destroyed Sea Stallion," Pinterest, accessed July 03, 2017, https://www.pinterest.com/pin/482870391269286873/.

Following the catastrophic extraction from Desert One, the President addressed the Iranians and the American people. There was no way to hide the tragedy from either. Guidry recalled the embarrassing admission, "The Iranians had to be told we were there."[916] Eight men were dead, five of which belonged to Guidry's squadron.[917] The toll was high, and the weight was heavy.

Figure 103. The Eight Servicemen Who Gave Their Lives at Desert One[918]

Intel left behind in the helicopters during the scrabbled escape had included classified information that compromised the staged assets and intelligence assets inside of Tehran. Meadows was able to escape, but the compromising information significantly

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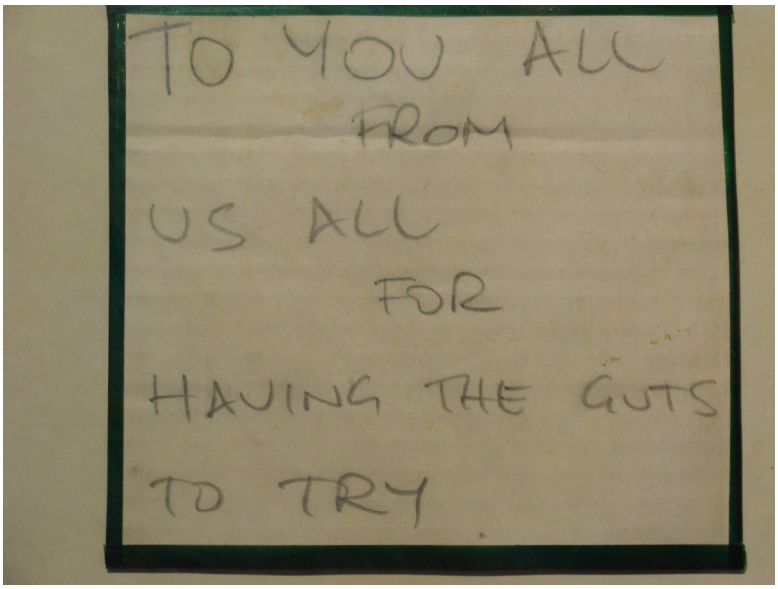
915 Adapted from "A C-130 Destroyed in the Aborted Operation," Pinterest, accessed July 03, 2017, https://www.pinterest.com/pin/482870391269286854/.

916 Guidry, "Operation EAGLE CLAW."

917 Guidry.

918 Adapted from Tony Daiuto, "Operation Eagle Claw: 35 years ago …," Monroe Marauders Military Vehicle Club, April 18, 2015, http://monroemarauders.com/operation-eagle-claw/.

hampered follow-on efforts to produce a second rescue attempt.[919] The Iranians had the playbook that explained the means, methods, and sources the assault force had been relying on. Now, it would be even more difficult to try again (see Figure 104).



"*To you all, from us all, for having the guts to try.*"

This note was quietly delivered, along with two cases of beer, to the just-returned weary and downtrodden survivors of the Operation EAGLE CLAW assault force by two British Airmen.[920]

Source: Headquarters, Air Force Special Operations Command

Figure 104. "The Guts to Try" Note[921]

6. Post-mission: Aftermath

The abandoned hulks of BLUEBEARD 03, REPUBLIC 04, as well as BLUEBEARDs 01, 02, 04, 07, and 08 were left as stark reminders of the mission's failure. "The abandoned helicopters were later destroyed by Navy fighters but the mutilated bodies and the wreckage of the burned-out aircraft abandoned in the Iranian desert remained an image

919 Guidry, "Operation EAGLE CLAW."

920 Whitney, ""To you all, from us all, for having the guts to try"--30 Years Later."

921 Adapted from Todd Schroeder, Historian, Headquarters, Air Force Special Operations Command, Hurlburt Field, FL, October 26, 2017.

that haunted U.S. special operators," said Adams.[922] "The failed mission was a brutal blow to America's military reputation," annotates Military History (see Figure 105 and Figure 106).[923]

The abandoned American aircraft littered the Iranian desert following the failed mission, a sign of the vulnerability any mission force may face if their transportation medium is inadequately operationalized.

Figure 105. Abandoned Operation EAGLE CLAW Aircraft[924]

Figure 106. Newspaper Depicting the Failure of Operation EAGLE CLAW[925]

922 Adams, *U.S. Special Operations Forces in Action,* 164.

923 "The Lessons of Operation EAGLE CLAW Part 2," Military History, accessed June 14, 2017, http://www.militaryhistoryveteran.com/2014/07/

924 Adapted from Guidry, "Operation EAGLE CLAW."

Adams notes that "a JCS commission was convened to report on the rescue failure."[926] It was established to ascertain how and why the operation had failed. The commission produced the "Holloway Report," named after the commission's leader, Admiral James L. Holloway.[927] "The commission blamed '*ad hoc* organization' combined with excess secrecy for the failure."[928]

> The Joint Chiefs of Staff had to start, literally from the beginning … find a commander, create and organization, provide a staff, develop a plan, select the units, and train the force before the first mission capability could be obtained. (US JCS, 1980, vi).[929]

These recommendations would eventually lead to the establishment of the Joint Special Operations Command, inspired by the Goldwater-Nichols Defense Reorganization Act of 1986 and the Nunn-Cohen Amendments which followed.[930] These acts cumulatively led to the creation of USSOCOM. As a combatant command, this institution would be empowered to provide funding and authorization for the equipment, tactics, and organizational structures required to accomplish these types of SOF direct-action missions.[931] They would ensure a "dedicated funding mechanism for special operations" independently of the funding controlled by the conventional services, known as Major Force Program 11 (MFP-11).[932] Whittle summarizes the profound impact Operation EAGLE CLAW had on reorganizing the SOF community and the mindsets that were employing it:

> Desert One would haunt America's military for years and inspire profound changes. One was a restructuring Congress imposed on the armed services to foster "jointness" – cooperation among the Air Force, Army, Navy, and

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925 Adapted from "OPERATION EAGLE CLAW Failed U.S. Hostages Rescue Attempt in IRAN 1980 Newspaper THE NEW YORK TIMES, April 8, 1980," Amazon, accessed July 03, 2017, https://www.amazon.com/OPERATION-Failed-Hostages-Attempt-Newspaper/dp/B01MG83SMZ.

926 Adams, *U.S. Special Operations Forces in Action,* 164.

927 Adams, 165.

928 Adams, 165.

929 Adams, 165.

930 Lederman, *Reorganizing the Joint Chiefs of Staff*," xi.

931 USSOCOM, "United States Special Operations Command Fact Book, 2017."

932 Guidry, "Operation EAGLE CLAW."

> Marines – instead of the interservice rivalry and insularity that had characterized their relations forever. Another was a new emphasis on training troops and pilots for special operations. A third was new interest in the Pentagon and Congress in buying equipment for such missions: better night-vision goggles, special radios, new radars and other electronic gear to make it easier to operate in darkness, and new weapons and aircraft. What the U.S. military already had, it was no clear, wasn't adequate [see Figure 107].[933]

Figure 107. The Remains of REPUBLIC 04 with BLUEBEARD 01 Resigned to its Fate in the Backdrop[934]

Operation CREDIBLE SPORT – Getting Back on The Horse: The incredible failure of Operation EAGLE CLAW did not end America's demand to bring the Iranian hostages home by any means necessary. While a semi-capable mission force remained on the string under the code name Operation HONEY BADGER, additional options for deep

933 Whittle, *The Dream Machine,* 59–69.

934 The photograph was adapted from Iron Modeler, while the information providing aircraft identification was adapted from Guidry. Adapted from Guidry, "Operation EAGLE CLAW;" Iron Modeler, "Another One of 'Those Anniversaries'…."

insertion and extraction were cultivated. One such program would be executed under the code name Operation CREDIBLE SPORT.[935]

Brendan McNally fashioned a detailed and interesting extrapolation of Operation CREDIBLE SPORT., entitled "CREDIBLE SPORT: The Super-STOL Hercules."[936] In it, he expanded on the details of how a YMC-130H variant was modified over a period of only eight weeks to allow a nearly vertical takeoff and landing of the aircraft, enabling it to directly ascend into the soccer stadium nearby where the hostages were being held in Tehran. The highly secretive program, headquartered from "Eglin Air Force Base's Auxiliary Field #1," required extensive modifications to the aircraft.[937]

"C-130s had been making near-vertical takeoffs for years using [jet assisted takeoff rockets] … and were renowned for short runway landings.… Of course a soccer stadium with 30-foot-high walls is not the same thing," said McNally.[938] The rockets would not suffice, as it would require 58 of them and the additional weight was prohibitive. "They decided to use rocket motors from missiles instead" (see Figure 108).[939]

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935 "C-130 YMC-130H Lockheed Hercules Flight Test Accident Crash," YouTube, 2:56, posted by Discovery Communications (Gmcjetpilot), May 29, 2009, https://www.youtube.com/watch?v=WKCl3lfAx1Q.

936 Brendan McNally, "CREDIBLE SPORT: The Super-STOL Hercules," Defense Media Network, September 5, 2012, http://www.defensemedianetwork.com/stories/credible-sport-the-super-stol-hercules/.

937 McNally, "CREDIBLE SPORT."

938 McNally.

939 McNally.

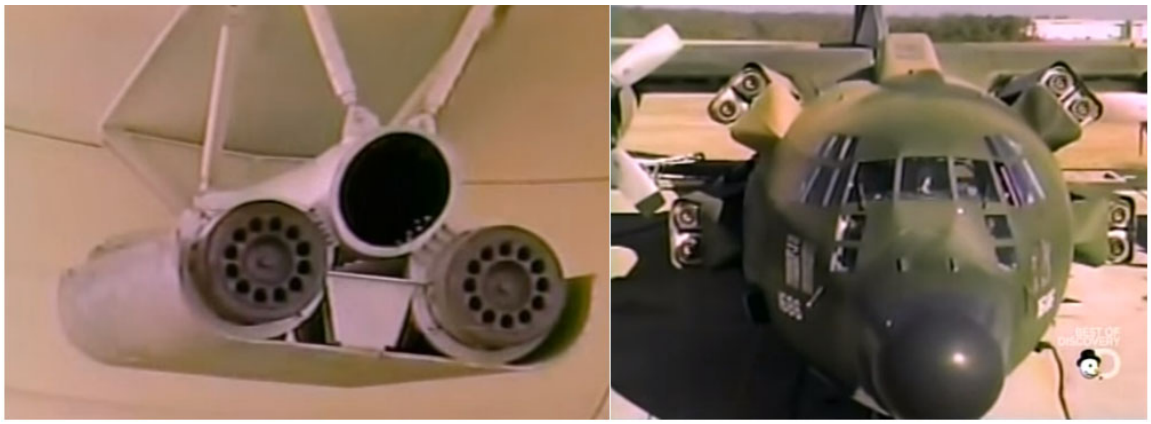


Figure 108. Operation CREDIBLE SPORT: Prototype YMC-130H, Call Sign CREDIBLE SPORT 01[940]

The airframe was reinforced to handle the additional stresses, and then:

> They began mounting the rocket motors to different points on the fuselage. Eight forward-pointing Navy anti-submarine rocket (ASROC) motors were mounted on the forward fuselage for decelerating the aircraft. Eight downward-pointing Shrike (anti-radiation missile) motors were mounted underneath to brake descent. Eight rear-mounted MK 56 motors from RIM-66 Standard Missiles were mounted at the rear of the aircraft for takeoffs. Four ASROC motors were mounted on the wing pylons to control yaw, and two more ASROC motors were mounted on the underside of the tail to prevent it from striking the ground during takeoff [see Figure 109].[941]

940 Discovery Communications, "C-130 YMC-130H Lockheed Hercules Flight Test Accident Crash."

941 McNally, "CREDIBLE SPORT."

Figure 109. Operation CREDIBLE SPORT: Rocket-Assisted Short Takeoff and Landing[942]

> To improve the aircraft's handling at low speed, a larger dorsal fin and two ventral fins were added to the rear fuselage. The flaps and ailerons were also increased in size to aid low-speed handling. An arresting hook was installed to enable the aircraft to land on a carrier. A new radome was added in the nose as well as the same avionics package used aboard Combat Talon aircraft, along with a chin-mounted FLIR and special terrain following radar.… The double-slotted flaps allowed the aircraft to make its landing approach at 85 knots and with a steep glide slope descent.[943]

It only took three weeks for the first test YMC-130H aircraft to take flight and seven weeks for the first mission-ready aircraft to be delivered for training. The program

[942] Discovery Communications, "C-130 YMC-130H Lockheed Hercules Flight Test Accident Crash."

[943] McNally, "CREDIBLE SPORT."

had reduced the aircraft's already respectable normal takeoff ground roll of 1,800 feet, and its landing distance of 1,400 feet, to a mere 350 feet.[944] On 29 October, eight weeks into the program, the crew trained and rehearsed a full test of the system. During one of the approaches to landing, it was determined "that the computers running the firing sequence were not properly calibrated."[945] The crew elected to execute the landing sequence manually. They were supposed to fire the top forward-facing rockets at 20 feet above the ground and then the bottom forward-facing rockets after touchdown. Unfortunately:

> The flight engineer in charge was blinded by the rockets firing topside and misjudged the timing for the lower rockets, firing them off too early, while the aircraft was still airborne. No longer aerodynamic, the aircraft crashed to the ground, breaking off the starboard wing while the rockets were all still firing. The aircraft burst into flames, but luckily no one was hurt [see Figure 110].[946]

Figure 110. Operation CREDIBLE SPORT: Disastrous Demise[947]

[944] Discovery Communications, "C-130 YMC-130H Lockheed Hercules Flight Test Accident Crash."

[945] McNally, "CREDIBLE SPORT."

[946] McNally, "CREDIBLE SPORT."

[947] Discovery Communications, "C-130 YMC-130H Lockheed Hercules Flight Test Accident Crash."

Operation CREDIBLE SPORT, temporarily stunned in the wake of the failure, became irrelevant when Carter lost the presidential election to Ronald Reagan in November 1980.[948] The hostages were eventually released "on 20 January 1981, 444 days after the event began."[949] Bowden notes how "The fireball in the Iranian desert took the Carter presidency with it."[950]

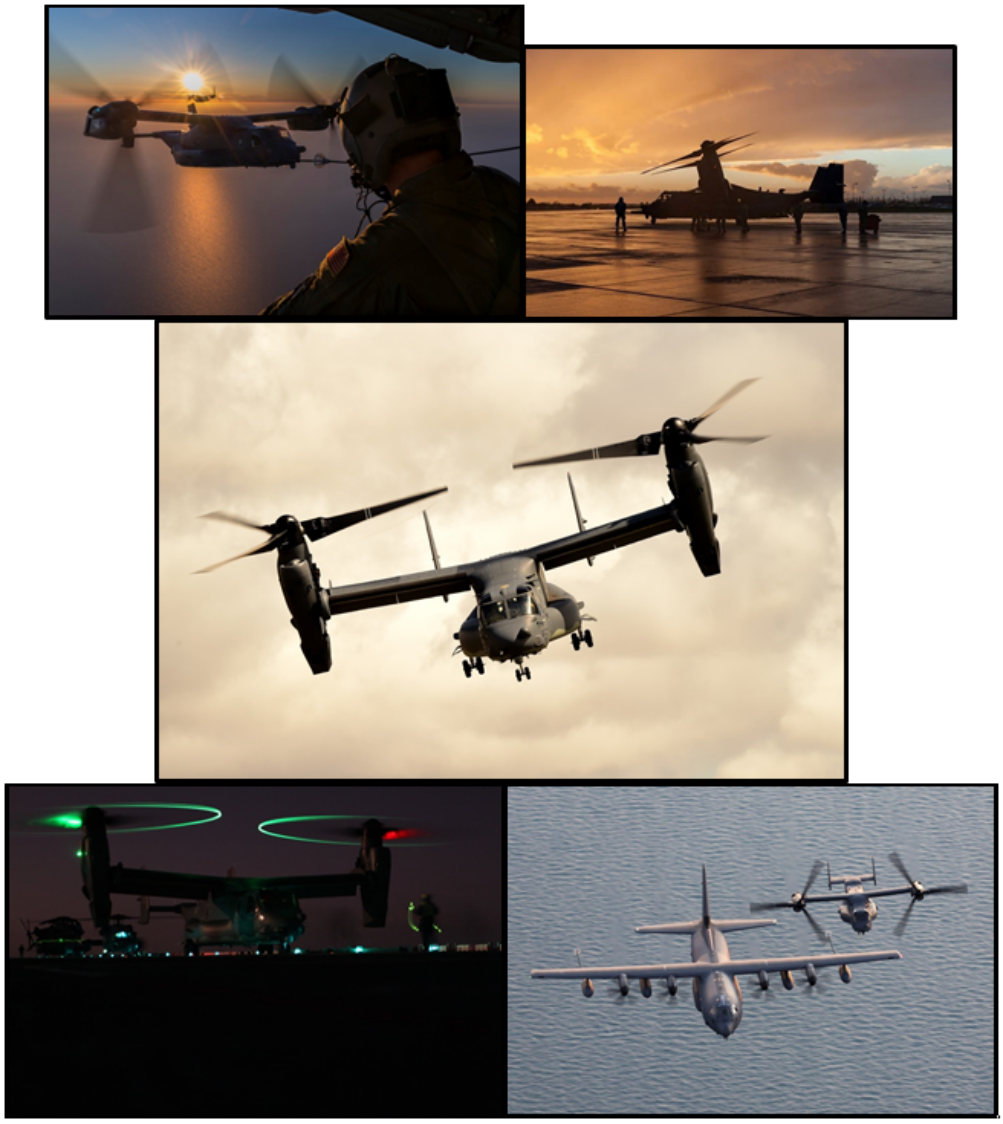
When Guidry looks back on the operation and thinks about how it could better be accomplished today, he reminisces about using a fleet of CV-22 Ospreys married with long range MC-130 refueling aircraft. He would use this combination to eliminate the need for any ground refueling and fly directly to and from the objective site. That is Guidry's idea of doing it again today (see Figure 111).[951]

948 McNally, "CREDIBLE SPORT."

949 Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

950 Bowden, "The Desert One Debacle."

951 Guidry, "Operation EAGLE CLAW."



CV-22 Osprey, the vertical-lift high-speed assault airlift asset currently employed by Air Force Special Operations Command. The Osprey arguably owes much of its roots in SOF direct-action to the lessons learned during Operation EAGLE CLAW.

The term "*The Dream Machine*" is from Richard Whittle's 2010 book bearing the same title.[952]

Figure 111. CV-22 Osprey: "The Dream Machine"[953]

952 Whittle, *The Dream Machine,* 59–69.

953 Adapted from 352d Special Operation Wing, Public Affairs, Royal Air Force Mildenhall, United Kingdom, 2016; Whittle, 59–69.

Guidry's dream has in part become reality. Richard Whittle describes in his book, *The Dream Machine: The Untold History of the Notorious V-22 Osprey*, how the disaster at Desert One directly bolstered the recognition for the capabilities a tiltrotor like the CV-22 Osprey could offer.[954] The CV-22 was specifically designed to clandestinely or forcefully infiltrate denied enemy airspace, through any weather conditions, across any type of terrain (no matter how unfamiliar or menacing), at low level with speed and vertical landing/takeoff precision.[955]

> With tiltrotors … the mission could have been done without EAGLE CLAW's complex choreography and risky timeline, which required the U.S. force to spend two nights and a day in Iran. With tiltrotors, there would have been no need for the deadly refueling rendezvous at Desert One. Delta Force, or whatever troops were chosen, might simply have climbed into tiltrotors aboard an aircraft carrier or on the territory of some friendly Middle Eastern country, flown directly to the vicinity of Tehran, infiltrated the city, taken down the guards, greed the hostages, met the tiltrotors outside the embassy or even on its grounds, loaded everybody aboard, and flown straight back to the ship. Time from incursion to extraction: no more than eight hours. One night. Or the classic "one period of darkness."[956]

C. ANALYSIS

1. Theory of Relative Superiority

Although Operation EAGLE CLAW was a mission failure, authors and military strategic analysts like Eliot A. Cohen and John Gooch, Robert Pois and Philip Langer, Saul David, Lucien S. Vandenbroucke, and others teach us that studying failures can be just as important in understanding the "why" as studying victories.[957] The case study of Desert One provides the distinctive opportunity to apply McRaven's theory of relative

954 Whittle, *The Dream Machine,* 59–69.

955 Whittle, 59–69.

956 Whittle, 59–69.

957 Long, "The Limits of Special Operations Forces," 34–47; Reeves, "Navy SEALs," 1–6; Gray, "Handfuls of Heroes on Desperate Ventures;" Cohen and Gooch, *Military Misfortunes*; Vandenbroucke, *Perilous Options*; David, *Military Blunders*; McRaven, *SPEC OPS.*

superiority to the catalyst event that defined how SOF direct-action would be operationalized for decades to come. This makes this case study particularly compelling to analyze.

The largest rises and falls in relative superiority during Operation EAGLE CLAW were directly associated with the contributions or failings of the air assault force. Recognizing this will assist in understanding how air mobility can best be used to attain and sustain relative superiority and subsequently increase the survivability of a SOF direct-action mission force. In this case, the assault force initially began their infiltration with a complex plan. It encompassed multiple objectives in multiple locations and included a myriad of stops and transportation mediums throughout the enemy's domain. The lack of simplicity disadvantaged the assault force's ability to achieve relative superiority, yet they attempted to tactically wield the elements of surprise and speed, provided by their use of air mobility, to reverse this disadvantage. They attempted to gain relative superiority by using these advantages to penetrate the Iranian desert undetected. The closer they got to the hostages, the more likely that they would be able to achieve their mission objective. Their degree of relative superiority, and thus their probability of achieving mission completion, grew with each passing moment they went undetected (see Figure 112).

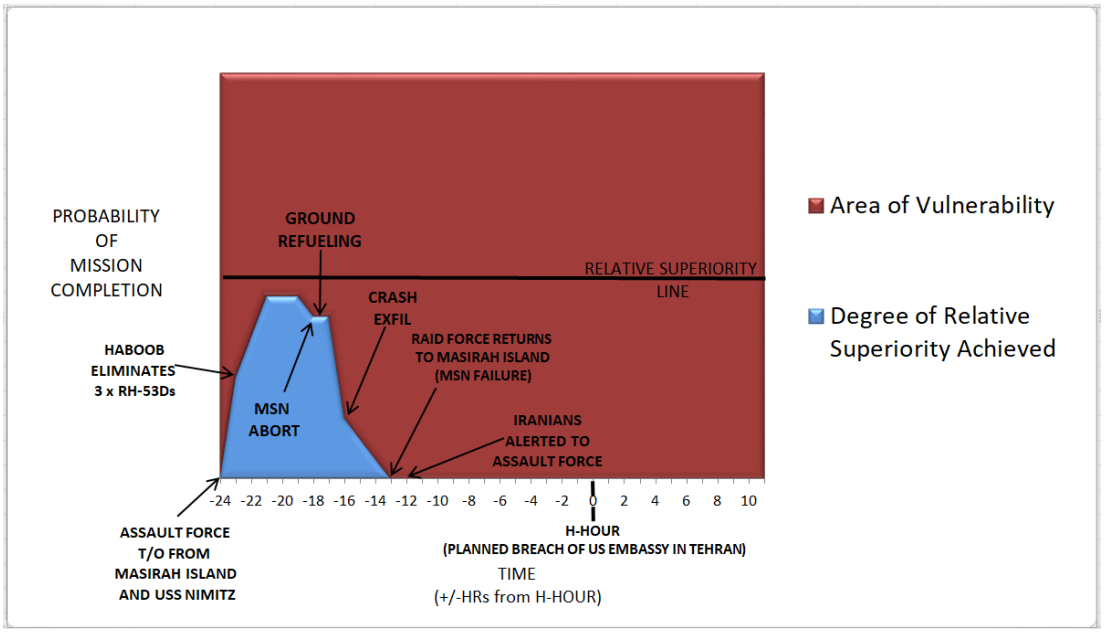
However, it was not detection by the enemy that compromised the assault force, but it was rather the environmental elements themselves that began eroding the assault force's level of relative superiority. This erosion was most prevalent when the helicopters encountered the haboob and then again, sadly, when BLUEBEARD 03 crashed into REPUBLIC 04 in the dust cloud on the desert floor. These two events significantly detracted from the relative superiority the assault force could achieve and made it effectively impossible for the assault force to achieve relative superiority. So, while the

assault force remained relatively undetected, they had not achieved enough relative superiority to overcome the complexity of their plan nor the substantial challenges the environment posed against them.[958] Therefore, at no point was the probability of mission completion greater than the probability of mission failure.

The inadequately developed plan, unsynchronized operationalization, and failure to anticipate environmental threats due to inadequate environmental reconnaissance left the assault force's success "dependent on benevolent frictions of war or the strong intervention of the moral factors."[959] Unfortunately, the benevolent frictions of war were insurmountable by the intervention of moral factors at Desert One, and the mission abortion catapulted into a catastrophic failure. This statement is not meant to detract from the investments and costs to those who heroically executed this mission. Instead, it is recognition that even valuable sacrifices of the highest order can be insufficient to achieve success if the employed strategy is misaligned with an environmental context that is so aggressively skewed due to lack of intelligence.

[958] The assault force remained relatively undetected, save for the civilians in the three vehicles encountered along the dirt road and perhaps any within eye or earshot of the operation. Nonetheless, these exposures had not yet metastasized into a direct threat to the operation. It is possible that they could have done so, if given the time to develop, but fortunately the assault force was able to exfiltrate before that could happen.

[959] McRaven, *SPEC OPS*, 7, 322.



This model is inclusive of joint air and ground assault forces components.

Figure 112. Relative Superiority Graph for Operation EAGLE CLAW's Execution[960]

a. Timeline:

The following timeline has been constructed from a myriad of the sources previously listed, with heavy influence provided by Colonel Guidry and Mark Bowden.[961]

At 6:45 PM, the assault formation C-130s, DRAGON 01–03 and REPUBLIC 04–06, began to takeoff from Masirah Island, Oman, followed shortly by the RH-53s, BLUEBEARD 01–08, lifting off from the USS Nimitz secluded in the expanse of the Gulf of Oman.[962] The initial point of vulnerability (PV) for the assault mission force began with

960 Adapted from McRaven, *SPEC OPS*, 7, 322.

961 Bowden, "The Desert One Debacle;" Guidry, "Operation EAGLE CLAW."

962 This time was calculated based on the reference Bowden provided that indicated the aircraft departed at "dusk." Dusk was calculated by the National Oceanic and Atmospheric Administration (NOAA) to be 6:45 PM local time on 24 April 1980 in Iran. Bowden, "The Desert One Debacle;" National Oceanic and Atmospheric Administration (NOAA), "NOAA Solar Calculator," U.S. Department of Commerce, accessed July 02, 2017, https://www.esrl.noaa.gov/gmd/grad/solcalc/.

the takeoff of these aircraft. It was at this point that mission execution began and the mission force was first exposed to the vulnerabilities associated.

These threats came not only from the Iranian air defense systems, but also from the inherently unforgiving elements the assault force was traversing. As soon as the aircraft were airborne, they were exposed to the taxing elements of the environment: the dark, the distance, the cold, the water, the early warning radar systems, the low altitude, the dust, the visibility, the heat, the vertigo, etc. At first, these elements did not appear to be insurmountable, but this perception was founded on the lack of information and an assumption that the resources at hand were sufficient to surmount these environmental threats. But the haboob loomed as a threat in the dark ahead. When this environmental threat confronted the air assault force, it directly contributed to the degradation of the entire mission force's ability to execute the mission.

Approximately one hour later, at around 7:45 PM, the assault force first encountered the haboob which, over the period of the next four hours, contributed to the damage or exclusion of three of the eight RH-53D Sea Stallions from proceeding forward with the mission past Desert One. While relative superiority was rising during this time due to the stealthily decreased distance between the assault force and the objective area, it was also being achieved at a diminished rate due to the environmental erosion of the air assault force assets. BLUEBEARD 05 was forced to return to the carrier and BLUEBEARD 06 was abandoned on the desert floor. Their loss was proximally due to their encounter with the haboob. It is still possible that neither of these aircraft would have made it to Desert One were the haboob to have been absent, but that outcome would not have been likely. BLUEBEARD 05 could have flown visually off of a wingman with functioning navigation equipment had he been given the opportunity, but the haboob prevented this option due to the lack of visibility. Likewise, the impact damage to BLUEBEARD 06's rotor and the precautionary handling of the satiation by the flight crew were likely driven by the swirling dust of the haboob and its threatening demeanor.

10:30 PM, DRAGON 01, the lead MC-130, arrived at Desert One. The landing was immediately followed by the exposure of the mission force to three civilian Iranian vehicles, ultimately resulting in an explosion that threatened to compromise their

presence. The landing of the aircraft represented a rise in relative superiority as the dispersed assault force began to convene its mass at the Desert One site, a location closer to the objective area than they had previously achieved. However, this rise was sharply offset by the exposure of the assault force to the passerby Iranian civilians and the audio-visual highlighting of the Desert One operation. While no immediately negative impacts developed to the operation from these exposures, they did represent a diminished probability of mission completion and an increase in vulnerability to the assault force.

12:00 PM (Midnight), the rest of the MC and EC-130s arrived at Desert One. This represented the highest level of relative superiority achieved by the assault force. It was still not probable that the mission would be successfully accomplished: the helicopter assault force had not yet arrived; there were still three other staging areas to secure and utilize; the objective area itself had yet to be reached; the objective itself had not yet been actioned; and there were still one and a half nights and a day throughout which the mission force would be poised behind enemy lines.

1:00 AM, the remaining six helicopters of the delayed helicopter assault force arrived at Desert One. At this point, though there was a momentary discussion about the viability of utilizing the hydraulically impaired BLUEBEARD 02, the air assault force was effectively down to five vertical lift platforms. The resources did exist to potentially continue with the mission from here, but the probability that this would happen was overshadowed by the belief by Colonel Beckwith that the size of the ground assault force could not be diminished without incurring unnecessary risk. Whether or not this belief was accurate is immaterial. It was a belief held by the most influential decision maker in the assault force. Shortly thereafter, the mission ABORT decision is made by Colonel Beckwith and President Carter concurred. Refueling and preparations for exfiltration commenced.

The probability of mission completion diminished slightly with this ABORT decision. However, the remaining assets of the assault force remained partially inserted at Desert One throughout the following ground refueling operation as they were prepared for exfiltration. The assault force participants remained emotionally prepared to execute their mission with the violent precision it would have demanded. During this time period,

it remained possible that either Beckwith or President Carter could have either independently or through some exterior influence been convinced to reverse their perspective. For example, had the safety of the hostages been threatened during this timeframe it is likely the President would have ordered an *in extremis* rescue attempt be made, even at the probable sacrifice of the assault mission force. The possibility such an order could have been made is echoed by the existence of follow-on preparations for just such an event with Operation HONEY BADGER and Operation CREDIBLE SPORT.

2:00 AM, BLUEBEARD 03 crashed into REPUBLIC 04, resulting in a massive explosion and catastrophic loss of both aircraft and eight servicemen. Several others were badly injured.[963] The remaining assault force elements quickly abandoned the scene and fled aboard the remaining three C-130 aircraft. This event represented an unrecoverable loss of relative superiority as it caved to the overwhelmingly punishing environmental factors of dust and diminished visibility that drew Schaefer and BLUEBEARD 03 into the EC-130 tanker aircraft. Environmental factors were both directly and indirectly implicated as causal factors. The straining flight to Desert One through the haboob wore away at the resolve and resiliency of Schaefer and his men. The dust on the desert floor at Desert One obscured the contour of the ground, allowing the rocks beneath the dust to damage BLUEBEARD 03's landing gear in a fashion that would have been easily avoided were it not for the unanticipated dust. The damage to the gear became the reason BLUEBEARD 03 had to hover-taxi instead of ground-taxi, increasing the risk of a collision in an already almost unnecessarily tight space at Desert One. It was the dust that swirled about hampering Schaefer's vision and leading to the terrible crash as he attempted to hover taxi his Sea Stallion clear of REPUBLIC 04. All of these factors were directly or indirectly the cause of unanticipated environmental threats that stung at the vulnerabilities of the air assault force. After this crash, it was hardly possible for the resolve of the men or the remaining equipment to achieve mission success. Even if an *in extremis* rescue attempt had subsequently been ordered by the President, the likelihood of success would have been increasingly miniscule.

963 Bacevich, *America's War for the Greater Middle East,* xix-xxii.

The mission resources continued to diminish with the pivot to exfiltration of the assault force. The feasibility of proceeding with a rescue attempt diminished as the fuel, time, and mechanical reliability of the assets were repurposed to extract the assault force instead of prosecuting their previously intended purpose of infiltration. These resources were also unavailable to defend the mission force against any conventional threats that could be brought to bear against it were the Iranian conventional military to become alerted to their presence. As exfiltration unfolded, the distance between the assault force and the objective area increased, and the probability of mission success for any *in extremis* follow-on attempt correspondingly decreased.

4:30 AM (estimated), the assault force coasted-out, departing Iranian airspace. At this point, the assault force was no longer exposed to the repercussions of potential exposure to Iranian defense forces. There was a nominal threat to the mission force comprised of the remaining environmental factors: weather, darkness, mechanical reliability of the C-130 fleet, and distance. However, these factors were either controlled for or represented the remnants of the more menacing environmental factors the assault force had already faced and breached, even if they were the worse for wear having done so. The remaining environmental factors embodied a less potent threat to the assault force at this point in time than those in their rear view mirror.

5:30 AM (estimated), the assault force returned to Masirah Island. Upon landing at Masirah Island, the area of vulnerability to the assault force effectively closed. The relative superiority graph effectually ends here. For the sake of portraying only the extensive amount of time the operation was intended to encompass prior to the H-Hour, scheduled for the following evening after dusk, the chart has been extended beyond the mission's termination to encompass the intended H-Hour. Nonetheless, the vulnerability to the mission force from either environmental or enemy threats associated with the mission effectively ended with their landing at Masirah Island.

6:30 AM, the Iranians learned of the American assault force presence in the desert. This point represents what would have most assuredly been the destruction of the assault mission force had it been on the ground at Desert One or in transit to Desert Two. Had the conventional Iranian forces been allowed to bring their superior firepower to

focus on the smaller assault force, the consequences would have been at minimal an organized retreat as the force flew desperately to evade destruction en route to the Iranian border. At worse, the mission force would have been destroyed entirely or taken hostage themselves.

It is possible that the alert of the Iranians was due solely to factors associated with the mission abortion, but unlikely. Perhaps the Iranians were tipped off to the presence of the mission force by the released bus passengers and this is the reason they were alerted to the American rescue force at this point in time. It is also possible that the Iranian air defense network detected the Americans during their egress. However, these possibilities are less probable when compared to the more probable scenario that the presence of the Americans was detected by any number of other sources. The escaped tanker fuel truck driver and the pickup truck driver were more mobile than the bus passengers, and they had been given a more compelling motivation to report what they had seen given their having been directly fired upon. Snow interviews the driver of the fuel truck in the aftermath of the event.[964] It is probable that the explosion of the fuel truck was seen or heard and reported to Iranian civilian authorities that eventually channeled this information to military assets. It is also probable that the Iranian military had additional intelligence gathering mechanisms in place that had already detected the American force prior to their exfiltration.

When the entire mission force is analyzed, it becomes apparent that the largest deviations in relative superiority are associated with the air assault force's ability or inability to achieve mobility. The rises in relative superiority are due to the air assault force's ability to exercise speed and simplicity to infiltrate the force into Iran's interior, bypassing otherwise significant challenges of terrain and defensive force positioning. The decreases in relative superiority are associated with air mobility's lack of versatility and flexibility brought on by resource erosion caused by environmental factors.

964 Channel 4 News, "*Jon Snow*."

2. Was Assault Airlift Being Adequately Achieved?

Operation EAGLE CLAW fell short of adequately achieving assault airlift. Many of the necessary components for its manifestation were present, but they were not adequately synchronized to achieve the desired effects. Aircraft were present, but their crews were not integrated with the ground assault force. Various innovations were utilized, but their presence did not result in the achievement of adequate mobility to accomplish the mission's objectives and ensure survival of the mission force.

3. Simplicity: How Was Assault Airlift Operationalized to Support the Principle of Simplicity?

Guidry, the DRAGON 01 pilot, later said that the Iranian hostage rescue was the most "complicated rescue mission ever attempted."[965] The plan's complicated objectives and multifaceted restraints made the mission vulnerable to failure from any number of unforeseen frictions. The plan was so complicated that it was not possible for the simplifying capabilities provided by the air assault force to mitigate these complexities, especially given that the advantages provided by air mobility were not fully embraced by the air assault force, as discussed in this analysis.[966]

Air mobility can best be utilized to attain and maintain relative superiority when it simplifies a plan by bypassing enemy defenses, but this capability can be mitigated when insufficient environmental intelligence is obtained for air mobility's employment. Nor can air mobility alone be used as a trump card to achieve success with a plan that ignores the advantages it provides while demanding it compensates for a plan of incredible complexity. Whittle calls the plan for Operation EAGLE CLAW "an audacious secret mission of Rubik's Cube complexity," and his assessment does not stand alone.[967] It is merely wishful thinking that one can sprinkle "air mobility" dust on a toxically complex plan and expect it to successfully achieve its objectives despite inadequate organizational support or utilization of the advantages offered by air mobility itself.

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965 Guidry, "Operation EAGLE CLAW."

966 Many of the relevant complexities of the Operation EAGLE CLAW plan are discussed in the synchronization portion of this chapter.

967 Whittle, *The Dream Machine,* 59–69.

Bypass of Enemy Defenses: In this case study, assault airlift did adequately provide initial clandestine penetration of Iranian airspace, but it was not adequately employed to provide the deep penetration necessary to reach the objective area. Air mobility did allow the assault force to pass through the Iranian early warning air defense network undetected. But, the ability of air mobility to simplify the overly complex plan to a level that would allow a high probability of mission success was allayed by the decision to marshal the assault force at the precarious Desert One location. Not only did the plan call for marshalling of the force at Desert One, but it also called for a secondary staging site at Desert Two, outside of Garmsar, so that the force could remain over day, and then a tertiary delivery location at the Laager site and finally a quaternary exfiltration staging site at Manzariyeh Air Base.[968] Only the Desert One location was ultimately utilized, but the plan itself failed to take advantage of the ability of the air assault force to more-fully bypass the enemy controlled space.

In the end, only a partial bypass of the enemy's was achieved by the assault force.[969] The assault force may have even been able to continue penetration into Iranian territory had the abort decision and subsequent crash not been experienced. This demonstrates that adequate assault airlift is a prerequisite to mission success but does not of itself ensure or produce mission success. In order to achieve mission success, assault airlift must be properly selected for the qualities it provides. It must then be supported to mitigate its inherent limitations of logistical and intelligence requirements. Then, and only then, can it be used to maximize the capabilities is provides. In this case, the penetrating capability of the air assault force was not fully utilized. Instead, the penetration of the enemy's airspace was mitigated by the incomplete environmental reconnaissance that had been conducted to support the air assault force.

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[968] Whittle, *The Dream Machine,* 59–69.

[969] Assault airlift enabled the mission assault force to successfully bypass enemy defenses both to and from the Desert One refueling site. The bypass of enemy defenses during the extraction was made possible by the use of air as a mobility means and should not be discounted. Without this ability, the capture of the assault force following the mishap could have led to even more devastating consequences at the tactical, operational, and strategic levels.

Adversarial Threat Intelligence: Overall, adversarial threat intelligence appeared to be adequate for Operation EAGLE CLAW. The National Security Agency, Central Intelligence Agency, and the subsequent intelligence augmentations provided by Meadows ensured that the plan took into account the enemy's strengths and weaknesses.[970] Although much of the plan remains untested, the executed portion of the infiltration demonstrated an understanding of the enemy's coastal detection and engagement systems.[971] The assault force had received adequate adversarial threat intelligence to know the best places to penetrate to avoid detection via radar or visual signatures. It was the environmental and regularly-transited nature of the Desert One site that failed to be adequately accounted for.

Environmental Reconnaissance: The lack of proper environmental reconnaissance was the primary reason for the failure at Desert One. It was the primary reason the assault force failed to maintain relative superiority and it was the primary contributing factor to the disastrous incident that defined the mission's end. Carney's contributions to the environmental intelligence gathering process were substantial and most assuredly cannot be blamed for the lack of additional information, but these contributions were insufficient to provide the types of information, the granularity of information, and the quantity of information the air assault force required in order to successfully provide adequate air mobility for the assault force.

The air assault force and its pilots were ill-prepared to confront or navigate through the unexpected and unforeseen haboob. The fact that the phenomenon itself was unknown to the senior ranking air commander, Colonel Kyle, or to the pilots of the assault force, denotes the inadequate level of environmental intelligence provided to the air assault force. Unlike the Iranian forces in the region, the U.S. forces had not been exposed to these kinds of environmental variables to any great degree. Whereas regionally acclimated units would have been normalized to exposure to the effects of haboobs, there was a more significant impact on the U.S. forces. Their leadership had not

970 Bowden, "The Desert One Debacle."

971 Guidry, "Operation EAGLE CLAW."

addressed the functional concerns of the assault airlift assets. The environmental intelligence could have been garnered through the Central Intelligence Agency and even Carney, but these assets were not properly synchronized to meet the needs of the assault force.

The consequences of this failure were, in the end, catastrophic. The high temperatures and particulate bombardment associated with the haboob exacerbated the equipment failures on the Sea Stallion choppers. This affect was most probably directly or indirectly associated with the equipment failures BLUEBEARD 02, 05, and 06 experienced. This threat remained "unforeseen" until the moment it was encountered, a fact that could have possibly been averted for the helicopter assault force had it received the warning Kyle had directed inflight. But this attempt to circumvent disaster was thwarted by an incompletely synchronized communications plan.

Unlike the Son Tay mission, Operation EAGLE CLAW did not benefit from having the established military weather and climatology analysis processes in place that had enabled General Manor and his men to foresee the deteriorating weather conditions they had faced. There had been no long-term dedicated and detailed military observations of the Iranian desert weather like the war in Vietnam had provided over the Gulf of Tonkin. There was no military continuity on the likelihood that the weather would sustain, change, or deteriorate. Accurate weather forecasts in the objective area and along the ingress routes were not available. The corporate knowledge had not been established in this area.

While it is not necessarily cost efficient to create and maintain military analysis processes at all times and places in the event that they should be required, it is effectively feasible and necessary to recognize that there are assets available that can be synchronized to produce these effects. There are regional weather services available over the preponderance of the planet. The challenge is maintaining operational security while tapping into these resources. This synchronization requires adequate leadership to fill the gap between preexisting organizational structures. And where preexisting information is not available satellite surveillance and special recon aircraft maintain the capability to fill the gap. While these assets are expensive to employ, they can be utilized when national

security requires it. The gathering of adequate environmental intelligence can be the difference between mission success and mission failure, especially when air assets are utilized. The flight regime remains too unforgiving to be ignored. If unmitigated, the environment can erode the relative superiority of a mission assault force.

When one ponders the use of expensive environmental reconnaissance resources, one must recall that the military in general is not a business designed to focus on efficiently maintaining the bottom line. It is a business in which the bottom line is always willing to be sacrificed for effective achievement of mission objectives. Effectiveness is paramount. Efficiency is desired. When the two come into conflict, effectiveness should almost always triumph when mortal lives and resolute principles hang in the balance.

The air assault force anticipated a hard packed surface at Desert One, but what they encountered instead was an "ankle deep" blanket of dust that degraded equipment performance and denied critical visibility in an already degraded sensory environment.[972] The dark of night, the unfamiliar environment, and the constant deafening drone of the running engines from multiple airframes all contributed to degraded sensory analysis by the assault force personnel. However, this became especially critical during the marshalling of the air assault aircraft. Recall how Whittle described the even as Schaefer began to hover-taxi his craft during ground refueling: "Desert One was a maelstrom of noise and dust."[973] This is not the description of a benign environment. Instead, it was the makings for a disaster pushed upon a force unprepared for the environment it had been previously unaware of. Had the assault force anticipated such diminished visibility it could have been counteracted by simply expanding the perimeter of the surveyed area to ensure enough space was available to avoid having to maneuver aircraft so closely to one another. Another alternative may have been to use the Nain airfield that the air assault force had been rehearsing to use. Either of these or any number of other solutions could have been explored had the environment been properly reconnoitered by additional intelligence gathering sources.

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[972] Bowden, "The Desert One Debacle;" Guidry, "Operation EAGLE CLAW."

[973] Whittle, *The Dream Machine,* 59–69.

The noise signature of aircraft is an inevitability when utilizing airlift for SOF direct-action assault missions, Whittle cautions.[974] Just as a blind person must learn to become more finely attuned to the details their other senses provide to them, personnel operating in audio-impaired environments must be aware that other sense must be relied upon to attain the peripheral situational awareness that is usually gathered almost subconsciously by acoustic acquisition. At Desert One, the thick layer of fine dust eliminated vision from operating as a primary source of situational awareness, while other senses, such as acoustic peripheral indications, were also inhibiting the ability of the pilot's to maintain situational awareness. This environmental distortion and information denial greatly contributed to the failure of air mobility to be able to simplify the insertion plan during their layover at Desert One.

Another environmental intelligence factor lacking in this case was that of the pattern of life associated with the dirt road at Desert One. The assault force had not adequately anticipated the level of traffic that would be present along the dirt road running alongside the clandestine staging site. The pattern of life for the road itself had not been adequately established to allow the assault force the opportunity of determining how significantly the operation would be compromised by repeated traffic encounters along the road during the several hours of their stay there. Jon Snow, the aforementioned journalist, later reported "perhaps a dozen vehicles pass each hour" along the remote dirt road running alongside the Desert One site.[975] "Two or three buses a day run the 14 hours from Tabas to Yazd. The Americans seem not to have anticipated that one would pass whilst they were here," Snow observed (see Figure 113).[976]

974 Whittle, 59–69.

975 Channel 4 News, "*Jon Snow*."

976 Channel 4 News, "*Jon Snow*."

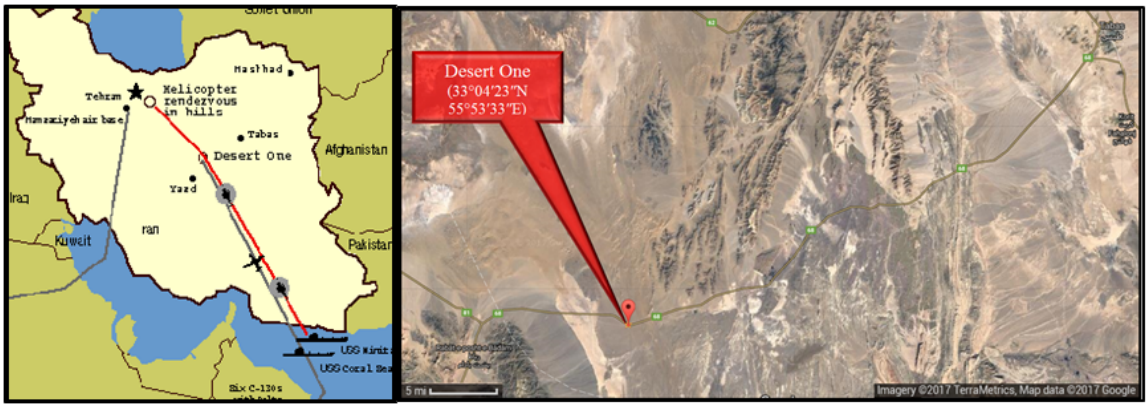

Figure 113. Tabas and Yazd, Relative to Desert One Location[977]

Imagery analysis is also an important part of gathering accurate environmental intelligence, and it was used as one of the primary means of selecting the ground refueling site at Desert One. However, imagery alone is not sufficient to determine the suitability of an environment for the employment of air mobility assets without incurring potentially detrimental risks. In the case of Desert One, imagery may have actually distorted the contour of the dry lakebed at Desert One by portraying a smooth surface where a rougher undersurface lay hidden beneath a blanket of fine dust. The sparse reconnoitering accomplished by Carney, while valuable, was not sufficient to discover this mirage and left the mission force to deal with the consequences. The lesson here may be to ensure imagery analysis is accomplished not just for a main site, but also for an alternative site in the case that the main site is spoiled. At a minimum the assault force should be prepared to abort the mission if the environment proves to be less forgiving than feasibly anticipated. Had such options been available, it is entirely possible DRAGON 01 would have departed at the first sight of civilian vehicles or when the excessive dust was encountered upon landing. The MC-130 could have proceeded to an alternative landing site and relayed the change to follow-on forces, just as plan Green was enacted at Son Tay when APPLE 01 landed at the wrong installation.

977 Adapted from "33°04′23″N 55°53′33″E;" Guidry, "Operation EAGLE CLAW;" "The Lessons of Operation EAGLE CLAW Part 2."

In the end, all of these environmental factors combined to prove a greater threat to the success of the assault force than any other. Between the time the air assault force departed Masirah and the USS Nimitz, these environmental factors continually degraded their ability to maintain the small amount of relative superiority they had previously achieved through penetration of enemy defenses, operational security, and concealed logistical support. Unfortunately, these environmental factors not only eroded the assault force's relative superiority below the level required to complete infiltration, but it also continued to present enough of a credible threat to eventually overcome the safe exfiltration of the assault force after mission abortion.

Recall McRaven's admonition that "intelligence contribute[s] to simplifying the plan by eliminating unknown factors."[978] The use of air mobility is not an adequate replacement for inadequate environmental reconnaissance.

Redundancy: Major Richard A. Radvanyi, a United States Air Force officer in attendance at the United States Marine Corps Command and Staff College, cited "equipment reliability" as one of the main reasons Operation EAGLE CLAW failed.[979] Each asset of the assault force represents a component necessary as a prerequisite for mission success. In addition to McRaven's assertions that a plan must be simplified by "limiting the number of objectives," attaining sufficient "intelligence," and through "innovation," the catastrophe at Desert One reminds one to ensure redundancy is considered, especially when utilizing airlift in an assault force.[980]

The inherently complicated nature of aircraft, and in particular rotary-wing aircraft, coupled with the unforgiving nature of flight, combine to require a given degree of resource commitment above and beyond the minimum necessary. The necessity for additional resources is more easily deduced from examples such as this. However, determining the appropriate amount of additional resources required may involve a more in-depth analysis and discussion. It is not always prudent to operate on a static "three to

978 McRaven, *SPEC OPS*, 324.

979 Radvanyi, "Operation EAGLE CLAW."

980 McRaven, 11.

make two" or "five to make three" rule of thumb. Arbitrary ratios such as this may not encompass the known and trackable mission ready and mission completion rates of a given airframe versus that of another. Some airframe designs are simply more reliable than others. Yet some of the more complex designs offer capabilities that are not available in more simplified platforms. When the more capable airframes are required for a mission, it must be taken into account that the reliability of the more complicated equipment may deem necessary a greater allocation of contingency resources. This allows the air assault force to retain the versatility and flexibility necessary for it to properly and adequately perform its role for the assault force.

The decision to transport only the minimum size of the ground assault force significantly constrained the air mobility elements and thus the assault force. Having the "min-force" ground elements dispersed across multiple aircraft meant that the mission would necessarily be aborted should any of the aircraft carrying ground assault force members fail to reach any of the multiple stages of the transportation plan during infiltration. It necessarily increased the minimum force requirement for the air assault assets. The assault force would not have been able to perform their portion of mission execution had they been deprived of any single aircraft worth of their assaulters. Because of this "go/no-go" predicament, Desert One (and each additional stop – Desert Two and the Laager site) were effectively planned potential failure points. These pit stops were the weak links in the chain. Each extra stop represents a significant increase in the probability that additional resources, some of which the assault force may not be able to carry on without, will be expended.

> Whenever technological components are linked together in order to carry out a particular scientific or technological activity, the possibility exists that the normal sequence of events the system has been designed to carry out may go awry when failures in two or more components interact in an unexpected way.[981]

Here, Cohen and Gooch describe "normal failures" that are "inevitable" given the employment of the system or machine at hand.[982] Whenever aircraft or technological

[981] Cohen and Gooch, *Military Misfortunes*, 22.

[982] Cohen and Gooch, 22.

transportation mediums are involved, the reliability of the system used must be taken into account. Aircraft have calculable mission ready rates. It is possible to predict, within a certain degree of accuracy, the likelihood that eight aircraft will be enough when a mission requires six. However, these calculations are contingent upon the variables they are based upon. If the mission ready rates are based on normal operating procedures, one must then anticipate the additional losses that will inevitably be associated with the abnormal operation of the aircraft in a foreign austere environment. To do otherwise is to condone logical fallacy or indulgence in wishful thinking. One must recognize that unknowns can often be mitigated by surplus resource allocation, but that surplus resource allocation alone is not necessarily sufficient to ensure resilience in an unexplored environment.

During Operation EAGLE CLAW, redundancy was calculated into the mission force, but it was not adequately planned against the environmental conditions the airframes would face. They brought extra fuel onboard the MC-130 aircraft. The brought eight helicopters when they only anticipated needing six. But they failed to make a calculated assessment of the resiliency these aircraft and resources would exhibit in the environment they would be operating in.

While some airframes were more robust during their encounter with the haboob and the dust-laden desert floor, like the C-130s, others, such as the RH-53D Sea Stallion helicopters, were not. All five of the C-130s successfully penetrated the haboob and safely arrived at the Desert One rendezvous. On the other hand, given the hydraulic issues with BLUEBEARD 02, the assault force was already effectively down to five mission capable helicopters during the infiltration, though they remained ignorant of this fact until it was discovered and discussed on the ground at Desert One.[983]

The lack of adequate air mobility assets was the cause of mission abortion, but because the mission was terminated short of the actions-on-the-objective this lack of redundancy did not contribute to overall mission failure. Instead, overall mission failure was brought on by the lack of environmental intelligence that left the force unprepared to

[983] Guidry, "Operation EAGLE CLAW."

deal with the circumstances it faced at and en route to Desert One, ultimately resulting in the deaths of eight service members.[984]

Operation EAGLE CLAW represents what Cohen and Gooch would refer to as a "complex failure."[985] It included all three of their presented simple failures: "failure to learn obvious lessons," "failure to anticipate predictable situations," and "failure to adapt to new and unexpected circumstances."[986] The disbandment of most SOF assets and units following the close of the Vietnam War had ensured the majority of the corporate knowledge necessary to avoid a failure to learn had been squandered. The failure of the leadership to plan and prepare in a fashion necessary to appropriately synchronize the available organizational structures ensured the individuals with technical expertise capable of surmounting predictable problems was not brought to bear with enough puissance to have their concerns voiced, let alone their solutions identified and enacted. The air assault force spent its effort working to achieve the ability to get to multiple rendezvous sites and objective areas. They never got to the point where they could adamantly insist on the need for environmental data collection that would be necessary if they were to succeed. And the culmination of these two failures resulted in a mission force that was convened for its first full-mission profile execution in the interior of Iran where the consequences for failure were overly dramatic. The mission force had spent all of its time building itself and refining individual technical functional skills, without ever

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[984] It is worthy of noting that there were very few innovative technologies or tactics developed for Operation EAGLE CLAW. Some previously developed specialized tactics, such as aerial refueling and formation drafting to keep fixed-wing and rotary-wing assets together, were actually discarded. But there were exceptions: night vision googles and communications. The air assault force was ordered to use night vision goggles that had been deemed unsafe for flight. The night vision goggles proved to be a technology that would be developed in the future to better support SOF aviation. Future models would specifically address the lack of peripheral vision by using a "binoculars" design that would allow the pilot to see through the dual scopes without the loss of peripheral vision. This would greatly aid in internal cockpit instrument and equipment checks. The air units were also used to enable long-rang communication with command via hatch-mounted antennas for the C-130s. This gave the President the ability to interact with the mission force well beyond line of site, through satellite constellation communications with the mission force. The satellite antennas, though inadequate to address the inter-communication needs of the assault force in Iran, would eventually become advanced and proliferated enough to provide reliable secure beyond line of sight satellite communications between air assault forces and their ground and command counterparts.

[985] Cohen and Gooch, *Military Misfortunes*, 23–28.

[986] Cohen and Gooch, 23–28.

having the luxury of moving on to develop the trust and complex interrelation skills that could have allowed them to triumph together against more formidable odds.

In the end, the plan developed for Operation EAGLE CLAW relied more on the perception and hope that the environment and enemy would cooperate in order for its complexity to manifest itself. It heavily relied upon uncontrollable variables to ensure the mission objective could be achieved instead of countering those variables with significant and specific enough resources to countermand them. As New York Mayor Rudy Giuliani once said, "Hope is not a strategy."[987]

Along with the advantages air mobility provides to SOF direct-action, it also brings its own sets of limitations. Operation EAGLE CLAW highlights a significant threat an assault force faces when integrating air mobility into their assault plan: the need for adequate maintenance and logistical support. Speed: How Was Assault Airlift Operationalized to Support the Principle of Speed?

> Schaefer said: "We were looking for airspeed. The least amount of time you're in there with the enemy, mixing it up, the more survivable you are. Get in, get out. Get the job done and get out of there."[988]

Unfortunately, the plan for Operation EAGLE CLAW was planned "to unfold over days," not minutes or hours, making it "inherently slow."[989]

The element of speed is best supported by air mobility when aerial refueling and the versatile and flexible maneuver of air mobility are capitalized on. Aerial refueling allows speed to be maintained during the infiltration and exfiltration processes while they are ongoing. It can also be used to increase the duration, versatility, flexibility, and maneuver of an aircraft during actions-on-the-objective. The versatility, flexibility and maneuver of air mobility are the qualities it provides that make it so effective at minimizing the required duration of exposure a SOF direct-action mission force must

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987 Rudy Giuliani, "The Republican Convention Transcript: Former New York Mayor Rudy Giuliani," National Public Radio, September 03, 2008, http://www.npr.org/templates/story/story.php?storyId=94254610

988 Whittle, *The Dream Machine,* 59–69.

989 Quote from Professor Arquilla. Dr. John Arquilla, Thesis Review, Naval Postgraduate School, Monterey, CA, 2017.

accept, thus directly diminishing the area of vulnerability the force is subject to throughout mission execution.

Aerial Refueling: Aerial refueling was not utilized during the plan for Operation EAGLE CLAW. This is unfortunate, as aerial refueling can help to speed SOF direct-action missions along without unnecessarily increasing risk. Instead, the plan called for multiple prestaging and marshalling locations behind enemy lines where the mission force was vulnerable to the threats of the enemy and the environment. Planning in such logistical centers in hostile territory decreases the speed with which the mission can be executed in favor of perceived logistical ease. This logistical decision cost the assault force a great deal of flexibility and significantly increased the chances of mission failure at the ground refueling point. The use of aerial refueling could have avoided this pitfall.

Aerial refueling does require tanker aircraft capable of clandestine enemy airspace infiltration, detection avoidance, and threat avoidance. Receivers may only have a limited amount of fuel when it departs the objective area, and its limited resources may have pushed even further due to operational contingencies executed up to this point in time. The critical fuel from the tanker is essentially liquid flexibility for the receivers, who are able to convert it into options for the assault force. However, the MC-130 aircraft already utilized could have fulfilled this role.

McRaven provides little in his masterpiece, *SPEC OPS*, with regard to Operation EAGLE CLAW. This may seem somewhat surprising considering the powerful impact the operation had on the SOF enterprise he would grow to lead. However, McRaven's light touch on the subject may have actually been driven by the remaining reverberations left in its wake at the time of his writing. He addresses it briefly with the introduction of his "six principles of special operations" to demonstrate "how the principles of simplicity, security, and repetition" are all intrinsically linked as synergistic elements of relative superiority.[990] He also mentions it while discussing the Son Tay raid in the following footnote:

[990] McRaven, *SPEC OPS*, 8, 9.

> While attached to the Holloway Commission investigating the failed Iranian hostage rescue mission, Lt. Gen. Manor asked one of the planners why the C-130s and helicopters did not fly in formation to the first staging base at Desert One He was told that this concept wouldn't work because the airspeeds between the C-130 ad the HH-53 were not compatible.[991]

Of course, Manor knew this was not an accurate assessment because his HH-53's had flown in a draft position with his MC-130s at 105 knots during Operation KINGPIN during the Son Tay raid. This highlights the need for technical expertise at the inception level whenever air mobility is considered as an integral part of a SOF direct-action assault mission.

It is not apparent why air refueling was not considered as part of this initial plan. The Holloway Commission finding suggests a lack of tactical expertise in the mission inception phases. It is possible that those involved in the planning process were not aware of the tactical advantages this tactic provided or that they were more familiar and comfortable with the ground refueling option. If the planners were not familiar with air tactics, it is probable the significant tactical advantage provided by aerial refueling was merely overlooked as they looked for ways to marshal the mission force in support of the ground assault force.

An argument could be made that the technological capabilities of the day did not allow the helicopters and tankers to penetrate the extreme distances required to reach Tehran in a single period of darkness. It is granted that the trip was over 1000 miles long inside of Iranian airspace. It is also granted that the maximum available airspeed of the H-53 helicopters, whether they be of the CH, MH, or RH variants, mandated the journey would take a minimum of three to four hours each way and would require aerial refueling in order to accomplish in this period of time without a ground layover for refueling. Still, the advantages of air refueling as opposed to ground refueling cannot be overlooked. It would have been feasible to have MC-130 tankers drag or refuel a helicopter assault force at multiple points to complete a one or two-stop mission plan. This would have been preferable to the utilized "remain over day" plan. Quickly crossing large distances only to

991 McRaven, 306.

stop for hours on end inside enemy territory, where discovery is inevitable with time – as it was at Desert One, only ensures the element of speed is sacrificed in order to accommodate incomplete tactical logistics. The risks associated with aerial refueling, though substantial, are proportionally lessened when compared to the complete vulnerability a force in waiting experiences during ground refueling operations in hostile territory.

Versatility, Flexibility, and Maneuver: These capabilities of air mobility were never capitalized on during the Iranian hostage rescue attempt. Timely and direct infiltration of the force was never accomplished. It is probably true that the direct and timely exfiltration from Desert One probably prevented further losses to the assault mission force. Had the assault force been required to walk, drive, or evade from the Desert One location, their chances for survival would have quickly diminished. They would have almost assuredly been captured or killed.

It can be said that versatility allowed Schaefer to have the option to hover-taxi his damaged aircraft following its landing gear damage. This versatility allowed the aircraft to be utilized when damaged in a fashion that would have precluded any land-based transportation from functioning. If it had been a truck that had its tires ripped from their rims, the vehicle would have been useless until the damage was repaired. While the Sea Stallion Schaefer was piloting could have also been brought back into readiness by repair, it was versatile enough to remain mobility without the repairs. Of course, the environmental elements associated with the hover-taxiing process led to the catastrophic events aforementioned, but this sequence of events should not be mistaken as a reason to forego recognizing the importance of versatility as an asset that air mobility forces can bring to the fight.

4. Surprise: How Was Assault Airlift Operationalized to Support the Principle of Surprise?

Direct or Offset Delivery: Air mobility had the capacity to increase the element of surprise at the time and place of the assault forces' choosing. It could have been used to deliver precise, immediate, and timely mass onto the objective area, amplifying the

impact of the assault force's expenditure of surprise. But this capability was not utilized. It was not even planed for. The lack of diversified technical expertise in the planning phase meant that the advantages and capabilities of the functional assault force components were not utilized to plan for the largest-possible impact of surprise. Access to the objective area was planned to be achieved through a series of intermediate staging locations and land-based methods that effectively mitigated air mobility's contributions. These were methods familiar and comfortable for the ground assault force, but they were not the most effective means of achieving relative superiority. The aircrafts' inherent speed went unutilized as they were scheduled for multiple logistics stops along the way. Only hypothetical analysis can be made regarding what might have happened had the mission continued. And as Andrew J. Bacevich stated in *America's War for the Greater Middle East: A Military History*, "Whether [the] plan could possibly have succeeded is a moot point. It never got past phase one."[992] What is certain is that air mobility was not given the opportunity to exercise the relevant portions of its portfolio to increase the impact of surprise. This oversight decreased the probability of achieving relative superiority, rescuing the Iranian hostages, and mission force survival.

Secure Beyond Line of Sight Communications: Operation EAGLE CLAW illustrates that diminished communications, either through lack of equipment or through operational mandate, can be detrimental for geographically extensive SOF direct-action missions. The initial mission requirements levied on the mission planners included radio silence. This was primarily a means of ensuring the operational security of the multi-day mission. The planners and leaders did not want to risk compromising the hidden presence of the assault force.

This parameter turned out to be too stringent and limiting on the mission force. It did not allow them to adequately communicate developing threats to their force, to include the presence of the haboob, means of mitigating it, aircraft mechanical fault information, asset resiliency during the mission, or even the dramatically unsettling exposure of the initial mission force elements who arrived at Desert One. Each of these

[992] Bacevich, *America's War for the Greater Middle East,* xix-xxii.

was critical pieces of information that were not shared with other members of the assault force who could have benefited from the information. Vital information was missing when decision makers were assessing how best to proceed. The result was an unsynchronized and discombobulated execution by the mission force.

Because of the failure to recognize adequate communications as a tenet required for operationalization, the aircraft were never properly outfitted with long-range and securely integrated communications gear. Of the gear that was outfitted, it went underutilized. The C-130s were only partially equipped with the long-range (beyond line of sight) hatch-mounted antenna, and only the lead RH-53D Sea Stallion was equipped with a long-range radio.[993] The rest of the C-130s and the majority of the helicopters were not equipped with secure satellite communication radios. Their inability to communicate with the rest of the force was, in all probability, a causal link in the failure chain that led to the decision to abort the mission.

Had the helicopters been able to communicate securely with Kyle when DRAGON 01 first encountered the haboob, the helicopter formation could have, in all likelihood, better prepared to overcome this environmental threat. They could have asked the MC-130s to provide weather reports or to search for cleaner air. They could have even been guided in on the MC-130's wing to penetrate the weather, had those experienced in such specialized aerial capabilities been present to devise such a contingency plan during the preparation phase of the mission. Sadly, this option was not conceived or available due to a lack of technical knowledge and prohibitive communication mediums.

To be clear, it is possible for radio silence to be utilized when mission conditions warrant or demand it. However, it requires preplanned meetings at places and times. These arrangements are inflexible to dynamic constraints that may yet be placed on a mission force. Changes in an element's ability to comply with preplanned procedures may stem from the vast distances covered, environmental disturbances, or enemy interferences. The rudimentary tactic of communication silence is not ideally suited for the continued synchronization of a mission force that may be geographically dislocated

[993] Guidry, "Operation EAGLE CLAW."

for an extended period of time and across a dynamic environment. As such, it should not be relied upon as a primary communications method if other means are available or if the situation demands dynamic communications to mitigate circumstances. Recognizing this limitation means recognizing the importance of maintaining relative superiority throughout the execution phase, not merely for actioning the objective.

Basic communication tactics such as reliance on prearranged procedures and maintaining radio silence are less suited for the synchronization of mission force functional components that may need to adjust or iterate to an alternative plan in order to mitigate changing circumstances. That is why newer and more effective communications methods are constantly being developed. Radio silence has a tactical use, but it should not be relied upon as the primary means of ensuring operational security above operational functionality. The balance between the two must be weighted. Failure to maintain synchronization of the mission force can lead to operational breakdown with assets left, or lost, behind enemy lines, to say nothing of the objective itself. Failure to maintain operational security could lead to an ambush and reduced probability of mission force survival.

The closer one comes to the moment when surprise will be exploited, the more force synchronization matters and the less likely an enemy will have enough time to mount a reasonable resistance. The synchronization of the mission force as this moment approaches, as well as during contingencies that may follow, is vital to the entire endeavor.

Advanced technological communication methods that are capable of secure, integrated, and beyond line of sight communications should be used to ensure a more synchronized assault force effort. More basic methods, such as prearranged meetings, should be backed up by these long-range and securely integrated systems. The absence of this capability may allow interruption of one critical assault force component to lead to a synchronization breakdown that disrupts the entire operation. Additionally, permissive operational environments allow more advanced communication methods to synchronize highly sophisticated assault force tactics: tactics not possible without joint air and ground assault force efforts.

McRaven's proverb, "surprise is gained through deception, timing, and taking advantage of the enemy's vulnerabilities," echoes in the positive aspects of Operation EAGLE CLAW.[994] The air assault force utilized tactical routes and methods to insert the mission force undetected into the adversary's territory. Their arrival at Desert One was clandestine, if not short lived. The element of surprise was complete in its employment up to this point. In fact, the enemy did not even know the assault force was present until two hours after they had departed Iranian airspace. "No Iranian alarm was raised until at least two hours after U.S. crews had left Iran," the Associated Press reported in *USA Today*.[995] The budding desire for assault airlift had made its presence known in the manifestation of this small amount of potential that at least approached toward the ability to capitalize on the element of surprise. Although it never fomented into the opportunity to fully yield an explosive impact, it did contribute to the survival of the remaining elements of the force following the tragedy at Desert One. Had the mission force been exposed prematurely the Iranians would have had ample opportunity to bring conventional assets to bear against them at Desert One. This is why the tanker truck explosion, and the accompanying fireball, was such a potentially costly mistake. It threatened to eradicate one of the only maturing principles of relative superiority working in favor of the assault force. Operation EAGLE CLAW highlights the importance of maintaining the element of surprise for as long as possible while also distinguishing its fragility.

5. Survivability: How Was Assault Airlift Operationalized to Increase Mission Force Survivability?

The Desert One disaster directly affected the perceived relationship between overall mission success and the survivability of the SOF direct-action mission force. The importances of the lessons learned from this catastrophe are easily noticed. "There have been few events in American history that have had such a profound impact on the

994 McRaven, *SPEC OPS*, 17.

995 Associated Press, "Jimmy Carter: Iran Hostage Rescue Should Have Worked," *USA Today*, September 17, 2010, https://usatoday30.usatoday.com/news/washington/2010-09-17-iran-hostages-jimmy-carter_N.htm.

American psyche as the Iranian hostage crisis of 1979–1981," Waugh asserts.[996] But while many analysts, including Waugh, focus on the doctrinal application, organizational, and strategic implications of the lessons learned at Desert One for SOF, they fail to focus on the glaringly obvious relationship between survivability and overall mission success. Nonetheless, that relationship is once again demonstrated in this case study.

The inability for the air assault force to maintain the survivability of the assault mission force had not yet been compromised when the mission abort decision was made. Therefore, survivability of the force was not directly liable for the abortion of the hostage rescue mission, though inadequate mobility was the cause of abortion. Instead, survivability became responsible for catapulting a mission abortion into overall tactical and then strategic mission failure. Overall mission failure was assured when eight service members perished. The mission could have possibly even survived the loss of the airframes without precluding the possibility of reattempting the mission the next night or some other point in the future. However, once these eight men died, the mission's fate was sealed. The emotional and physical losses to the mission force were insurmountable. It is true that preparations were made to perform follow-on rescue attempts, but there is evidence to suggest that these efforts were not substantially supported well enough to warrant their successful execution.[997] These subsequent efforts only demonstrate how the Carter administration, whose survivability depended on a solution to the Iranian hostage crisis, was willing to have military personnel accept a great deal of unmitigated risks to develop technical solutions to overcome the desperate situation the administration faced.

This desperation for a solution may also have been a contributing factor to the drive that sent the mission force into a lethal scenario it did not have the resources to mitigate. The survivability of the force was compromised because of a lack of environmental intelligence and the associated preparations that could have mitigated these threats had they been known. The mission had already been aborted by the time BLUEBEARD 03 crashed into REPUBLIC 04, but the mission force remained intact. No

[996] Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

[997] Guidry, "Operation EAGLE CLAW;" McNally, "CREDIBLE SPORT."

personnel had been sacrificed at this point. It was the crash and associated deaths that ensured the mission as a failure. This specific incident was the primary detractor from the survivability of the mission force.

During Operation EAGLE CLAW assault airlift was not achieved. The senior leaders and planners had understood that aircraft could provide a means to penetrate Iran, but they had not exuded the leadership necessary to fill the large gap between the existing organizational structures to operationalize these assets. They understood that aircraft were part of the solution they were looking for, but they did not understand the difference between having aircraft and being able to produce assault airlift. They did not understand how to attain the capabilities they sought. They added aircraft to an inadequate plan in the hopes that this would suffice to make it effective. Instead, the presence of the aerial platforms increased the costs associated with the mission. The presence of the aircraft did not significantly increase the probability of achieving the mission's objective, as they had not been empowered or prepared to face the environment they would be operating within. They were unprepared to mitigate the haboob, their communications shortcomings, their inter-force integration fractures, or the diverse ancestral roots of the diversified assault force. These air assets were only able to contribute to the survival of the mission force to a limited degree: to the extent of the clandestine delivery and extraction of the assault force to the intermediate Desert One location. The small amount of relative superiority and clandestine penetration the assault force did achieve were owed solely to the burgeoning efforts of the airlift assets. These aircraft were not able to surmount the faults of the plan or the challenges of the environment they were immersed in. But, following the crash, the remaining aircraft were able to extract the remaining assault force members, ensuring their survival. This was an intrepid last-ditch effort at retaining the survivability of the residual assault force members.

Due to the lack of adequate integration and synchronization, the air assets present were not able to fully contribute their inherent capabilities toward the survivability of the assault force and mission success. Instead, the presence of the aircraft drove up the risks, costs, and depths associated with being isolated behind enemy lines. The lack of

synchronization and integration contributed to the demise of the mission force's survivability and overall mission failure.

Military action to rescue the hostages was considered to be a last resort measure by the Carter administration.[998] There was a high probability that the hostages themselves could be harmed if a direct-action recue were attempted or that innocent Iranians would become casualties of the effort. "It was assumed by many in the U.S. and abroad that a rescue mission would result in a large number of casualties on both sides," Waugh relayed.[999] "The U.S. military estimates included as many as thirty deaths among the rescuers, fifteen among the hostages, and possibly hundreds of Iranian civilians," Senator Abraham A. Ribicoff said in "Lessons and Conclusions" of the 1985 book, *American Hostages In Iran: The Conduct of a Crisis,* by Warren Christopher, et al.[1000] Waugh reinforces the point: "The 'best case scenarios' provided by both the Department of Defense and the CIA predicted significant casualties among the hostages."[1001] These quotes show how this plan was developed to include casualty tolerances despite the primary restriction on the plan that it would incur no Iranian civilian or military casualties and that the hostages and rescue force must be returned safely.[1002]

Waugh suggests this distraction from the preservation of life was due to the perceived necessity of retrieving the hostages at any cost. "The issue of hostage safety was lost in the search for alternatives, and the Carter Administration chose to adopt an option that would have seemed to be antithetical to the hoped-for conclusion."[1003] If this is the case then it is highly probably that even if the mission had succeeded neither the air or ground assault forces would have been able to compensate fully enough to achieve the survivability of the mission force, the hostages, and the Iranians near the objective area.

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998 Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt," 33

999 Waugh, Jr, 33–34.

1000 Abraham A. Ribicoff, "Lessons and Conclusions," in Warren Christopher, et al., *American Hostages in Iran: The Conduct of a Crisis* (n.p.: n.p., 1985), 382–395.

1001 Waugh, Jr, 37–38.

1002 Guidry, "Operation EAGLE CLAW."

1003 Waugh, Jr, 37.

Medical Support: The casualty evacuation plan for Operation EAGLE CLAW was porous from the start. The initial plan relied on C-141 Starlifters to provide medical evacuations from Manzariyeh Air Base following the actions-on-the-objective during Night Two of the operation. This was clearly focused on providing medical support to the rescued hostages and any injured members of the assault force during the actions on portion of the mission, as stated by Guidry.[1004] Until this portion of the operation, no specific casualty evacuation assets had been incorporated into the plan. Instead, the inherent flexibility and versatility of the vertical lift platforms, the helicopters, coupled with the long range capabilities of the C-130s was being relied upon to fill this gap. This is not entirely unusual for SOF aviation assets, but it may have been a bridge too far to expect this level of support from converted minesweeping pilots who had already been challenged to meet the basic mission requirements.

Despite this, it is probable that the assault force plan to utilize helicopters and C-141s from Manzariyeh Air Base for casualty evacuation would have contributed to the survival of the mission force and the hostages they were attempting to rescue. Conversely, it also probable that this would have been overshadowed by the number of casualties a "successful" raid would likely produced.

The air assault force during Operation EAGLE CLAW can be credited with providing on scene medical support and expeditious casualty evacuation. Unfortunately for those who perished in the crash at Desert One, medical evacuation was not sufficient to ensure their survival.

During Operation EAGLE CLAW, the composition of the force may have been a contributing factor to the survivability of the force, or the lack there of. What sets SOF aviation assets apart from the RH-53 minesweeping crews and other conventional forces is the same thing that defines SOF in the first place: the mission requirement. The mission of SOF direct-action aviation support requires infiltration of enemy airspace, a job not normally accomplished by other military department conventional transportation assets. This requirement drives the authority and resource requirements necessary to

[1004] Guidry, "Operation EAGLE CLAW."

achieve these means. These authorities translate into the requirement to mitigate as much of the risk as possible, to avoid or avert any unnecessary risk, and to accept whatever risk remains as a necessary requirement to accomplish the assigned mission tasking. The funding for specialized training and the funding for specialized equipment fall hand-in-hand with these risks. A rather simple example may serve to illustrate the point.

Consider the difference between a conventional C-130 unit versus a special operations MC-130 unit. The MC-130 is essentially a standard C-130 that has been augmented with additional equipment to provide an additional level of threat mitigation, as well as a crew with specialized training for both the equipment and tactics to also mitigate these threats. Both units are required to operate in a "low-level" environment. However, the MC-130 must be able to do this behind enemy lines and in unfriendly airspace. This means the MC-130's environment is inherently more lethal than that of the conventional C-130. To mitigate these lethal risks, the MC-130 comes with certain equipment that is expensive and specialized, equipment that is not necessary or feasible for installation on all C-130s. Furthermore, the equipment itself is useless without the training to use it. And the training to use it is not perfected overnight. Most Air Force Special Operations Forces (AFSOF) pilots go through conventional aircraft training, which can take six months after the year they spend in undergraduate pilot training. After this, SOF pilots go on to train for an additional six months to familiarize themselves with the specialized equipment and tactics they will rely upon to keep themselves and the specialized teams they support safe from environmental and enemy threats. All of this is accomplished before a SOF aviator ever reaches his or her unit. By the time they get there, they have almost two years of specialized training preparing them to meet the challenges they will face. And this training is only the beginning. Upon arrival to an operations unit, these aviators will go on to begin the process of competitive training selection to ready themselves for missions that might come their way.

The conventional C-130 could fly the same mission as the MC-130, but it would be accepting a larger level of risk and would thus be subjected to a lower probability of achieving mission success. A conventional asset would be forced to fly at higher altitudes without a terrain following radar, exposing themselves to an increased probability of

detection by enemy forces. The conventional assets may be constrained by communications and defensive systems that are less capable than those onboard specialized SOF airframes. Because of the requirement to clandestinely infiltrate enemy airspace, the MC-130 is required to operate equipment that allow it to penetrate threats that would be lethal to the conventional C-130. This does not mean in any way that the SOF assets are "better" than the conventional assets, but it does mean they are more capable at protecting survivability in their own niche. Conversely, utilizing an MC-130 for a C-130 logistical support mission may be counterproductive, as the conventional C-130, being unladen with the great deal of specialized equipment aboard the MC-130, has a higher carrying capacity and can thus transport more cargo. Both aircraft are designed to succeed in their own realm. Either aircraft can provide air transport for a specialized ground force. However, specialized SOF aircraft and their crews are specifically designed and trained to increase the survivability and capability of the assault force they are a part of.[1005]

Colonel Powell's words echo to life: "Flying isn't inherently dangerous, but it is incredibly unforgiving." Aviation is unique because flight itself can be incredibly unforgiving. Unlike ground warfare, aviation transpires in a medium humans are ill adapted to operate in. An enemy need not hit an aircraft to achieve their objective. Aircraft are operated in an environment that is so naturally unforgiving that an enemy merely needs to distract the aircrew long enough that they fail to take the necessary precautions to keep themselves alive.[1006]

[1005] SOF assault airlift platforms are generally able to exercise self-sufficient combat search and rescue extractions, something that is not usually required of conventional assets.

[1006] An example or two may assist in understanding this concept of "unforgiving, not dangerous." First of all, numbers have meanings and misinterpreting them can lead to consequences. If one misreads one's watch, one might be late. One's boss might be angry that one is late. There are consequences. Yet, these types of errors can have dramatically increased consequences in flight. Misreading an airspeed or altitude gauge may have lethal consequences, something that is generally not as severe in other transportation mediums. The ground is very unforgiving. Unlike a time that passes one by, the ground insists on being met with unforgiving force if certain conditions are not adhered to for the sake of ensuring a safe landing.

Two-Way Mission: Operation EAGLE CLAW makes a difficult case to study when ascertaining whether air mobility contributed to making a two-way mission possible. On the one hand, it was a hostage rescue mission. It was inherently designed to be a two-way mission. Retrieval of the force and the objective were paramount to mission success. On the other hand, one cannot ignore that the only lives lost at Desert One were onboard the mishap aircraft. Air mobility did contribute to their loss, and this cannot be forgotten. This demonstrates how air mobility cannot fully compensate for an overly complex plan, the lack of environmental intelligence, or the insistence on utilizing it as a supporting asset. Instead, air mobility should be institutionalized, along with intelligence gathering, at the outset of a mission, to ensure both its capabilities and limitations are planned for throughout all stages of a mission.

6. Synchronization: What Factors Were Critical to Operationalizing the Joint Mission Force?

Leadership: Radvanyi cited "command and control" as one of the top three causal factors explaining the failures of Operation EAGLE CLAW.[1007] The leadership required to synchronize the disjointed organization and operationalization challenges encountered during Operation EAGLE CLAW were insufficient to surmount the gap between the forces at hand and the integration of air and ground forces that would have been required to achieve mission success. "The lack of a unified military force to deal with hostage situations outside of U.S. borders turned out to be a significant problem," Waugh reminds, hinting at how devastating it was for such a complicated plan to be attempted by

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Another example is the narrow margin of acceptable-error in many flight regimes. If a friendly military aircraft is engaged by a ground-to-air threat while on short final to land, the enemy need not hit the aircraft to succeed. The enemy merely needs to disrupt the normally-safe flight regime of the aircraft. If the evasive maneuver required to save the aircraft causes the aircraft to depart the narrow space of safety it treads between the delicate limits of power, speed, bank angle, yaw, pitch, wind, temperature, and altitude, damage to the aircraft can occur. Departure from a safe flight regime could easily result engine over-torque, a hard landing, or an over-stressed condition of the airframe in its configured state. The asset is essentially removed from combat service. It may interrupt the combat readiness of the crew. The landing field may necessarily be closed for repairs to the landing surface. All of these repercussions represent threats posed by the enemy: not directly, but indirectly. By disrupting the safe operation of the aircraft, the enemy can get a "win" without directly striking the aircraft. Landing an aircraft is not necessarily dangerous, but the consequences of deviation from safe-regimes, even when necessarily warranted, may prove costly.

[1007] Radvanyi, "Operation EAGLE CLAW."

such a dissonant force.[1008] When SOF direct-action missions present themselves, leaders must be able to synchronize the elements from the organizations currently at hand to achieve operational effectiveness. Leaders will always benefit when these organizations are more robust and tailored to meet the demands of the task at hand. Nonetheless, even well-oiled organizational structures rely on sound leadership to synchronize their employment alongside other organizations to accomplish goals. During the 1980 rescue attempt, there simply as not enough focus at the leadership level at synchronizing the organizational gaps. Instead, the focus was on making sure that every DOD service department had a role to play.

Cohen and Gooch, looking at longer campaigns, recognize that soldiers often have little control over the political and environmental contexts surrounding the missions they embark upon. "Why they fight, when they fight, and very often where they fight are the decisions over which they usually have little control, for they lie in the province of politics."[1009] And while these factors can diminish the probability of achieving military success (or make it more challenging to achieve), it is not seen as an excuse for failure.[1010]

Who were the most influential leaders in Operation EAGLE CLAW? An argument could be made for the commander-in-chief, with his continued pressure to create a military solution within constraints that precluded the usual use of the assets that were available to accomplish the mission. Waugh describes President Carter's observed investment and handling of the event in his journal article, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt and its Implications for Conflict Management," in which he said the following:

[1008] Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt," 36.

[1009] Cohen and Gooch, *Military Misfortunes,* 23.

[1010] Cohen and Gooch expand on this concept when they state:

> "For although solders may be bound by decisions over which they are unable to exercise any control, they are not bound hand and foot. Their options may be limited, but opportunities still remain for them to outthink, outsmart, or outfight their opponent – or at least to put up a good enough show to salvage honor and reputation. In other words, failure lurks at many levels." Cohen and Gooch, 24.

> President Carter utilized a "rose garden" strategy, in which he declined to campaign actively for reelection while the hostages were held … [it] was intended to impress the public with Carter's attention to the business of the presidency, including the hostage crisis. The strategy, in fact, may have attracted greater attention to the hostage crisis and increased the President's political investment in its resolution. When the rescue failed, Carter—hoping to minimize the political damage—reviewed tapes and followed the example provided by President John Kennedy's explanation of the Bay of Pigs fiasco to the American people in 1961.[1011]

USA Today described the damage to Carter's reelection campaign after the tragedy at Desert One as devastating:

> Carter mostly blamed his election loss on his failure to win the release of U.S. hostages held captive in Iran … people realized the hostages were not coming home. Undecided voters were moving almost entirely to Ronald Reagan.[1012]

An argument could be made that General Vaught, the operational Joint Task Force Commander, was the most influential leader during of the planning and preparation of Operation EAGLE CLAW. Indeed, his contributions were notable and large. It was no small effort to attempt to build and operationalize a hostage rescue force essentially from scratch. But his interactions with the mission force were less significant (or at least only indirectly felt) during the mission's execution (see Figure 114).

[1011] Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt," 36.

[1012] Associated Press, "Jimmy Carter."

Figure 114. Lieutenant General James B. Vaught, Joint Task Force Commander for Operation EAGLE CLAW[1013]

However, the one individual whose importance is continually highlighted by those who study this event is Colonel Beckwith, commander of Delta Force and the most unwaveringly persistent leader on the ground at Desert One (see Figure 115).

Figure 115. Colonel Charlie A. Beckwith, Commander of Special Forces Operational Detachment – Delta during Operation EAGLE CLAW[1014]

[1013] Adapted from Michael Smith and Ettie Newlands, "Conway Native Lieutenant General James Vaught Fought for Our Freedom," myHorryNews, 24 Sep 2013, https://www.myhorrynews.com/news/local/horry_county/conway-native-lieutenant-general-james-vaught-fought-for-our-freedom/article_268ac8ca-22e6-11e3-b4ee-0019bb30f31a.html; Guidry, "Operation EAGLE CLAW."

Bowden relayed his own insights into Beckwith:

> It had not been lost on the other commanders, most of whom outranked Beckwith, that the pugnacious colonel regarded them all as inferiors, as supporting players. The pilots, the navigators, the air crews, the fuel-equipment operators, the Rangers, the combat controllers, the spies in Tehran, even the generals back at Wadi Kena—they were all ordinary mortals, squires, spear carriers, water boys. Their job was to serve Delta, to get the colonel and his magnificent men into place for their rendezvous with destiny. All along, Beckwith had been impatient with and suspicious of the other services and units involved; in his eyes, they all lacked experience, nerve, and skill. So now, when things began to go sour, Beckwith felt not just disappointment and anger but contempt.[1015]

These perceptions about Beckwith do not necessarily mean he was incorrect in his professional assessments or that his commitment, duty, or loyalty was in any way tainted. But they do lead one to acknowledge the fracturing nature of conventionally ancestral backgrounds when these attitudes are allowed to persist in a joint environment. Beckwith perceived conventionally dissonant functional elements of the assault force to be inferior to his own. This perception disallowed any contribution his leadership could have had toward the integration of other functional assault force components. Without listening to and addressing the pertinent concerns of his counterpart assault force components, Beckwith judged their perturbations to be due to a lack of moral fortitude.

In situations like this, the unfamiliarity of leaders or critics with the unforgiving nature of air operations can sometimes lead to less than informed perspectives. Lack of familiarity can lead an observer to ascertain that air assault force leaders are risk averse in comparison to ground assault force leaders. On an individual level, this argument could be made in either direction, but on large this stereotype is simply not the case. On the contrary, assault airlift forces execute their mission in a very unforgiving environment where the risks can be substantially magnified. These risks can be amplified further if

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[1014] Adapted from Phil Walter, "Leadership in Action: Colonel Charles A. Beckwith," The Military Leader, accessed October 18, 2017, https://www.themilitaryleader.com/leadership-in-action-colonel-charles-a-beckwith/.

[1015] Bowden adds, "Beckwith, a brave and commanding soldier, was a big, gruff man whose energy filled a room—and he had flaws as outsized as his virtues. He was a difficult man, proud, tough, and at times arrogant and capricious." Bowden, "The Desert One Debacle."

relevant details are overlooked. Aviation is a regime in which both rewards and consequences are played out on an exaggerated scale. The rewards for success can be large, while the consequences for failures or oversights can be quite costly. Expertise in the functional arena of flight may seem to be risk aversion to an outsider who is less familiar with the equipment and environmental limitations of the flight regime, but this is a misperception that can be overcome with education and the foundational relationship pillars of trust and credibility.

Waugh said a "failure to provide for adequate critical review prevented the identification of weakness in the operational plans," for Operation EAGLE CLAW.[1016] His assessment seems accurate, but while this sort of analytical mentality is easily levied against the plan associated with Operation EAGLE CLAW, it is seldom brought to bear against the leadership involved. The disdainful attitude Beckwith had toward the air assault elements is obvious from any number of sources one may choose to examine, from Whittle's account of his interaction with Schaefer to Bowden's recount of the event.[1017] Across the sources Beckwith's attitude and actions display that he considered the transportation assets to be at his disposal in a supporting role, yet inferior to the elitist force he had himself created in Delta Force. As with any environment, arrogance and ego, while uncomfortable to examine, can be absolutely detrimental when allowed to interfere with the synchronization of a mission-oriented task force.

This is far less a personal critique and instead a professional one. Professionals are expected to put aside their personal emotional investments and focus on the role they have been contracted to perform as it relates to the society they defend. Dr. Bradley "B.J." Strawser of the Naval Postgraduate School discusses these dilemmas for professionals in his postgraduate class entitled "Critical Thinking–Ethical Decision

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[1016] Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt," 34.

[1017] In addition to the other sources utilized above, Andrew J. Bacevich describes Beckwith as an arrogant man, prone to emotional outbursts. He is specifically described as "the swaggering, irascible commander of the commando task force." This language is quite harsh and seems emotionally laced, but that seems to be typical of the author's style of writing. In any case, any single description will necessarily fail to fully encapsulate the infinitely more complex nuances, both positive and negative, of any leader. A more complete understanding is gleaned referencing the breadth of multiple available sources. Bacevich, *America's War for the Greater Middle East,* xix-xxii.

Making."[1018] He discusses how society has historically elevated the professions of clergy, lawyers, and medical doctors by allowing them certain privileges that are not given to everyday members of the society at large. Each of these professions is given the opportunity to serve society and they are given the extra-ordinary allowances to make that service possible.[1019] The same is true in modern times of military officers. Military officers, in particular, are entrusted with the means, methods, and authority to protect our national interests. Society has a contract with them, if you will, that says they will use the resources and authorities for the collective best interest of the society they represent. Military service members are given the authority to take lives, but not indiscriminately. They may only perform this allowed authority under the strictest of circumstances, in accordance with the laws of war, the rules of engagement and international conventions. It is wrong for a service member to take a life under any other circumstances, such as to obtain personal gain or to prosecute a personal agenda.[1020]

This same principle must be maintained when one seeks to understand how a military professional should manage the resources, including personnel, equipment, authorities, funding, and organizations, at their disposal. Beckwith had a great deal of resources made available to him by General Vaught and President Carter. However, his personal bias towards the importance of the ground assault force's role in mission success resulted in an inability to recognize the critical role the other resources played aside his own. Whittle explained how this perception had been developed during Beckwith's experiences of the Vietnam War. There, Beckwith had seen helicopters used for critical casualty evacuations, but he had also seen them fail. He had personally been involved in several helicopter crashes himself.[1021] Beckwith knew there was a probability of failure due to the mechanical reliability issues of aircraft. He allowed this reliability deficit to

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[1018] B. J. Strawser, "Critical Thinking–Ethical Decision Making," (Lecture, Naval Postgraduate School, Monterey, CA, May 10, 2017).

[1019] Strawser, "Critical Thinking."

[1020] The ethical considerations of professionals and their mutual obligations with society are concepts adapted from the teachings of Dr. B.J. Strawser's course, "Critical Thinking–Ethical Decision Making," at the Naval Postgraduate School. Bradley "B.J." Strawser, "Critical Thinking–Ethical Decision Making," (Lecture, Naval Postgraduate School, Monterey, CA, 2017).

[1021] Whittle, *The Dream Machine,* 59–69.

diminish the importance of the asset in achieving mission success at Desert One. Even Beckwith's eventual call for mission abortion was based on his perceived need for every last ground force assaulter, not on his recognition of air mobility as a prerequisite to the survivability of his force and its contribution toward overall mission success.

It is possible that Beckwith had been exposed to a risk-averse culture in air mobility during the Vietnam War, but it is also possible he mistook inability for a lack of desire to perform. It is possible that the conventional helicopter pilots he flew with were less than motivated to charge into combat situations that their aircraft were ill equipped to handle. However, one should be cautioned to not mistake tactical expertise that precludes proceeding with a desired course of action for cowardice or risk-aversion. Just as possible is the scenario that Beckwith had been exposed to aviators who wholeheartedly desired to provide as much support as possible to the ground forces they worked with in Vietnam. But desire alone is not equivalent to a situation or an environment that is amiable to the tools one has on hand to mold it. The laws of physics are not susceptible to hope or desire. If a torque shaft is unable to provide more than a set amount of lifting capability, then no amount of desire or authorization will allow it to overcome that limit. Insisting on doing so merely ensures the aircraft will find itself in a less than desirable aftermath: ineffective, damaged, disabled, or destroyed. Whether Beckwith was susceptible to confusing inability to produce the desired results with lack of moral character during Vietnam is not necessarily relevant, but it could be a plausibly explanatory reason for his apparent disdain and distrust of the air mobility elements on the Iranian hostage rescue force.

It is also possible that the inability to perform is closely associated with a lack of moral factors for ground operators. Ground operators frequently must be pushed exceed their perceived limits in an effort to achieve more than they previously thought possible. They must be "broken down" in order to "build them up." This concept is not unique to ground operators and is shared by air operators and seamen alike. However, air operators and naval personnel push to achieve the finite limits of machinery. Aircraft limits are fairly calculable. On the other hand, the precision of fire or number of steps a soldier can carry may vary more wildly based on any number of other factors that are only

controllable by the soldier himself: the amount of sleep he has attained or the amount of hydration or rest he has had. In this case, the acquisition of these resources may actually directly relate to the moral character of the individual, resulting in a direct correlation between performance and moral character. The same cannot be said of a machine operated by a person where the machine's performance is more predictable. Having said all of this, it remains relevant to acknowledge that the moral character of operators, whether they be of the air or ground assault force, are critical factors when combatting the dynamic environment SOF direct-action missions are prosecuted in, as McRaven himself purported.[1022]

The bottom line is that leaders must either be familiar with the technical skillsets and the limitations of the assets they rely upon to accomplish their missions, or they must be able to humble themselves and defer to individuals with expertise who they trust. Leaders with enough time and gumption may also choose to become educated on specifics in order to wield assets more effectively. But the one thing SOF direct-action mission cannot afford are leaders whose attitudes fragment the nature of the joint force by belittling those whose backgrounds are not congruent with their own.

Organization and Operationalization: Cohen and Gooch warn that "it is in the deficiency of organizations that the embryo of misfortune develops."[1023] They recognize the importance of preparing for disasters at an organizational level. They understand the importances of developing institutions to produce capabilities that may be necessarily required before events requiring them actually occur:

> Foresight and planning can minimize the degree of damage suffered once disaster has occurred and hasten recovery. Specialist agencies come into action to cope.… The importance of such activity is so great that Form and Nosow maintain that 'organizational integration is the most crucial dimension in disaster performance.'"[1024] The parallels with the military world are obvious. Units which – for whatever reason – are good at responding to unexpected setback in a coordinated and effective manner

[1022] McRaven, *SPEC OPS*, 1–25.

[1023] Cohen and Gooch, *Military Misfortunes,* 57.

[1024] Cohen and Gooch quote this excerpt from "All the Inefficiencies of An Intelligence Service," Armed Forces Journal International 111:2 (October 1973): 47; Cohen and Gooch, 25–26.

> will be more likely to avoid disaster than those that fail to rise to the challenge.[1025]

By the time Operation EAGLE CLAW was conceived, it had been nine years since Operation KINGPIN and five years since the Vietnam War had drawn to a close. During that timeframe, the relatively robust and well integrated capabilities of the special operations MACV-SOG had been unceremoniously dismantled, reabsorbed into conventional capacities, and disbanded.[1026] The special operations forces of the Vietnam War era had represented a potential threat to the leadership, power, influence, and resources conventional forces required to perform their duties to protect the nation against existential threats. Sacrificing these resources to mission sets and objectives of non-existential natures, even if of strategic national importance, was against the mantra and dogma of the conventional mindset of the day. So, the relatively robust relationships and support structures once enjoyed by SOF had deteriorated to a state of dissolution. The models of "how" to operate were readily available, but the relationships to execute them were not. This was a lack of air and ground force synchronization.

Colonel Guidry flew DRAGON 01, the lead MC-130 for the rescue effort and later went on to command Joint Special Operations Command. He spoke of the dilapidated state of Special Operations Forces institutions in the decade following the Vietnam War, saying "anything that had the label 'special' got decimated." "We had very little capability" he recalled.[1027]

The lack of organizational support for Operation EAGLE CLAW was staggering. It affected the mission from inception until the bitter end. Waugh's observation captured the astounding lack of congruity: "There were no written plans covering the entire operation and no rehearsals to assure that the pieces fit together."[1028]

The command structure of Operation EAGLE CLAW never functionally identified or integrated the assault force in any meaningful fashion. Instead of separating the air

[1025] Cohen and Gooch, 25–26.

[1026] Adams, *U.S. Special Operations Forces in Action,* 116–150.

[1027] Guidry, "Operation EAGLE CLAW."

[1028] Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt," 34.

elements and ground elements based on their function and then integrating them for preparations and rehearsals, the task force was instead divided based on the conventional parent service of each participating element. The plan involved every branch and service in the Department of Defense and integrated them at abnormal levels, such as having Marine helicopter pilots flying Navy aircraft. While this structure may be appropriate for less joint and less integrated conventional forces, it is not conducive to the highly integrated and inherently joint atmosphere required for SOF direct-action missions. "*Ad hoc* units will simply not have the level of coordination and cooperation necessary for the most complex operations," Waugh warns.[1029]

For a SOF direct-action mission, the functions of a force must be focused on their contributing roles during the infiltration, actions-on-the-objective, and exfiltration portions of the mission. This usually requires a close internal cohesion among the air and ground forces, being functionally separated to ensure each of their viewpoints have a voice to air relevant concerns to the Joint Task Force commander.

Had the assault force been functionally structured with all air elements under a single joint air commander, it is possible their sense of purpose and focus would have allowed them to foresee with greater granularity the environmental and enemy threats they would face.[1030] It is possible, and highly likely, that they would have had a higher probability of success if they had been organized in a joint but functionally relevant manner, just a Cohen and Gooch observed regarding the Pearl Harbor disaster.[1031] Having a single joint commander over a SOF direct-action force that is organized based on functionality and logically integrated at the appropriate levels internally can increase the force's overall functionality.

An example of this misalignment is the unintegrated aircrew and airframe mismatch that led BLUEBEARD 06 to land immediately when it experienced the BIM malfunction. The RH-53D operating procedures, written by and for the Navy, did not

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[1029] Waugh, Jr, 37.

[1030] "The lack of an overall commander of the ground operation was also noted." Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt," 34.

[1031] Cohen and Gooch, *Military Misfortunes,* 54–55.

require grounding of the aircraft for the BIM malfunction. The procedural differences between the Marine and Navy checklists were never fully resolved, and the Marines maintained their CH-53 operating standards despite the fact that aircraft they were operating were slightly different than those they were familiar with. Their subsequent corrective action to the BIM alert could be attributed to the fact that Marine pilots were being asked to fly Navy helicopters on which they were not intimately familiar nor were they fully trained. This scenario displays how the lack of synchronization between the tasked organizations and the failure of adequate leadership to operationalize the miss-matched organizational structures can manifest operationally.

Waugh credits "faulty organizational design" as a primary factor accounting for the mission's failure.[1032] He also credits the failure of the mission with the restructuring of the special operations forces institutions to allow the structure employed today.

> The ill-fated rescue attempt six months into the hostage-taking has led to fundamental reappraisal of … the decision-making process within the military establishment…. The organizational design problem can … be alleviated by the creation of permanent response units under a unified command, with clear lines of authority and the delegation of operational decision-making responsibility to a commander close to the operation.[1033]

These clear lines of command and control may be something that has become clearer in the years since the establishment of USSOCOM in order to address this issue.

Integration of Air and Ground Forces: In the aftermath of Operation EAGLE CLAW, it became overtly apparent that the air mobility portions of mission execution had been inadequately formulated to allow mission success to be achieved. The failure represented "clear evidence of the inadequacy of U.S. special operations capabilities," Susan Marquis said in her 2011 book, *Unconventional Warfare: Rebuilding U.S. Special Operation Forces*.[1034] This recognition, though too late to avert the Desert One "debacle," did highlight the importance of specifically synchronizing air mobility into the

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[1032] Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt," 26, 32, 37.

[1033] Waugh, Jr, 26.

[1034] Susan Marquis, *Unconventional Warfare: Rebuilding U.S. Special Operation Forces,* (n.p.: Brookings Institution Press, 2011): 69–79.

assault force composition.[1035] Adequate mobility to infiltrate and exfiltrate are prerequisites to SOF direct-action mission success in all but the most *in extremis* cases. Yet, mobility had only been superficially synchronized with the ground assault force and the mission plan, and at too low a level of integration to achieve adequately robust mobility.

Operation EAGLE CLAW represented a low point in the integration of air and ground SOF. It was the "first joint mission of the U.S. military since Vietnam," and it suffered the inevitable consequences of being such.[1036] Beckwith learned the lessons of this tragedy, and he ultimately fully embraced the concept of a more inclusive joint force:

> "My recommendation is to put together an organization that would include Delta, the Rangers, the Navy SEALs, Air Force pilots, its own staff, its own support people, its own aircraft and helicopters. Make this organization a permanent military unit. Allocate sufficient funds. And give it sufficient time to recruit, assess, and train its people," (Beckwith 1983).[1037]

The assault force at Desert One was plagued by an inadequate plan, but in the end they both failed for the same reason. The environmental conditions were not adequately understood, leading to the ineffective operationalization of the air assault force resulting in both mission abortion and the subsequent catastrophe that took the lives of eight service members.

D. CONCLUSION

When Whittle interviewed Schaefer for his book, Schaefer agreed with his assessments regarding the importance of direct and reliable transportation as a prerequisite to mission success. "Schaefer said: 'We were looking for airspeed. The least amount of time you're in there with the enemy, mixing it up, the more survivable you are. Get in, get out. Get the job done and get out of there.'"[1038]

[1035] Bowden, "The Desert One Debacle."

[1036] "The Lessons of Operation EAGLE CLAW Part 2."

[1037] "The Lessons of Operation EAGLE CLAW Part 2;" Beckwith, and Knox, *Delta Force,* 207.

[1038] Whittle, *The Dream Machine,* 59–69.

Operation EAGLE CLAW suffered from a lack of adequate air mobility, a prerequisite for mission success. The inability of air mobility to perform during Operation EAGLE CLAW directly resulted in the detrimental loss of the mission force's survivability when eight of its members perished. The air mobility elements did not benefit from a preexisting organizational structure, nor did they receive the leadership, resources, or attention required to synchronize the assets obtained to fill this gap. The resulting operationalization of the air mobility forces was not robust enough to overcome even the unforgiving environmental forces they encountered, let alone increasing the survivability of the mission force once it would have been exposed to threats brought on by enemy defensive forces.

The causes behind this inadequacy were due to incomplete assessments of the conditions necessary for mission success, as Waugh pointed out.[1039] These assessments should have encompassed both the infiltration and exfiltration as critical portions of the execution phase that deserved as much preparation as the actions-on-the-objective. Future SOF direct-action missions could suffer a similar fate if an unbalanced weight is placed on subjecting the air assault force into a subordinate role to the ground assault force. Both of these forces must be seen and supported as critical and integral to mission success if complicated failures of this type are to be avoided in the future.[1040]

Accomplishing a SOF direct-action mission requires both air and ground operators to put their asses on the line. Neither of them can complete the mission alone. It takes equal partners to pull the yoke. Leadership and organizations must ensure a culture of brotherhood that fosters these relationships is developed. They cannot afford to focus solely on either one or the other. Put simply, the ground assault force has a one-hundred

[1039] Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

[1040] As one looks to the future, it is important to remember that there is a tendency to latch onto solutions that have previously worked in an effort to use them to resolve current and future conflicts. Using assault airlift for effective avoidance of unnecessary casualties may be a rational solution set now, but caution should be warranted when seeking to apply it to any and all future SOF direct-action mission sets. It is possible that in the future, space or subterranean insertions will prove to be more suitable options. Space or subterranean insertion methods may prove more effective. But for now, assault airlift offers SOF direct-action the greatest chances for overall mission success while minimizing casualties. If it is to be employed, its limitations are as important to understand as its capabilities.

percent chance of failure if it never reaches the mission objective, and the air assault force has no reason to go without the ground assault force onboard.

The rescue mission in Iran was "unbelievably risky."[1041] It failed to achieve the primary mission objective. It failed to extract the mission force without casualties. It also led to devastating consequences for the United States' reputation on the world stage. However, it did lead to the recognition that SOF requires the funding, authorities, and dedicated assets to prosecute SOF direct-action missions. The conventional toolset is not sufficient to draw upon in times of duress to create these capabilities. These resources must be set apart from conventional forces if special operations forces are to be expected to perform "anytime, anyplace."[1042]

[1041] Bowden, "The Desert One Debacle."

[1042] "Anytime, Anyplace" is the motto of the 1st Special Operations Wing at Hurlburt Field, FL. Master Sergeant Jeffrey Michalke, "The History of the 1st Special Operations Wing Revisited," 16th SOW History Office, November 15, 2006, http://www.hurlburt.af.mil/News/Features/Display/Article/206680/the-history-of-the-1st-special-operations-wing-revisited/.

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IV. CASE STUDY #3—"OPERATION ANACONDA"

The Battle for Takur Ghar

A. INTRODUCTION

> "Getting shot at; shooting at somebody; … you know … five hundred pounders 'danger close'; mortars landing in your position; friends getting shot; friends getting killed; getting shot yourself. I mean, if you sat down and wrote a list of experiences in combat, I think you could … uh … fit 'em all into that day."
>
> Sergeant 1st Class Cory Lamoreaux,
> U.S. Army Ranger aboard RAZOR 01 at the Battle for Takur Ghar.[1043]

This is the story of "the U.S. Army's single bloodiest firefight in the Afghan War."[1044] In 2002, an advanced force operation composed of various SOF components supporting the conventional territorial-control land war in Afghanistan moved into Shah-e-Kot Valley, a safe haven for Taliban, Al Qaeda, and foreign fighters.[1045] The terrain and the enemy posed substantial resistance. In an effort to mitigate enemy strikes against the advancing but vulnerable main coalition force body, a Navy sea, air, and land (SEAL) reconnaissance sniper team was given the task of establishing an observation post that could be used to call in airstrikes against entrenched enemy forces. The aerial insertion of the SEAL team alerted an embedded and numerically superior enemy force to the presence of the SOF force and inadvertently resulted in a man left behind. Subsequent rescue efforts aimed at extraction resulted in multiple insertion aircraft being shot or shot down, leaving would-be-rescuers pinned down and surrounded. The resulting casualties and losses associated with the mission serve as a means to study McRaven's principles and this assault airlift relative superiority model outside the confines of SOF direct-action

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[1043] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1044] Hammer.

[1045] Hammer.

and inside the context of SOF support to the conventional military strategy of attrition warfare (see Figure 116).

Journalist and military author Sean Naylor described Operation ANACONDA with clarity and exquisite detail in his 2005 book *Not a Good Day to Die: The Untold Story of Operation ANACONDA*.[1046] His work provides a well-researched, though unofficially sanctioned, account of the battles of the operation told by the men who were there. As such, Naylor's telling of the story provides a reasonably reliable and authentic source for portraying the events that unfolded as they relate to a determination of how assault airlift may best be utilized to increase the survivability of a SOF direct-action mission force.

An additional source of magnitude is the 2015 National Geographic documentary "Al Qaeda Ambush Battle of Takur Ghar," posted by Kyla Hammer to YouTube, where it is now available online.[1047] This documentary provides times, locations, interviews, and perspectives of the participants in the operation that make detailed timeline and event analysis possible herein. The credibility of National Geographic's standards, as well as the first-hand accounts within the documentary, serve to make it a reliable and credible source for this case study.

The relatively high level of assault force casualties coupled with the lack of mission success make Operation ANACONDA a disturbing but necessary case study for examining the capabilities of SOF assault airlift and the prerequisite of assault force survival as an essential element to mission success. During the operation, SOF operators are not tasked with single-objectives and national-level assets, as is the case with most direct-action missions and the majority of McRaven's examples.[1048] Instead, the mission represents a SOF direct-action team being utilized to secure a geographic terrain foothold necessary for the continued advancement of forces for a conventional land-control based attrition warfare strategy.

[1046] Sean Naylor, *Not a Good Day to Die: The Untold Story of Operation ANACONDA* (New York: Berkley Books, 2005).

[1047] "Al Qaeda Ambush Battle of Takur Ghar," YouTube, 47:31, National Geographic documentary, posted by Kyla Hammer, 2015, accessed July 06, 2017, https://www.youtube.com/watch?v=0SkbjZ2weis.

[1048] McRaven, *SPEC OPS*, 2–3.

As the situation deteriorated around the inserted special operators, their inability to attain and retain relative superiority left them pitted against the enemy in attrition warfare. The superior number of enemy forces, coupled with the intrinsically stronger defensive form of war they possess, allowed the enemy to inflict severe casualties on the attacking SOF elements, despite the high-attrition rate these SOF personnel wielded. The result was a small attacking force, unassisted by relative superiority, caught behind enemy lines with little hope of a successful extraction, and reliant upon attrition warfare principles to achieve survival in the face of a stronger and superiorly located enemy.

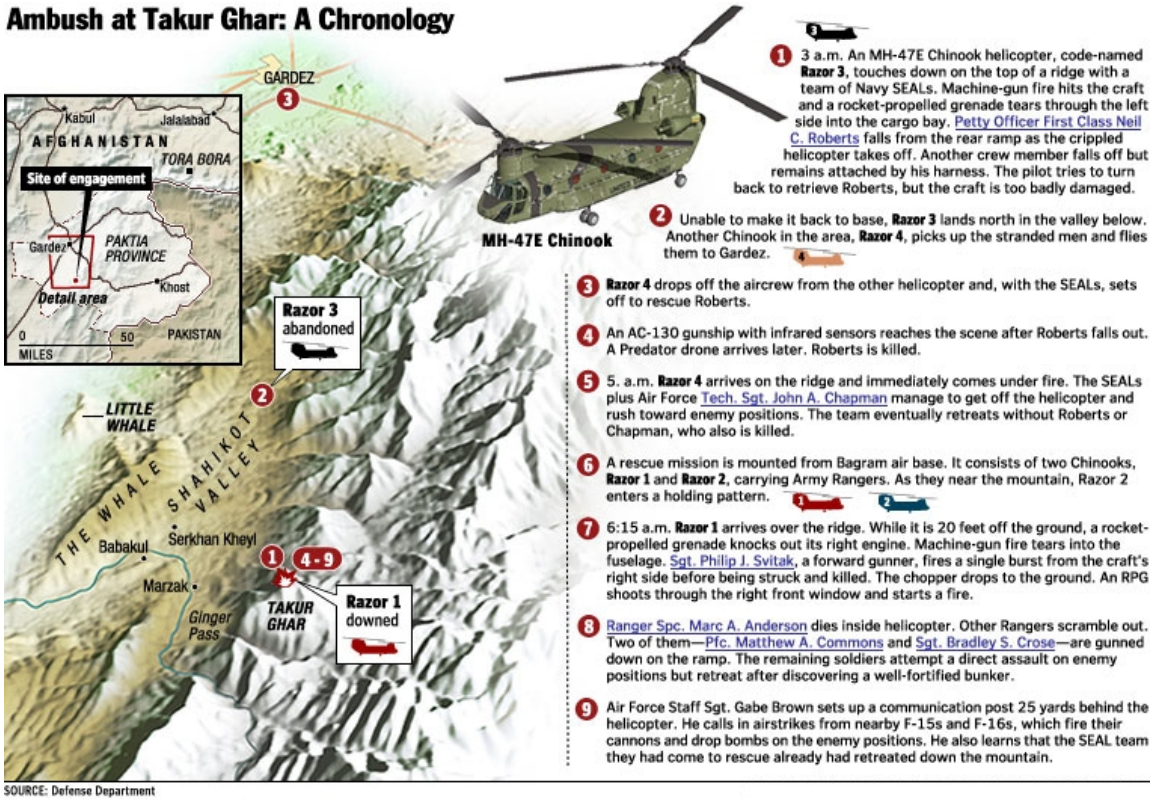

Figure 116. Storyboard Summary of the Battle of Takur Ghar[1049]

[1049] Adapted from "ROBERTS RIDGE BRACELETS," Fallen Hero Bracelets, n.d. 2012, http://fallenherobracelets.com/roberts-ridge-bracelets.html.

Operation ANACONDA, and in particular the battle of Takur Ghar, allow one to examine a SOF operation that strays from the typical raid or direct-action missions McRaven's theory of relative superiority and even this research are inclined towards. Instead, the battle of Takur Ghar pitted a SOF direct-action force against a mission that was less familiar than the raids and rescues that typically define SOF direct-action missions.

This delineation makes Operation ANACONDA and the battle for Takur Ghar particularly enticing to examine. It offers an opportunity to examine the theory of relative superiority and the contributing elements bolstered by assault airlift in a case study that is not a traditional direct-action mission. Colonel Andrew J. Bacevich catalogues U.S. military exploits in the Greater Middle East from 1980 to 2016. Presented with the prologue of his book, *America's War for the Greater Middle East: A Military History*, Bacevich lists all U.S. direct-action missions in the timeframe.[1050] Operation EAGLE CLAW and NEPTUNE'S SPEAR are clearly annotated while Operation ANACONDA is notably absent. Instead, Operation ANACONDA is accurately recorded under the broader scope of Operation ENDURING FREEDOM as an "attack followed by occupation," – clearly a conventional warfare operation.[1051] This differentiation points out how Operation ANACONDA differs from typical raid and rescue missions previously analyzed by McRaven and this work. It allows an observer the opportunity to see how relative superiority wielded by SOF direct-action forces interacts in a conventional attrition-based conflict when the principles of relative superiority are not exploited.

B. EVENT SUMMARY

1. Planning

In December 2001, U.S. and coalition forces believed they were closing in on Usama bin Laden in the eastern mountains of Afghanistan, near Tora Bora.[1052] There,

[1050] Conflict map presentation provided just prior to Prologue. Bacevich, *America's War for the Greater Middle East*, xiv-xv.

[1051] Bacevich, xiv-xv.

[1052] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

the Al Qaeda leader had escaped being killed or captured, but the event had frustrated and emboldened U.S. forces intent on bringing the terrorist network leader to justice for the crimes he had instigated, to include the deaths of 2,977 Americans during the commercial airline hijacking attacks of 11 September, 2001.[1053]

In 2002, a new effort to push back Al Qaeda's territorial control in Afghanistan would be planned, prepared, and executed under the codename Operation ANACONDA.[1054] It would seek to remove the infestation of Taliban, Al Qaeda, and foreign fighters from the mountains of Southeast Afghanistan. The rugged terrain and inaccessible nature of this area had allowed it to become a sanctuary for extremists. Coalition forces, composed primarily of American and Afghan soldiers, began a push to root out Al Qaeda and their Taliban supporters from these strongholds, including their hideouts in the treacherous Shah-e-Kot Valley, Afghanistan (see Figure 117 and Figure 118).[1055]

[1053] Kevin McCoy, "9/11 Death and Injury Total Still Rising," *USA Today*, September 09, 2015, https://www.usatoday.com/story/news/2015/09/09/911-death-and-injury-total-still-rising/71943340/.

[1054] Naylor, *Not a Good Day to Die.*

[1055] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

Figure 117. Map of Shah-e-Kot Valley in Relation to Gardez, Bagram, and Greater Afghanistan[1056]

1056 Adapted from, "Image Gallery: Operation ANACONDA Map," Keyword Team Encyclopedia, accessed September 03, 2017, http://keywordteam.net/gallery/202503.html.

Figure 118. Map of Shah-e-Kot Valley, Afghanistan, by Dave Herring[1057]

The main coalition force was composed of an amalgamation of conventional units augmented by SOF. The American and Afghan forces were to be inserted overland, via convoy, with air strike and air mobility support, as available.[1058] The conventional U.S. Tenth Mountain Division, a light infantry unit, composed the bulk of the force. They were transported by vehicular convoy. The 10th was married up with the 101st Airborne Division: a highly mobile light infantry unit whose specialty of mass assault airlift insertion suited it particularly well for the task of taking the unforgiving terrain. They would be transported via vehicle convoy and tactically mobilized by Army helicopters. These joint forces were augmented by a collage of coalition and Afghan forces, with the

1057 Source Dave Herring, "ΕΦΗΜΕΡΙΔΑ ΤΩΝ ΕΙΔΙΚΩΝ ΔΥΝΑΜΕΩΝ," *n.p.* (blog), accessed September 03, 2017, https://tolmwnnika.blogspot.com/2013/03/.

1058 Naylor, *Not a Good Day to Die,* 197–205.

goal being an Afghan-led, U.S.-supported territorial penetration maneuver, as reported on by Tony Karon in his *Time* article, "What We Learned in Shah-i-Kot."[1059] A small number of SOF assets would be provided in a supporting role to prepare the operational landscape for conventional ground force offenses by providing intelligence enabling precision airstrikes against enemy forces.[1060]

> At Shah-i-Kot, the U.S. elected to create its own ring of steel, using the U.S. Tenth Mountain Division, the 101st Airborne and an assortment of Special Forces units sent by European NATO allies, Canada and Australia to cut off lines of retreat. That gave the U.S. a more committed fighting force on the ground.[1061]

In total, there were only some 1,100 coalition forces, almost all of which were conventional infantry, to cover the target area; a "target area, which [covering] 60 to 70 square miles in the Shahi Kot mountains around Gardez, about 100 miles (160 kilometers) south of the Afghan capital, Kabul," CNN reported.[1062] Command, having seen the successes of a relatively small contingent of a few hundred SOF over the previous months, saw no need to dramatically escalate the number of troops as the strategic methodology shifted. Instead, it was believed that small numbers of conventional forces could be used to fulfil the same roles SOF had performed.[1063] These conventional forces would be supported by a few small SOF teams, brought in to perform the role of Advanced Force Operations (AFOs). The AFOs would be based out of the small nearby town of Gardez, and their job was to prepare the environment in a way that would allow the more conventionally suited forces to dominate. General Tommy R. Franks, then Commander of the U.S. Central Command, spoke of the forces merged to perform Operation ANACONDA to reporters in 2002. CNN reported the following:

1059 "An operation in which Afghan forces were to have been supported by the U.S. quickly turned into a U.S. operation supported by the Afghans," Tony Karon said in his *Time* article, "What We Learned in Shah-i-Kot." "When the Afghans folded under fire on the western approaches to Shah-i-Kot, U.S. commanders moved their own men into the breach." Tony Karon, "What We Learned in Shah-i-Kot," *Time*, March 14, 2002, http://content.time.com/time/world/article/0,8599,217266,00.html.

1060 Naylor, *Not a Good Day to Die,* 197–205.

1061 Karon, "What We Learned in Shah-i-Kot."

1062 "Operation ANACONDA Costs 8 U.S. Lives," CNN, March 04, 2002, http://edition.cnn.com/2002/WORLD/asiapcf/central/03/04/ret.afghan.fighting/index.html.

1063 Naylor, 137.

> Of the 2,000 coalition troops involved, about half are Afghan forces whose primary mission is to block al Qaeda and Taliban forces from leaving the area.… About 800 to 900 U.S. troops are involved in combat operations along with about 200 special operations forces from other international partners in the U.S.-led coalition. Troops from Australia, Canada, Denmark, Germany, France and Norway are participating, [General Franks] said. The bulk of the U.S. forces are from the 10th Mountain Division, based at Fort Drum, New York, and the 101st Airborne Division, based at Fort Campbell, Kentucky.[1064]

SOF leadership was not thrilled with the idea of supporting Operation ANACONDA. Major General Dell L. Dailey, a special operations aviator and commander of the SOF unit whose operators would deploy forward to participate in Operation ANACODA, did not directly sign up for this mission. Dailey's deputy commander, Brigadier General Gregory Trebon, a C-141 conventional air mobility pilot, had committed SOF to the mission.[1065] Naylor's book described how Dailey was discontented with the commitment's misalignment with the SOF mentality of "my word is my bond." Naylor described how Dailey did not want to participate in the conventional territorial-gain operation, but he was going to follow through because Trebon had already committed on behalf of their organization:

> When Trebon told [Dailey] that he had committed … to help out.… Dailey was not pleased. "Hey, Greg, we are in manhunt mode, and this is a conventional fight here," Dailey said to his deputy [see Figure 119].[1066]

Dailey accurately interpreted Operation ANACODA as a conventional battle and did not want to involve his limited SOF assets for fear that it would distract them from their manhunt of Usama bin Laden, Zawahiri, and Mullah Omar, currently the "big three" primary targets they were pursuing.[1067] "'This is gonna blow up in our face, but if you've made the commitment, then we need to honor the commitment,'" Dailey

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[1064] CNN, "Operation ANACONDA Costs 8 U.S. Lives."

[1065] Ben Friedman identifies Trebon's experience as a C-141 pilot in his surmise of Sean Naylor's work on Operation ANACONDA. Ben Friedman, "Sean Naylor-Operation ANACONDA," Security Studies Program Seminar, March 22, 2006, http://web.mit.edu/SSP/seminars/wed_archives06spring/naylor.htm.

[1066] Naylor, *Not a Good Day to Die,* 142.

[1067] Naylor, 142.

conceded to Trebon.[1068] Consequently, Dailey placed his participating SOF task force units under Trebon's command. It was billet Trebon would fill from Masirah Island, Oman, 1,100 miles away from the operation.[1069] At his disposal would be an additional a SEAL command center at Bagram Air Base, Afghanistan, some 90+ miles to the north of Gardez and the Shah-e-Kot Valley.[1070]

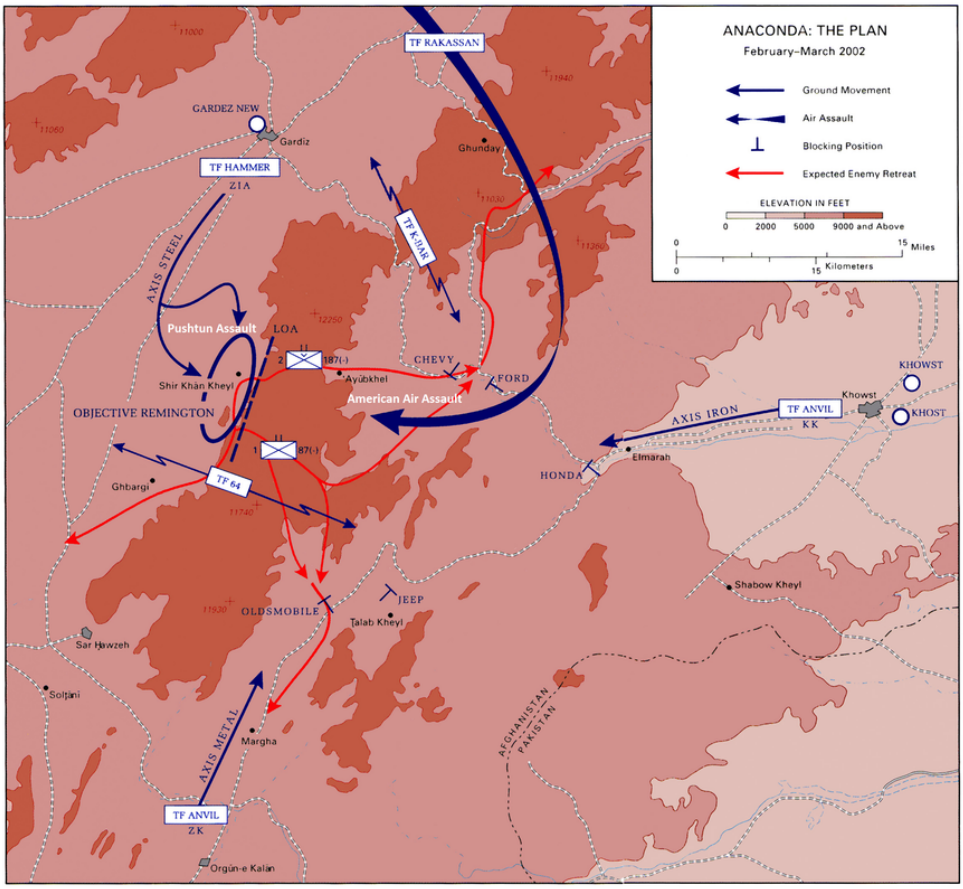

Figure 119. The Plan for Operation ANACONDA[1071]

1068 Naylor, *Not a Good Day to Die,* 142.

1069 Masirah Island was also the launching point for fixed-wing assault force assets utilized in Operation EAGLE CLAW.

1070 Naylor, 320.

1071 Adapted from Neha Patil, "Operation ANACONDA," Alchetron, accessed September 03, 2017, https://alchetron.com/Operation-Anaconda

The assorted nature of the coalition forces postured to implement Operation ANACONDA was driven by introverted desires for each participating organization to have representation in the action. Everyone wanted to be part of the special operations offensive against the terrorists. Under normal circumstances, terrorists had been hard to find. This operation represented an opportunity to pit conventional forces against a known and located enemy. Secretary of Defense Donald Rumsfeld was paraphrased by CNN as having said, "It [was] easy for the al Qaeda and Taliban to blend into the countryside and villages to regroup, partly because of the Afghan terrain."[1072] Now that the target had been illuminated, everyone wanted a chance to pull a trigger.[1073]

The coalition's force was couched to support the popularized tactical strategy of "small numbers of U.S. special forces on the ground directing awesome U.S. air power and Afghan proxy infantry."[1074] Although the bulk of the coalition forces were composed of conventional light infantry, the presence of SOF allowed the entire coalition force to be cast into the light of integrated "special operations forces." It was dubbed a "SOF" operation, yet the mission remained one of territorial control achieved via means of conventional attrition warfare strategies. It was determined that this coalition force could be applied using a footprint larger than that of a normal SOF direct-assault mission force, but smaller than a traditional conventional force. Instead, their size was formulated somewhere in between. They were not as small as a SOF direct-action mission force but they were not as substantial as a conventional land-warfare force. This meant that they would not be able to operate with the delicate finesse and subtle periphery of a small special operations force; their size was too large to enable this stealthy approach. Conversely, they would not be able to boldly execute traditional land-acquisition warfare strategies; their size was not large enough to provide the sustenance necessary to exercise these tactics.

While U.S. military efforts had proven effective in previous Afghanistan battles, those successes had largely been accomplished by smaller SOF units able to capitalize on

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[1072] CNN, "Operation ANACONDA Costs 8 U.S. Lives."

[1073] Naylor, *Not a Good Day to Die,* 172.

[1074] Karon, "What We Learned in Shah-i-Kot."

the principles of relative superiority. Up until this point in the war, Colonel John Mulholland had commanded a Special Forces task force of only 316 soldiers, and their successes had been profound.[1075] Now, a layman's interpretation of the strategy they had employed would be attempted by a conventional force augmented with an attached SOF contingent, so as to characterize the entire mission force as "SOF." The mismatched resultant force was "too-large to be SOF" and "too-small to be conventional." The lack of integration between these conventional forces would lead to a number of synchronization issues that leadership would be forced to address if the mission were to succeed.

By the early stages of Operation ANACONDA, there were already signs of the lack of integration and synchronization within the main coalition body pushing forward for territorial control.[1076] Known as Task Force HAMMER, the vehicular-mobilized force had experienced significant mobility delays associated with enemy engagements, unforgiving terrain, and poor-to-non-existent road conditions.[1077] The coalition convoy had grudgingly and slowly made its way through the rough and demanding terrain of the Shah-e-Kot Valley. Along the way, enemy attacks had inflicted significant casualties on them.[1078] These attacks effectively immobilized the convoy, negating the effectiveness of mass assault airlift feats to push forward and seize terrain. The enemy's bombardments

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[1075] Naylor, 14.

[1076] Naylor elaborates on the historical dissention between Special Forces and the conventional U.S. Army in the opening pages of his book. The perceived motives Naylor lays out may or may not be accurate (see his quote below), but his observations serve as evidence of the lack of synchronization between these two organizations. His research displays the historic lack-of-desire for a mutually-respectful relationship between these two organizations. There was significant cross-cultural friction. Naylor's passage also serves to illustrate the size disparity between the forces used in ANACONDA and their counterpart forces employed by either conventional or unconventional warfare means:

> "Special Forces have been part of the Army since 1952. For much of that time they have been treated like a bastard child. The 'big Army' never really felt comfortable with the independence bred and trained into SF soldiers. Unlike the conventional Army, which often maneuvered in 600-soldier battalions, Special Forces' cutting edge was provided by twelve-man operational detachments alpha, more commonly known as ODAs or A-teams. By 2001 Special Forces focused on 'unconventional warfare' – teaching insurgents how to wage war against the enemies of the United States. Afghanistan seemed to validate their approach. But that didn't stop [Central Command] from ensnaring Special Forces in a confusing and often conflicting chain of command that was to affect with nearly disastrous results the rest of the war in Afghanistan." Naylor, *Not a Good Day to Die,* 14.

[1077] Naylor, 158–184.

[1078] Naylor, 197–216.

had also reinforced the need to counter such attacks. As new SOF forces entered into the engagement, they became eager to fill this role themselves.

Major General Franklin L. Hagenbeck, described by Naylor as "the 10th Mountain Division commander in charge of all U.S. forces in ANACODA accept for the [Special Operations Command Task Force] elements," faced critical decisions on whether to keep the assault airlift force and vehicular convoy operations synchronized for solidarity or to separate them for territorial gains.[1079] The convoy represented the bulk of his forces, but they "had been stymied" by the grueling terrain and constant enemy bombardments.[1080] But the forward motion of conventional forces via assault airlift alone would leave a sparsely defended forward operating line of battle. It would increase the exposure of the helicopters, their crews, and their occupants to enemy threats (see Figure 120).

The risks of infiltrating a moderately-armed and nominally-sized force into highly defended occupied territory had not passed by command without notice. Hagenbeck, responsible for the safety of these forces, had become painfully aware of these risks. He had been forced to focus on these risks while making decisions regarding aerial infiltrations in the early stages of Operation ANACONDA's force advancements. Trying to put a helicopter into a landing zone in this terrain while surrounded by enemy forces could leave it exposed and vulnerable. It could also leave Hagenbeck's forces hopelessly stranded behind enemy lines if anything went wrong. This was a major concern for Hagenbeck. "I didn't want a shoot-down," Hagenbeck specified in Naylor's book.[1081]

[1079] Naylor, *Not a Good Day to Die,* xiii.

[1080] Naylor, 265.

[1081] Naylor, 265.

"Soldiers from 101st Airborne Division Unload From Chinook, Operation ANACONDA (55th Signal Company, Combat Camera, Keith D. McGrew)"

Figure 120. Airlift in Operation ANACONDA[1082]

The initial plan Hagenbeck employed to counter the strikes against his main force was to use the SOF AFO teams to pinpoint enemy ground forces for subsequent elimination via precision airstrike. This would prepare the territory for control by the conventional force main body. The air force strike assets required intelligence to perform these precision strikes, and this intelligence had been historically and successfully provided by SOF assets.[1083] However, there were synchronization and integration issues preventing this plan from effectively materializing in Operation ANACONDA. Naylor wrote:

> The core of the problem was that although [SOF's] awareness of their surroundings in general and of the enemy's disposition in particular was far superior to that of the [coalition] troops on the valley floor, the [coalition forces] enjoyed 'priority of fires,' meaning if a [coalition] element and an [SOF] team were each requesting an air strike, the aircraft would be vectored to answer the [coalition's] call first.

[1082] Adapted from Richard B. Andres and Jeffrey B. Hukill, "ANACODA: A Flawed Joint Planning Process," *Joint Force Quarterly* (4th Quarter, 2007): 135–140, http://www.au.af.mil/au/afri/aspj/apjinternational/apj-s/2009/3tri09/andreseng.htm.

[1083] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

> The result of this confused and confusing situation was that 10th Mountain and 101st troops were filling the radio nets with calls for close air support, but were often only able to give the strike aircraft a vague description of where they through the target might be. The [SOF] teams, meanwhile, could identify the mortar positions and machine guns firing at the infantry, but sometimes had to wait over an hour to arrange for an air strike on the target.[1084]

There seemed to be a misalignment between the capabilities and responsibilities of the involved units, and the confusion could cost lives. One of the special operators involved later expressed his frustration to Naylor with the early events during Operation ANACONDA. "'Listening to the [SOF] teams ask for an aircraft to drop [ordinance] on enemy mortar positions without execution for hours, while hearing [sic] hearing [coalition] calls for MEDEVAC [medical evacuation] was very frustrating.'"[1085] This stage of the operation was epitomized by an overall lack of integration of mission force assets, brought on by a lack of leadership synchronization.

To help overcome this organizational integration deficiency, it was determined that additional SOF assets in the form of SOF SEAL units, would be brought in to augment the establishment and manning of observation posts. In addition to providing targeting intelligence for precision air strikes, the SEALs would also provide coordination for command and control elements. This would provide cover for increased mobility, enabling ground troop surges in order to wipe out enemy.[1086] The precision air strikes would make up for the conventionally small size of the coalition force, while the additional SOF integration would provide the expertise required to operationalize the "specialized" coalition force.

[1084] Naylor, *Not a Good Day to Die,* 261.

[1085] Naylor, 261–262.

[1086] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

2. Preparation

As early as 01 March 2002, three days before what would be the Battle of Takur Ghar, sniper teams were being positioned into observation posts in the Shah-e-Kot Valley.[1087] There, they began the task of supporting Operation ANACONDA's coalition conventional forces by calling in the position of enemy forces, allowing conventional air strike assets to eliminate these enemy threats. Attrition warfare at its finest, these methods were met with increasing success and diminished the enemy's ability to retain terrain and carry out ambushes and strikes against American and allied forces in the area.[1088]

> The result was a series of air strikes that pulverized Al Qaida mortar positions, command and control buildings and troops in the open, but also highlighted the weaknesses of a plan that relied almost exclusively on air power for indirect fires.[1089]

These tactics "were almost certainly responsible for killing more enemy fighters during the daylight hours of March 2 than the rest of the U.S. forces in the Shahikot put together."[1090] This initial success validated the tactic of using SOF for precision strike targeting in protection of the main coalition force.

The key to SOF's ability to provide such devastating intelligence was based on a simple reconnaissance and tactical warfare credo: *always hold the high ground.* Their observation posts were in tactically secluded and defensibly high positions. "By occupying positions high above the valley floor," Naylor explained, "the [SOF] teams had given themselves a near-perfect situational awareness that the [coalition forces] could not hope to achieve from either the valley floor or their blocking positions."[1091]

Not only did this method provide devastating protection and firepower for the main body of the coalition force, but the "special operators also enjoyed a territorial

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[1087] Naylor, *Not a Good Day to Die,* 173.

[1088] Naylor, 263–264.

[1089] Naylor, 263.

[1090] Naylor, 263.

[1091] Naylor, 263–264.

advantage that made up for their lack of numbers."[1092] The SOF operators were able to protect themselves against numerically superior adversaries as long as they remained advantaged by locations in the well defended higher terrain (see Figure 121).[1093]

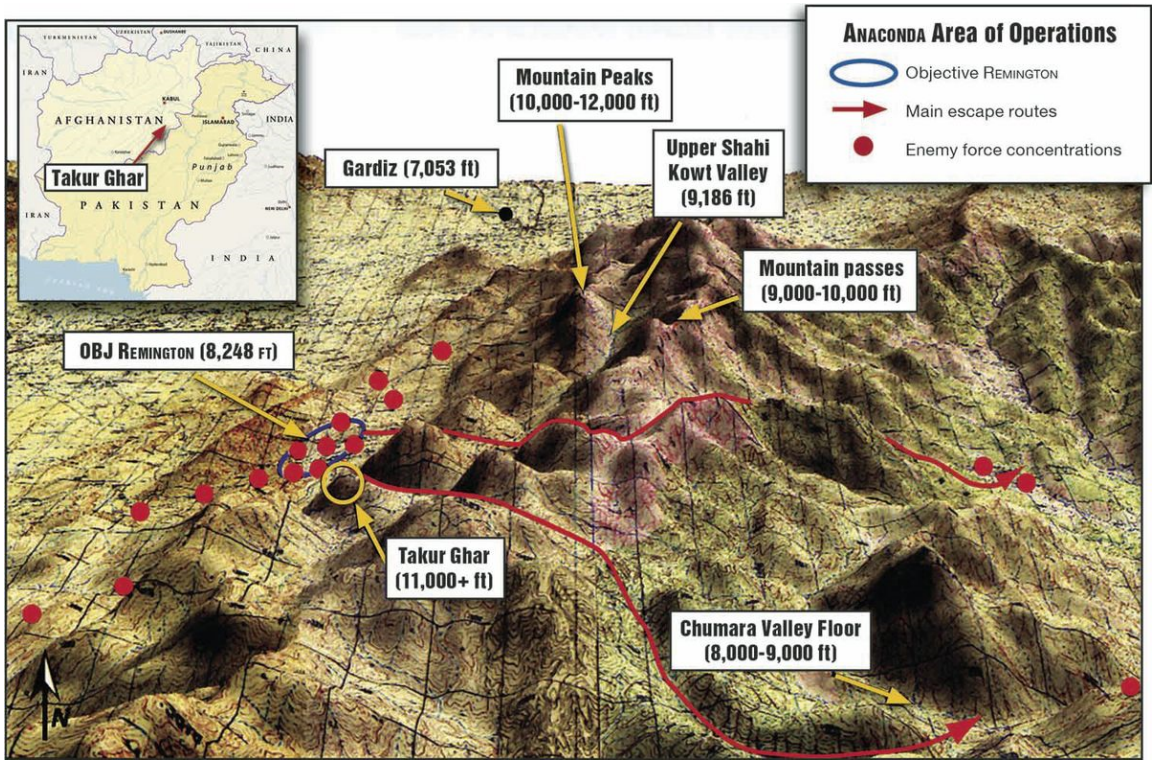

Figure 121. Topographical Layout of the Area[1094]

As SOF operators began the process of establishing and utilizing these observation posts, they had the opportunity to observe the types of weaponry being employed by Al Qaeda forces in the area. Their enemy was armed with AK-47s, howitzers, mortars, rocket propelled grenades (RPGs), and large-caliber heavy machineguns.

1092 Naylor, 263–264.

1093 Naylor, *Not a Good Day to Die,* 264.

1094 Adapted from Patil, "Operation ANACONDA."

Among the more ominous of the weapons observed was the impartially lethal Russian anti-aircraft and infantry heavy machinegun: the Degtyaryova-Shpagina Krupnokaliberny, translated as "Degtyaryov-Shpagin Large-Calibre," or DShK, for short.[1095] The DShK fires a relatively large 12.7×108mm round, compared to the standard North Atlantic Treaty Organization (NATO) 5.56×45mm round.[1096] The hammering lethality of Al Qaeda's weaponry and tactics threatened the Afghan and American forces (see Figure 122, Figure 123, Figure 124, and Figure 125).[1097]

Figure 122. Example of a Degtyaryova-Shpagina Krupnokaliberny (DShK) Russian-Made Heavy Machinegun.[1098]

[1095] Pronounced "diSH-kə;" "diSH" is pronounced like the dinner plate; "kə" like the first syllable of the word "cousin." Spelling adapted from SOFREP News. "Watch: 2nd REP, French Foreign Legion, Maneuvers under DShK Fire in Afghanistan," SOFREP News, September 18, 2016, https://sofrep.com/64288/watch-french-foreign-legion-manuvers-taking-dshk-fire-afghanistan/.

[1096] Ivan V. Hogg, *Jane's Infantry Weapons, 1986–1987* (Janes, 1986), 362.

[1097] Naylor, *Not a Good Day to Die,* 173–191.

[1098] Source "روایتی از زندگی شهید مجید برکـپور؛," Jamnews, translated as, "A Narration of The Life of Martyr Majid Barakpour," accessed August 22, 2017, http://www.jamnews.ir/textversion/detail/news/805260/11

Figure 123. The Actual DShK Position QRF-1 and QRF-2 Would Storm[1099]

[1099] Adapted from Lieutenant Colonel J. D. Lock, U.S. Army (Retired), "Rangers in Combat-Excerpt," accessed November 11, 2017, https://www.johndlock.com/copy-of-ric-excerpt---t-ghar-legacy.

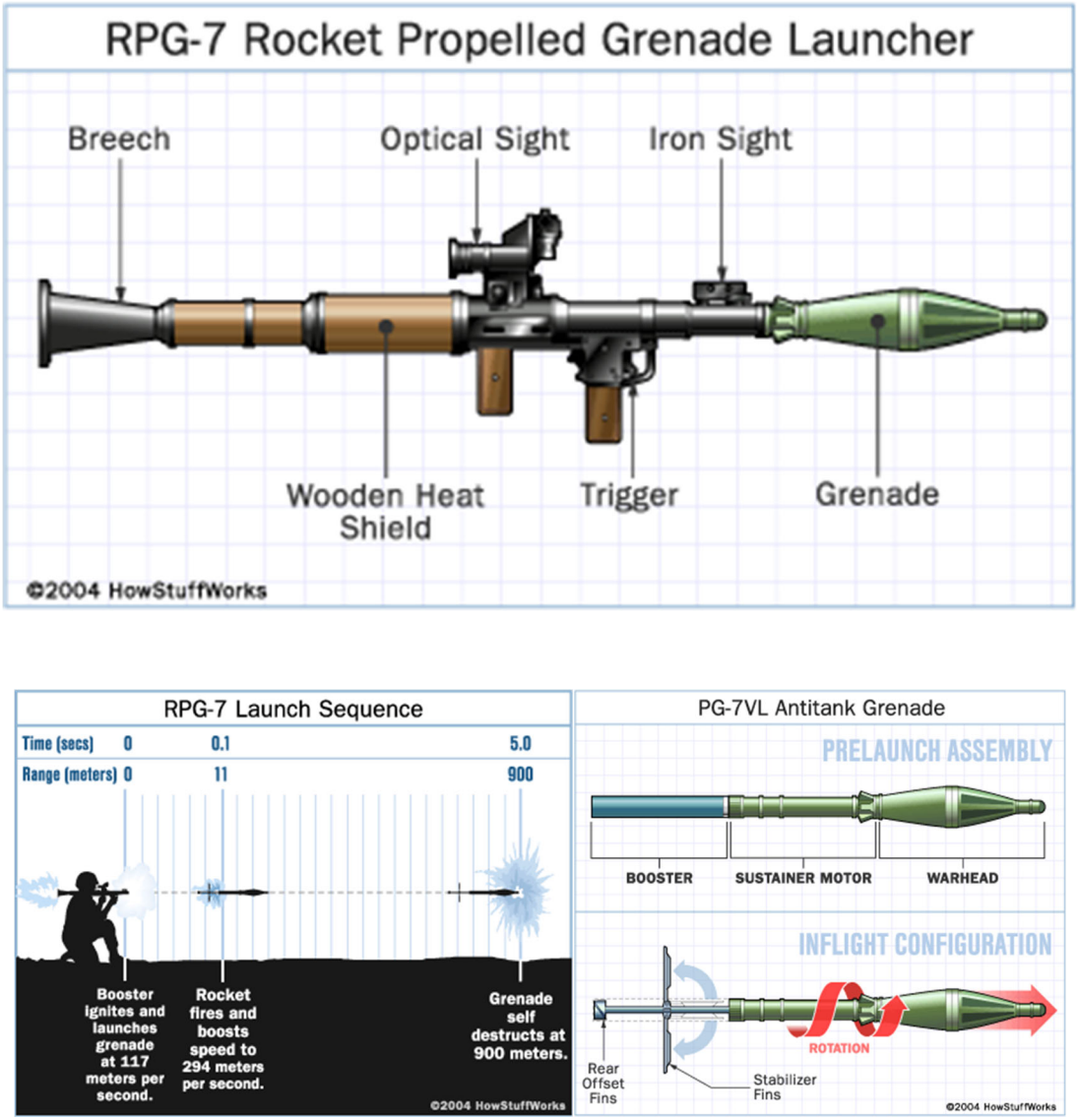

Figure 124. Rocket Propelled Grenade (RPG) Launcher[1100]

[1100] Adapted from Shane Speck, "How Rocket-Propelled Grenades Work," How Stuff Works, accessed September 03, 2017, http://science.howstuffworks.com/rpg3.htm.

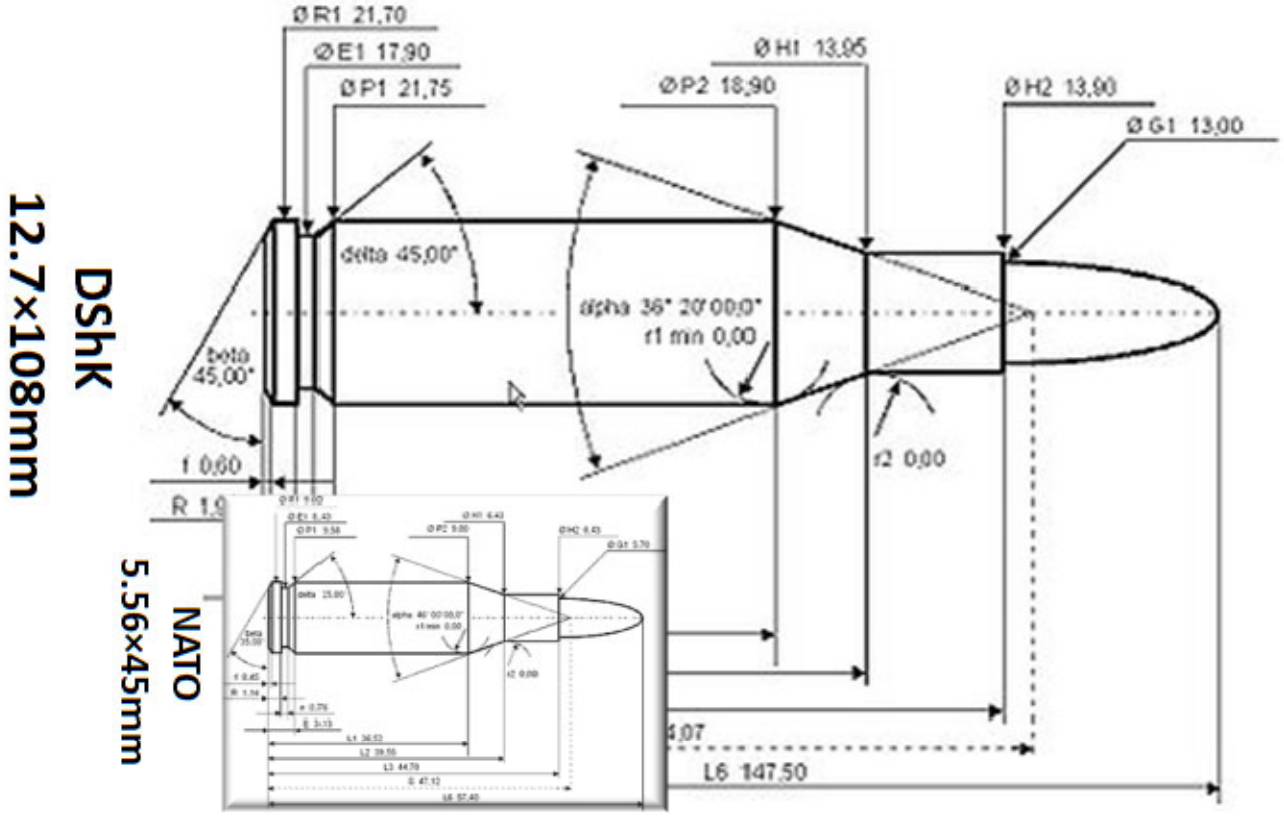

Figure 125. DShK 12.7×108mm Round Compared to the Standard North Atlantic Treaty Organization (NATO) 5.56×45mm Round[1101]

[1101] Adapted from "12.7x108mm," Revolvy, accessed August 22, 2017, https://www.revolvy.com/topic/12.7%C3%97108mm&uid=1575; "5.56x45mm NATO," Revolvy, accessed August 22, 2017, https://www.revolvy.com/topic/5.56%C3%9745mm%20NATO

In addition to the threats posed by enemy forces, the environment also posed a comparable hazard to SOF and coalition forces. The terrain in Shah-e-Kot Valley was some of the roughest on the planet. Not only was the terrain inhospitable for vehicular overland travel, but the weather, terrain, and elevation made it challenging even for tactical airlift assets to conquer. The altitude and elevation posed threats to the performance of both men and machines, to land-based and air-based assets alike. The treacherous terrain disrupted the mission force's tactics and performance. Naylor recurrently describes in his account of Operation ANACONDA how these factors decreased the ability of American and Afghan forces to achieve success.

> The weather … played havoc with the aviation plan…. So many trucks had broken down, rolled over, become stuck or been dispatched … that despite starting the night with three spare trucks, [the task force] was now running out of vehicles.[1102]

Naylor noted how even Apache helicopter gunship fire, powerful as it was, was only *just* able to provide enough cover to allow friendly convoy vehicles enough freedom-of-maneuver to retreat when ambushed in the punishing valley's adhesive terrain.[1103] Something had to be done if the assembled task force was to be able to accomplish its mission of dominating and holding this arduous terrain.[1104]

In the days that followed, the firefights and skirmishes with the enemy intensified. The enemy's mass coupled with the rigidity of the terrain were beginning to take their toll. Operation ANACONDA faced stalling out and even operational failure if the current

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[1102] Naylor, *Not a Good Day to Die,* 214.

[1103] Naylor, 216.

[1104] Naylor does a magnificent job of describing the visceral reality and intensity of helicopter gunship combat operations during their close air support of the task force. His description accurately transports the reader into a realistic imagination of the stresses such scenarios cast upon their participants. One such incident describing two gunships coming to the aid of a task force convoy is relayed as follows:

> "Drawing fire was easy. Avoiding it was tough. The pilots were for the most part blissfully unaware of the DShK and Kalashnikov bullets peppering their aircraft. The RPGs were harder to ignore. The guerrillas were firing them at a rate of about one every minute, and each round's relatively slow velocity and short smoke trail meant the pilots could visually track the grenades as they flew through the air and exploded with a puff of black smoke that reminded Hamilton of World War II flak. "They're shooting RPGs at you," Hamilton told Hardy as the two helicopters flew along the ridgeline. "I don't want to hear about it. Just shoot them!" Hardy replied." Naylor, 222.

course of events was not derailed. Initial threat intelligence analysis indicated the coalition force would be adequate to counter a supposed two hundred enemy fighters embedded with eight-hundred civilians within the valley. But, as the battle developed, it became clear that the enemy force magnitude had been substantially underestimated. It appeared as though all of the reconnoitered personnel in the valley were enemy fighters, and their numbers had been dangerously underestimated.[1105] They were well armed and organized, "fighting hard and well, with high-caliber weapons – mortars, recoilless rifles, and howitzers."[1106]

The coalition force was ill equipped to face off in this sort of semi-conventional attrition warfare fight. The convoy vehicles had necessarily been forced to maneuver through the only potentially passable terrain features, located along the valley floors, but this put them at a tremendous tactical disadvantage while eroding effective communications. Naylor described that, "by seizing the low ground, [the coalition force] had put itself on terrain from which it was hard to identify the enemy positions from which it was receiving fire."[1107] To make matters worse, they were plagued by internal communications disparities, significantly decreasing the effectiveness of their ability to act against the enemy in a timely manner. A great deal of effort was expended just trying to physically relay communications across the arduous terrain.[1108] Operation ANACONDA was experiencing the relearning of a critical combat lesson: friendly forces do not get to choose the plan of effective strategy alone. The environment and the enemy both "always get a vote."[1109] The entrenched enemy forces had voted for a battle of attrition in a setting unconducive for the employment of the equipment, limited manpower, and light firepower the coalition force had been provisioned with.

While the vehicle convoy was plagued with mobility issues, the aerial assaults had only proven effective at getting the aircraft shot at. The enemy continually engaged

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[1105] Naylor, *Not a Good Day to Die,* 267.

[1106] Naylor, 267.

[1107] Naylor, 271.

[1108] Naylor, 268.

[1109] Naylor, 267.

them with RPGs and large-caliber heavy machinegun fire.[1110] After having seen the helicopters moving about, the enemy had become increasingly aware of their presence and had learned how to best them in the harshly mottled terrain. Naylor's book reports that by 02 March 2002, "The enemy in the Shahikot was … fully alert to the possibility of American helicopters landing in their midst."[1111] Hot landing zones were to be expected from here out.[1112] The use of airlift to achieve any semblance of the element of surprise had evaporated. The enemy knew they were there, knew how to determine when their arrival was imminent, and was consistently prepared to face them.

What the coalition force commanders believed they needed was more precision airstrikes to level the playing field. The heavy hand of precision airstrike had helped to curtail the success of the enemy's initial ambushes. They trusted this "great-equalizer" could rebalance the table back in favor of their nearly-immobilized coalition force.

Unfortunately, fractured command structures and ineffectively weak ties failed to provide adequate air support. While SOF AC-130 gunship assets were made available, other more conventional Air Force strike assets were not logistically prepared to provide the level of support Hagenbeck and his force now required. When questioned about this deficiency, "Air Force officials responded by saying they had been largely left out of the planning for [Operation ANACONDA], and that what advice they had offered had been ignored," Naylor relayed.[1113] Naylor goes on about the interservice rivalry and bad blood between the poorly synchronized coalition forces:

> There were also specific problems that hurt the relationship between ground and air forces during the planning and execution of [Operation ANACONDA]: The small, enclosed battlefield meant the calls for fire often outnumbered the number of aircraft that could safely fly bombing runs over the valley simultaneously; the icy relationship between [the conventional air and ground leadership], who should have been working hand in glove, trickled down to their staffs; the Mountain staff's failure to anticipate the likelihood of ferocious resistance on the enemy's part meant

[1110] Naylor, *Not a Good Day to Die,* 282.

[1111] Naylor, 288.

[1112] Naylor, 288.

[1113] Naylor, 270.

> they had given only cursory attention to close air support issues.… As ever in combat, it was left to captains and sergeants to bear the consequences of mistakes made by generals.[1114]

These types of interservice conflicts are indicative of the ancestrally segregated cross-cultural frictions typical of conventional forces. These frictions represent a significant challenge for a jointly composed mission force to overcome. It is one of the reasons seamless integration of inherently joint special operations force is so hard to achieve. Nonetheless, such high levels of integration are required in order for a mission force to reach the competency levels required to conduct direct-action missions.[1115] ANACONDA may not have been a direct-action mission, but inadequate integration in any mission force can be devastating. The price of inefficiency was measured in lives: a price too high to pay for these types of unnecessary deficiencies. Leadership needed to step in.

Operation ANACONDA needed a turn around, and its leadership thought it had found a panacea. SOF direct-action SEAL teams acting as targeting mechanisms for precision air strikes appeared to be just the thing needed to do the job. The success of the SOF-directed air strikes had already been verified to the command staff. Despite the some of the initial inefficiencies of this tactic, it had proved incredibly effective at attriting the enemy's forces. By inserting additional Navy SEAL assets into the equation, the hope was that the integration and successes the SEALs enjoyed within the realm of their man-hunting exploits would translate to the Operation ANACONDA mission force. The SEALs' experience with command and control synchronization would hopefully align the coalition ground force needs with the abilities of the available precision strike

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[1114] Naylor, *Not a Good Day to Die,* 271–272.

[1115] Andres and Hukill relay how the Combined Forces Air Component Commander (CFACC), Lieutenant General Michael Moseley (a conventional F-15C air-to-air fighter pilot), was not informed about Operation ANACONDA by his ground force and joint force counterparts until only two days before the operation commenced. This oversight on the part of these leaders disallowed the opportunity to address the needs of the combined joint force. These types of inter-service dissonances are an identifiable aspect of traditional technical-based leadership that must, by trade, focus on the needs and contributions of their own parent service. These dissonances diminish the effectiveness of joint force assets by reducing the level of achieved integration. Andres and Hukill wrote, "By the time the CFACC was pulled in, it was too late to change the plan. With only 2 days until the operation commenced, it was nearly inevitable that Moseley's desire for more time for the air component to prepare would not be met." Andres and Hukill, "ANACODA."

assets. It was the innovative solution leadership had been looking for and now that they had found it, they intended to capitalize and dominate with it.

The solution looked simple, from a distance. Naylor extrapolated on how some of the intricacies were lost in the translation of distance:

> To those who hadn't spent time in Gardez [a town just north of Shah-e-Kot used as a sanctuary safe house site for coalition forces] the formula for success in the Shahikot seemed simple: put some operators in the high ground and have them call in air strikes on the enemy.[1116]

But for those who had been there, the reality of the size and capacity of the entrenched enemy and the insurmountable terrain posed a more menacing threat.

Trebon would be in command of the incoming SEAL assets. He was committed to this fight and responsible for SOF involvement in it. Because he was the one responsible for getting his organization involved in this operation, he was personally and professionally dedicated to seeing it succeed. Through the command center in Bagram, he ordered the SEALs in to make good on his word to assist.

On 03 March 2002, Trebon had three new SEAL teams sent in: MAKO 21, MAKO 22, and MAKO 30. They arrived, unannounced to the current SOF AFO contingent, to join the fight in Shah-e-Kot: The first two SEAL units were direct-action assault teams, while the third was a "reconnaissance outfit."[1117]

MAKO 22 was a five-man SEAL assault team. They arrived via helicopter to take over one of the previously established observation posts, relieving the un-expecting reconnaissance team that was in place. After the SEALs assured the reconnaissance team that they were indeed their relief, the SEALs realized they were ill prepared for the job at hand. Equipped for direct-action, the SEALs were forced to borrow gear from the AFO team they were relieving for the reconnaissance and surveillance mission they had been tasked to perform.[1118]

[1116] Naylor, *Not a Good Day to Die,* 300.

[1117] Naylor, 305.

[1118] Naylor, 300.

MAKO 30 and MAKO 21 also arrived, unannounced, to join the SOF and coalition forces in Gardez. These units were accompanied and overseen by Lieutenant Commander Victor "Vic" D. Hyder.[1119] Naylor relayed how Hyder had experienced two "red-flag" incidents in his past that could have represented poor judgement calls on his part, but neither incident had conclusively been held against Hyder to the degree that it had derailed him from this position of leadership.[1120]

Hyder and his men joined the existing task force with a bit of initial confusion. Hyder, under the direction of Trebon, was intent upon employing his SEAL teams in support of the fight as soon as able. He was also intent upon retaining tactical control of these men. Under the impression that his SEALs were there to provide command and control, Hyder expected to be in charge of all the SOF AFO assets in the operation. Expecting the SEAL support but unaware of Hyder's imminent arrival, the AFO had not prepared for or planned to relinquish command and control of their forces in Shah-e-Kot.[1121] This confusion was not quickly or easily resolved.

If the chains of command, force compositions, unit tactical expertise, unit task assignments, and even the overall strategic methods of employment seem a bit foggy and confused, it is because they were. Naylor captured the lack of synchronized efforts:

> ANACONDA would be overseen by an *ad hoc* command and control setup and fought by units weakened by … force cap executing a plan that was a production of negotiation and compromise, but confidence was not in short supply.[1122]

Commander's Intent: Field command elements, in an effort to gain clarity of intent, contacted Trebon at Masirah. He clarified that his intent was for all SOF units to be controlled through the SEAL team efforts, effectively placing Hyder in unofficial command of the fielded SOF units.[1123] This created a sea of confusion, a confusion in

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[1119] Naylor, *Not a Good Day to Die,* 297–300.

[1120] Naylor, 300–301.

[1121] Naylor, 286.

[1122] Naylor, 137.

[1123] Naylor, 302.

which momentum of action, something all military personnel are akin to and familiar with, provided a rallying point of cohesive effort.

The SEALs made it clear that they were dedicated to immediately going out into the valley to assist in the fight as best they could, as they had been ordered to do by Trebon. The SEALs set to work building a plan of action. A collection of Army Special Forces, conventional coalition forces, and others gathered around the SEALs as they began to plan.

Some were not certain this expedited call to action was required. Trebon was again contacted at the command center in Masirah for clarification, which he reiterated in no uncertain terms. "Trebon spoke as if to leave … no doubt. [They] were to put both SEAL teams straight into the fight that night. That was an order," Naylor relayed.[1124]

The Plan: With the command decision that MAKO 30 and MAKO 21 would be going out immediately, the questions of how and where remained. It was determined that MAKO 21, a direct-action assault force composed of six SEALs, would be infiltrated via helicopter to a landing zone near the northern end of Shah-e-Kot.[1125] MAKO 30, on the other hand, as the only reconnaissance SEAL team present, was more familiar with the role they would be expected to fill. The plan would rely more heavily on them. The six-man SEAL team and their accompanying Air Force combat controller would be placed "onto the most dominant piece of terrain in the valley: the peak of Takur Ghar."[1126]

Takur Ghar was an unassailable 10,469 foot tall mountain that stood prominently above Shah-e-Kot Valley. "Anyone on top of the … mountain would enjoy a commanding view of the entire valley," Naylor wrote.[1127] The SOF soldiers who had experienced combat in the area understood the value of this terrain, but they also understood the definitive challenge faced by any helicopter attempting to reach any point along its spine or summit. The enemy had become accustomed to the sounds of the

[1124] Naylor, *Not a Good Day to Die,* 303.

[1125] Naylor, 305.

[1126] Naylor, 305.

[1127] Naylor, 305.

helicopters, and had become increasingly efficient at combatting their ability to successfully infiltrate and exfiltrate ground forces. This had eventually resulted in a "no helicopter" rule, one that would now need to be broken if the SEALs were to be fielded this night.[1128]

The mountain was simply too large for an overland option to meet the requirements of getting the SEALs in place before the dark of night gave way to the illuminating day. It would take too long for them to climb to the summit. It could take days, not hours, to make that happen. With the overland option considered unfeasible due to the time constraints Trebon had placed on the operators, the only remaining course of action for compliance was an aerial insertion.

Charts and imagery revealed a potentially suitable insertion landing zone some distance below the desired observation post position on Takur Ghar.[1129] The plan would be to land a safe distance from peak along a ridgeline. From there, MAKO 30 could hike to the summit of the mountain over the next four hours, allowing the final location of the outpost to remain obscured by the offsite infiltration and the dark of night. This tactic would conceal the location of the observation post and allow the SEALs to operate it undetected amid terrain that was otherwise controlled by enemy forces.[1130]

Even this option required a grueling four-hour hike following the airlift, but the offset infiltration seemed necessary to mitigate potential exposure of the observation post.[1131] Exposing the site could mean leaving a handful of men stuck behind enemy lines to face off against a numerically superior enemy force. Hyder, anxious to press the mission forward, nonetheless considered a direct infiltration to the summit of Takur Ghar. He liked the idea of just going directly to the "X," to save time and effort. But Hyder was initially discouraged by members of the AFO who had more experience in the area. They reiterated to Hyder that a direct infiltration would betray the operational security of the

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[1128] Naylor, *Not a Good Day to Die,* 305.

[1129] Naylor, 305.

[1130] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1131] Naylor, 306.

site, leaving the reconnaissance team exposed to an outsized number of enemy threats.[1132]

Intelligence briefed to Hyder and the SEALs revealed possible enemy threats in the vicinity. Enemy forces had been reported via human intelligence sources, "and the enemy had already demonstrated a determination to occupy the other high around the valley."[1133] Intelligence indicated "that there was a high likelihood that the enemy already occupied the top of Takur Ghar," Naylor related.[1134]

Despite this threat, Hyder deemed a direct infiltration to be the most advantageous course of action. The SEALs could mitigate the possible enemy threat by relying on AC-130 gunship visual reconnaissance of the landing zone and mountain summit to confirm or deny the presence of enemy force prior to their infiltration.[1135] Naylor elucidated the high levels of trust, credibility, and technical competence the AC-130 community contributes to these kinds of situations, all reasons why SOF ground operators highly regard their estimations of adversarial threats:

> Special operators of all branches placed great faith in the AC-130's two sensors – television like cameras, one geared to the infrared spectrum, the other working from the same image-intensification technology as night-vision goggles – and often used the lethal attack aircraft for reconnaissance.[1136]

Hyder's preference to push forward with a more timely direct infiltration was relayed to Hagenbeck, who "greeted … [the idea] enthusiastically," from Bagram Air Base.[1137] Although not an official member of the SOF chain of command, Hagenbeck oversaw the bulk of the operational forces and had a working relationship with the special operators. He had a vested interest in obtaining the intelligence necessary to protect his coalition forces. It was, after all, his operation that these assets were being brought in to support.

[1132] Naylor, *Not a Good Day to Die,* 306.

[1133] Naylor, 306.

[1134] Naylor, 306.

[1135] Naylor, 307.

[1136] Naylor, 198.

[1137] Naylor, 307.

Still, neither of these men was currently in a position to override the existing AFO chain of command and order a direct infiltration.

With the momentum to push forward continuing, the trigger was pulled to launch for the offset infiltration, but with Hyder's continued preference for a direct infiltration brewing in the background. Two 160th Special Operations Aviation Regiment (160th SOAR) Chinook MH-47E helicopters, RAZOR 03 and RAZOR 04, departed Bagram at 10:20 PM for the hour-long flight to Gardez.[1138] The MH-47 was a traditional SOF assault airlift platform: tough and armed to the teeth with two M134 miniguns bristling out each side.[1139] Once at Gardez, they on-loaded the awaiting SEAL units (see Figure 126).

Figure 126. The "Night Stalkers" Patch, 160th Special Operations Aviation Regiment[1140]

1138 Naylor, *Not a Good Day to Die,* 307.

1139 Naylor, 313.

1140 Adapted from Hal Frary, "KY214 Member Participates in Army Water Survival Course," KY214, July 04, 2014, http://www.ky214.us/dunker2.htm.

3. Execution

On 04 March 2002 at 11:23 PM, RAZOR 03 and RAZOR 04, with MAKO 30 and MAKO 21 respectively on board, departed Gardez for an offset infiltration at the foot of Takur Ghar.[1141] Unfortunately, the AC-130 they expect to use for reconnaissance was not able to enter the area due to an ongoing kinetic strike. Without any means of determining the level of enemy activity at the objective site and landing zone, the Chinooks were forced to turn back to Gardez and wait out the interruption.[1142]

a. Infiltration: Delays and Changes

While on the ground at Gardez, aircraft maintenance threw its own wrench into their plans. Maintenance delays force the aircrews and the SEALs to transfer to two replacement MH-47E's dispatched from Bagram to Gardez for their use. The pilots, their call signs, and the SEALs transfer to the replacement airframes, while the enlisted crewmembers stay with their original aircraft tail numbers. Once this challenge was overcome, the refurbished RAZOR formation was directed to hold again, this time to de-conflict with another aerial operation taking place in the valley. Without any command prioritization or empowerment to press in, the formation was again forced to wait. Valuable time-of-darkness slipped away.

By the time the RAZORs were finally authorized to depart, there was no chance of inserting MAKO 30 to the offsite landing zone with enough time for them to ascend Takur Ghar under the cover of darkness.[1143] The SEALs, cognizant of the increased risks associated with their remaining options, call back to request a twenty-four hour delay, a request Hyder subsequently relayed to Trebon.

Here, the lack of a clearly defined chain of command and competing leadership desires came into play. AFO leaders, who had the technical and environmental expertise associated with the Shah-e-Kot Valley, were not included in the decision making process between Hyder and Trebon at this critical juncture. The critical inputs they may have had

[1141] Naylor, *Not a Good Day to Die,* 307.

[1142] Naylor, 308.

[1143] Naylor, *Not a Good Day to Die,* 308–309.

were not integrated into the discussion. The proximate reason was because Hyder and Trebon utilized a different radio network for this conversation instead of the one that had been utilized by the AFO leadership team at Gardez up to this point.[1144] However, the reason these networks were not integrated was because Hyder apparently understood that inclusion of the AFO advice would have led to a delay in the mission's execution, a delay he did not believe to be warranted. Hyder, focused on mission accomplishment above all else, preferred to channel his request directly to Trebon: a man he knew was just as personally vested in seeing this mission pressed forward as he was.

Between these two men, neither retained both the operational expertise and contextual understandings of the risks involved with the reconnaissance mission they had asked the SEAL units and the 160th aircrews to press forward with. Quantitatively, the two of them adequately represented years of both SOF ground and air-mobility experience. Yet, somehow their cumulative technical experiences failed to reconcile their desires for mission progress with the intelligence and facts presented. Their desire to press forward seemed to have overridden any risks associated with the information they had received from the AFO or even the recommendations of their own SEAL operators. They remained unwaveringly focused on pressing the mission forward.

Trebon and Hyder understood that the mission could be "rolexed," or delayed twenty-four hours, but that would come at the price of failing to move forward during this period of darkness, an outcome which they had already categorically rejected. Orders were passed from Trebon's command center at Masirah for Hyder to continue with the infiltration "tonight."[1145]

Hyder contacted the aircraft commander of RAZOR 03. He asked "about whether it was technically possible to land the team directly on their observation post," at the summit of Takur Ghar, Naylor relayed.[1146] The pilot indicated that he had not seen imagery of the area in the context of looking for a landing zone at the observation site,

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1144 Naylor, 309.

1145 Naylor, *Not a Good Day to Die,* 309.

1146 Naylor, 309.

and expressed his concerns to Hyder. This functionally-relevant technical concern was dismissed by Hyder. "'It should be no problem,' Hyder [told the pilot]. 'I've seen imagery.'"[1147] Hyder, reliant on his own imagery analysis and understanding of aerial infiltration requirements, had deemed the landing zone feasible.

Hyder was building the foundation to implement the plan he preferred, even though he was not in a position to officially order this change. If he could get a direct infiltration, he could get his SEALs up to the observation post during the same period of darkness. Hyder used his position of apparent authority to convince the pilot that it was possible to change the landing zone for a direct infiltration to the summit of Takur Ghar. He had circumvented the ineffectively tangled web of command chains that were standing in the way of progress.

The leadership failure to synchronize the participating elements of Operation ANACONDA had allowed Hyder to bypass the experience of the AFO. The AFO's experience was lost in the fragmented communication chains and dis-integrated command and control processes being utilized. Naylor summed it up when he says, "In ANACONDA, senior leaders' failure to establish a tight, unified chain of command was adding unnecessary friction to that which is inevitable in any combat operation."[1148]

An unmanned Predator reconnaissance drone, call sign WILDFIRE, arrived overhead Takur Ghar at 1:15 AM.[1149] The drone pilot operated this asset from over nine hundred miles away in Oman, Jordan. The predator drone provided live coverage of the event for military command elements as near as Bagram Air Base, Afghanistan, and as far away as those in the continental United States.[1150]

Naylor wrote that less than an hour before RAZOR 03 and RAZOR 04 departed Gardez for the second time, an intelligence report provided to the AFO indicated enemy activity on the mountain's top. Unaware of a pending direct infiltration, the AFO member

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[1147] Naylor, 309.

[1148] Naylor, *Not a Good Day to Die,* 310.

[1149] Naylor, 357.

[1150] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

presented with the information failed to pass it along to the infiltrating force. It would not ostensibly matter since the operators were not going directly to the summit. The AFO knew this was a bad place to land. Naylor relayed how one intelligence officer, when earlier questioned about the suitability of landing zone areas, had pointed to the summit of Takur Ghar and replied, "Anywhere but here."[1151] But this information would not be taken into account by the officers pushing the Navy SEALs into immediate action.

The AFO command center at Gardez remained out of the loop, unaware of Hyder's auxiliary coordination efforts. They had no idea that a direct infiltration was in the works. They remained in the dark, believing MAKO 30 to be inserting via the less-visible and less-risky offset method.[1152]

b. Take Two: New Helos, New Plan

Finally, at 1:43 AM, with fresh aircraft and a refurbished alternative infil plan, RAZOR 03 and RAZOR 04 again departed Gardez for their objectives. RAZOR 04 and MAKO 21 would continue as initially planned to their landing zone in the valley's north.[1153] MAKO 30, aboard RAZOR 03, would still ride their MH-47 Chinook helicopter to Takur Ghar, but this time they would aim to land directly to the mountain's summit.[1154]

Among the unit's eight members were now six SEALs and two additional operators. One of the operators was Technical Sergeant John Chapman, a combat controller from the 24th Special Tactics Squadron.[1155] Chapman, like the SEALs, had

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[1151] Naylor, 310.

[1152] Naylor, *Not a Good Day to Die,* 310.

[1153] Naylor, 311.

[1154] Naylor, 310.

[1155] The 24th Special Tactics Squadron is a unit under the 24th Special Operations Wing (24 SOW). The mission of the 24 SOW is as follows:

> "The primary mission of the 24 SOW is to provide Special Tactics forces for rapid global employment to enable airpower success. The 24 SOW is U.S. Special Operation Command's tactical air and ground integration force, and the Air Force's special operations ground force to enable global access, precision strike, and personnel recovery operations. Core capabilities encompass: airfield reconnaissance, assessment, and control; personnel recovery; joint terminal attack control and environmental reconnaissance." 24th Special Operations Wing, Public Affairs Office, "24th Special Operations Wing," Hurlburt Field, accessed August 29, 2017, http://www.24sow.af.mil/.

volunteered, been vetted, and had been hand selected for inclusion with this specialized mission unit.[1156] Of the six SEALs, Petty Officer First Class Neil Roberts, a 12-year Navy SEAL veteran also stood out. Roberts was an experienced and reliable member of the mission force (see Figure 127 and Figure 128).[1157]

Figure 127. Petty Officer First Class Neil Roberts[1158]

1156 Chapman's life and career were expanded on by Brian Jones in, "UNSUNG HEROES: The Airman Who Gave His Life During The Initial Invasion Of Afghanistan." Brian A. Jones, "UNSUNG HEROES: The Airman Who Gave His Life During The Initial Invasion Of Afghanistan," Task & Purpose, October 16, 2014, http://taskandpurpose.com/unsung-heroes-airman-special-forces-gave-life-initial-invasion-afghanistan/

1157 Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

1158 Adapted from Katherine Ainsworth, "American Heroes: Navy SEAL Neil C. Roberts, Uncommon Valor," *U.S. Patriot Tactical* (blog), September 22, 2014, http://blog.uspatriottactical.com/american-heroes-navy-seal-neil-c-roberts-uncommon-valor/

Figure 128. Technical Sergeant John Chapman, Afghanistan[1159]

Roberts and Chapman, like their counterparts, were totally dedicated to the mission at hand. They had to be to take the kinds of risks they did. They could not afford to contemplate whether or not mission objectives were warranted. They trusted in their leaders to balance those scales. They had to focus on the nuanced details of the technical tasks necessary to accomplish the mission at hand. These were men of action: trained to accomplish lawful and moral military objectives as they were assigned. They were trained to simplify scenarios to achieve objectives, and they had simplified this mission to the imperative of a singular objective. They were operators on a mission. Their goal was to establish an observation post atop Takur Ghar so they could spot Al Qaeda fighters and provide coordinates for airstrikes.[1160] Their chain of command was insistent they do so in a timely manner, and they intend to do just that.

The 160th SOAR pilots may have been convinced by Hyder to go directly to the top of the mountain, but they were still cognizant of the risks. Some sort of surveillance had to be acquired given that previous intelligence reports indicate there may be up to 200 enemy fighters in the area. An orbiting AC-130 gunship, NAIL 22, was requested to

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[1159] The image on the left was adapted from Jones, "UNSUNG HEROES." The image on the right was adapted from the National Museum of the U.S. Air Force. Adapted from Jones, "UNSUNG HEROES; National Museum of the U.S. Air Force, "Battle at Takur Ghar: Roberts Ridge," accessed August 30, 2017, http://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/196791/battle-at-takur-ghar-roberts-ridge/.

[1160] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

perform tactical reconnaissance of the mountain to detect any enemy activity prior to the SEAL insertion.[1161] NAIL 22 utilized their suite of targeting instruments and infrared heat sensors to scrutinize the objective and landing zones. No enemy activity was detected, and the AC-130 declared the areas "secure."[1162] This information was relayed to MAKO 30, pacifying their concerns about any unwarranted risks.

The report that Takur Ghar was "clear" is sadly mistaken. Hidden from NAIL 22's probing sensors, Al Qaeda fighters lay hidden, secluded in the rocks and cags along the mountain's ridge. Their heat signatures were masked by the rock, the snow, and the mountain itself. Some of the most unsophisticated tactics in the world had successfully competed to foil some of the world's most advanced detection methods. The results were to be catastrophic.[1163]

At 2:20 AM, Hyder took *de facto* command at Gardez. He was left in charge when the rest of the contingent departed as Task Force HAMMER launched a vehicle convoy. The convoy took with it the AFO officers, their experience, and their advice. Hyder was now effectively in control of the SOF elements operating in Shah-e-Kot, and his focus would remain squarely on pressing the mission forward with little regard to the local factors he remained willingly ignorant of.

Less than one minute later, at 2:21 AM, RAZOR 03 and her SEALs were given clearance to approach and land directly to the summit of Takur Ghar.[1164] The SEALs, trusting in the AC-130 assessment that the summit was clear, believed the threat of enemy detection to be neutralized. Their unit leader concurred with the decision to land directly onto summit, and they proceeded inbound.[1165]

RAZOR 03 would infiltrate MAKO 30 to the top of Takur Ghar. They would do so into an environment that was recognized as a potential enemy stronghold. They would do

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[1161] Hammer.

[1162] Naylor, *Not a Good Day to Die,* 310; Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1163] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1164] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1165] Hammer.

so without the benefit of relative superiority. They would go in via an anticipated means to a contested location, making the timing and means of their insertion predictable based on pre-established patterns already discerned by the enemy. They would go in without having the expertise of their SOF AFO counterparts brought to bear against their plan in the context of the body of accumulated intelligence. And they would go in without the benefit of a chain of command as focused on mission force survival as on accomplishment of the mission objectives themselves.

At 2:38 AM, RAZOR 04, who had separated from RAZOR 03 to infiltrate to their individual objective, deposited MAKO 21 to the intended landing zone. They were airborne again within three minutes. MAKO 21 proceeded with their mission and RAZOR 04 headed back to Gardez.[1166]

4. Ambush

Infil to Takur Ghar: At approximately 3:00 AM, the acoustic signature of RAZOR 03's approach alerted Al Qaeda fighters to their presence. The approach would take extra time in the thin mountain air. The enemy fighters collected weaponry and positioning themselves toward the activity to tactically confront the aircraft. They wielded AK-47 assault rifles and rocket propelled grenade launchers (RPGs), both of which were potentially lethal to a helicopter and its occupants in the terminal phase of an approach to landing.[1167]

RAZOR 03 continued their ascent to the summit of Takur Ghar, unaware they were well entering the firing range of the undetected enemy forces. Not only did the assault force not have relative superiority, but it faced a larger defensive force that did. Unaware of the seriousness of their predicament, the SEALs maneuvered themselves toward the rear door of the helicopter, anxious to egress upon landing.[1168] Roberts took the position closest to the ramp.[1169]

[1166] Naylor, *Not a Good Day to Die,* 311.

[1167] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1168] Hammer; Naylor, 311.

[1169] Naylor, 312.

The first signs of the enemy appeared as RAZOR 03 descended to land. A crew member noticed footprints in the snow.[1170] This served as a sign of human presence, but did not warrant enough evidence to discourage these warriors. The helicopter strained in the final stages of descent, as the additional lift of forward motion slipped away and sheer torque stepped in to maintain control. The pilots settled the great beast into the mountain snow. It sank down to its belly in three feet of white powder as they let the power out.[1171] As the operators gained clarity on the environment surrounding them, they realized they were not alone. They spotted a DShK mounted a short distance away and then a donkey tied to a tree. Skinned animal carcasses were hanging nearby. The mounting evidence surrounding them pointed to a current human presence, and a hostile one.[1172] Then, the aircraft commander spotted a silhouette lurking among the rocks of the mountain's peak.

The SEAL unit decided to take definitive action to control the situation before the enemy could respond to their presence. Perhaps they could spend their element of surprise to suppress these enemies and still use the cover of darkness to conceal the exact location of their activity. "We're taking the LZ," the SEAL leader stated decisively.[1173]

"A bright orange flash to the left of the Chinook" disrupted the night, illuminating the helicopter, perched on the mountain peak high above the valley.[1174] An Al Qaeda fighter's RPG had been fired at a devastatingly close range. The projectile ripped through the helicopter's skin before any human reaction was possible.[1175] The startled flight crew was momentarily blinded by the flash of the projectile's launch. The projectile shunted through the helicopter's left side electrical compartment, before exploding through its counterpart on the right. The helicopter lost all of its high-power alternating-current electrical systems, killing the pilot's "multifunction displays, navigation, … automatic

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[1170] Naylor, 311.

[1171] Naylor, 312.

[1172] Naylor, *Not a Good Day to Die,* 312.

[1173] Naylor, 312.

[1174] Naylor, 312.

[1175] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

flight control systems, … all the radios accept part of the intercom," and the preciously lethal bite of its two M134 miniguns. The aircraft's primary means of suppressive fire had been violently and instantly silenced.[1176]

A second RPG slammed into the ground at the nose of the chopper, "showering the multimode radar" with shrapnel.[1177] Bullets began to "pepper" the aircraft, piercing the thin metal skin and shredding its critical hydraulic lines.[1178] Hydraulic fluid, pressurized at a flesh-slicing 3000 psi, vaporized into the air as it sprayed out in a thin pink mist, poisonously toxifying the atmosphere around it. Choking smoke began to fill the aircraft, further diminishing its occupants' ability to see or breathe.

"'Get us out of here!'" the SEAL leader yelled.[1179] "Go! Go! Go!" a crew member echoed.[1180] As soon as the pilots heard that it was clear to liftoff, they simultaneously wrestled for the controls to demand the aircraft to fly. The injured aircraft staggered as it clawed its way back into the air.[1181]

The helicopter continued to absorb fire as it fought to climb away from this lethal trap. Crippled and without the ability to return fire, the pilots were left with only evasive maneuvers as their last ditch effort to avoid certain death. They maneuvered the lurching aircraft sharply in an effort to avoid terrain and enemy fire.

The violence of the maneuver flung Roberts, who had been perched by the rear door, off of his feet and toward the rear opening of the aircraft. One of his fellow operators attempted to assist, grabbing at Roberts, but to no avail. Roberts slipped through his fingers and disappeared out the back of the helicopter into the dark night.[1182]

[1176] Naylor, 313.

[1177] Naylor, 313.

[1178] Naylor, 313.

[1179] Naylor, *Not a Good Day to Die,* 313.

[1180] Naylor, 313.

[1181] Naylor, 313.

[1182] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

The RAZOR 03 pilots were saturated fighting to control their impaired craft and avoid enemy fire. They wrestled it away from the enemy engagement, dodging terrain as they descend down the mountain's slope. They were unaware Roberts was missing and the state of their aircraft meant they were unable to retrieve him even if they had known.[1183]

RAZOR 03 proceeded down the mountainous terrain and away from the fight, but it had been damaged too badly to sustain flight. It crashed at a site a little over four miles away, in a remote mountain valley. In the confusion that followed, the operators attempted to attain accountability of their personnel. They discovered that one of the SEALs was missing: Roberts was gone. As they put the pieces together, they deduced where he must be: over four miles away at the insertion site – atop Takur Ghar. It would take hours for the SEAL unit to personally mount a rescue attempt. Without airlift, their ability to provide recovery and extraction of their own isolate person had been compromised.[1184]

a. SEAL Rescue Attempt

The SEALs will find a way to go back. Major General Hagenbeck would later explain in his interview with National Geographic how important it is in the military, and particularly the SOF community, to never leave a man behind: "Part of the warrior ethos is to never leave a fallen comrade, so there was never a question about us going back in to find him [Roberts] … alive or dead," Hagenbeck stated.[1185] His attitude admirably reflects the lessons hard learned in the aftermath of 1980s Operation EAGLE CLAW and the 1993 Battle of Mogadishu.

The SEALs had Chapman set up his radio to call back for an additional Chinook helicopter.[1186] With it, they can mount a rescue effort to extract Roberts from the ridge.

[1183] Hammer.

[1184] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1185] Hammer."

[1186] Naylor, *Not a Good Day to Die,* 316.

Their primary mission of reconnaissance had now been replaced with a new mission objective: isolated personnel recovery for one of their own – Roberts.

As the news of the downed chopper reverberated through the various command channels, the responsive activity was flurrying. The "bifurcated chain of command" that had been "imposed on U.S. forces in Afghanistan," had taken its toll.[1187] No one owned all of the resources that would be necessary to end this disaster, and the command lines were unclear at best, tangled at worst.[1188]

At this point, General Trebon assumed complete command of the intrepid SOF mission, ousting the AFO leadership. Trebon was deeply invested in seeing this mission succeed and he could not just stand by and watch it fall apart around him and his men. He had to take control of the situation himself. "'Get off the [radio] net,'" Trebon barked at the ranking AFO officer across the command net, "'We've got it.'"[1189] Naylor summed the response and consequences:

> In deciding to remove command and control of the events in the Shahikot from AFO leadership … and manage it himself, Trebon was … taking the … men whose professional background and current situational awareness best qualified them to organize the rescue operation in the Shahikot out of the loop, and replacing them with staff officers … miles away from the battlefield.… Trebon took this action in the belief that simply having access to the satellite radio nets and, especially, the Predator feeds gave the officers in Masirah as much understating of the events in the Shahikot Valley as they needed to run things from there.
>
> Perhaps acknowledging that his own background hardly qualified him for the situation in which he had placed himself, Trebon told his staff in Masirah, "I have command, you have control." … Command and control usually go together in military operations…. "Command is the decision-making, control is the mechanism that supports the decision-making."
>
> In the space of a few seconds, Trebon had ensured that what was about to bubble into the fiercest close-range firefight U.S. troops had waged since Mogadishu, a close quarters, take-no prisoners battle fought on a frozen Afghan mountaintop, would be "controlled" by officers watching video

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1187 Naylor, 319.

1188 Naylor, 319.

1189 Trebon, as quoted by Naylor. Naylor, *Not a Good Day to Die,* 319.

> screens on a desert island and "commanded" by a man who had made his name flying transport aircraft.[1190]

Roberts had survived the fall from RAZOR 03, but the incident had left him alone and stranded inside a swarming nest of an enemy strongholds with only his M-4 carbine light assault rifle for protection. The cold and dark may have comforted him as he faced this perilous environment: they are old friends to SOF operators. But out of radio range and unable to call for help, Roberts had few allies as he sought to obscure himself among the rocks.[1191]

Al Qaeda's forces closed in on Roberts. For the next hour and a half, their small arms fire proved effective at pinning him down. Eventually, one of the enemy's shots found its mark. Roberts was struck in the right leg.[1192] Shortly afterwards, "[a]bout an hour and a half after falling from RAZOR 03, Neil Roberts was dead."[1193]

"Roberts [had] been killed. General Hagenbeck [had] witnessed his execution via … surveillance images," a National Geographic documentary punctuated years later.[1194] Hagenbeck described the grizzly loss of Roberts: "It was gut-wrenching to see. Al Qaeda…grabbed him. We saw them move [him] into a shadowy area, never to be seen again."[1195] But Hagenbeck was not in communication with the SEALs or Chinooks.

By 5:00 AM, the SEAL unit's efforts to regain mobility had succeeded. RAZOR 04 had retrieved them and they were now approaching Takur Ghar on a rescue mission to retrieve Roberts. The plan was simple enough: get in, get Roberts, and get out. But this

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[1190] Naylor, 319–320.

[1191] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1192] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1193] Naylor, *Not a Good Day to Die,* 324.

[1194] There is a possible discrepancy noted in the source's identification of how Hagenbeck made this observation. The National Geographic report stated that "General Hagenbeck witnessed [Roberts's] execution via the satellite surveillance images." However, it is more likely these images were transmitted via Predator drone feed, as Naylor reported in his account of the incident. Naylor, 365; Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1195] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

battle was no longer a typical SOF mission. It had instead devolved into a classical battle of attrition for which the SEALs were relatively lightly armed.[1196]

The critical element of surprise would not be with the SEALs on this attempt, either. The enemy would be imminently expecting their rescue attempt. Their method of insertion was easily anticipated, but there were no other options available to them. There were no other ways to accomplish an insertion at that altitude in a timely-enough manner to try to save Roberts. Hiking up would take longer than Roberts might have. Despite the risks of another direct infiltration, these operators felt a driving need to go back for the friend and colleague they had unintentionally left behind. They had no choice but to proceed back in to try and save him.[1197] They rode RAZOR 04 to the summit.

b. Confronting Force

Second Infil to Takur Ghar: As RAZOR 04 descended to land on the mountain ridgeline; it "immediately [came] under fire."[1198] The pilots, undeterred, continued to touchdown. Five SEALs and Chapman departed the aircraft into a firestorm in the night. "An intense firefight [erupted]" as they engaged the enemy on all sides.[1199] Like Roberts, the SEAL unit found itself hopelessly outmatched against the much stronger and alerted enemy defensive positions. Without any of the advantages provided through relative superiority, they were quickly pinned down. Al Qaeda fighters retained the privilege of familiarity in these rocks, and they had fully exploited it to their advantage. Al Qaeda held the most defensible positions as well as the high ground.[1200]

In the barrage of bullets, Technical Sergeant John Chapman found the calm to accurately dispose of two enemy fighters. Moments later, he fell victim to the

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[1196] Hammer.

[1197] Hammer.

[1198] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1199] Hammer.

[1200] Hammer.

intensifying maelstrom. He was killed in action.[1201] The National Museum of the United States Air Force recorded the final sacrificial moments of Chapman's life:

> Chapman advanced on an enemy position, killing two of the enemy. When the team became pinned down by fire from three directions, Chapman broke cover to rush another enemy position, but was killed. His action saved the lives of the team by allowing them to break contact and move down the mountain away from the ambush. Chapman was posthumously awarded the Air Force Cross.[1202]

Russian-made DShK 0.50 caliber machine guns came to bear against the SEALs. The impact was as devastating in real life as imagination could make possible. The DShK 12.7mm rounds were capable of penetrating one inch thick armor plating at over 1,600 feet.[1203] The SEALs, armed only with M-4 carbines, light-weight assault rifles intended for SOF direct-action missions, were dangerously outgunned in this conventional firefight of attrition. They were only six attempting to mount an assault against a well defended enemy numbering into the hundreds … less than promising odds.[1204]

Two more of the SEALs were hit by enemy fire. The situation began to deteriorate, dangerously. The remaining SEALs began fighting a battle of survival as they fell back, unable to reach Roberts against the superior firepower of the amassed enemy forces.[1205] The National Geographic documentary described the disproportionate confrontation: "Outgunned and severely outnumbered, the SEALs [were] in deep trouble. They [retreated]."[1206]

What the SEALs still did not realize yet was that Roberts was no longer alive at this point. Unaware, the SEALs had continued to risk themselves for the chance of retrieving Roberts alive. RAZOR 03, damaged during the insertion, had returned to base, taking with it the high powered long-range radio communications capabilities the SEAL

[1201] Jones, "UNSUNG HEROES;" Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1202] National Museum of the U.S. Air Force, "Battle at Takur Ghar."

[1203] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1204] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1205] Hammer.

[1206] Hammer.

unit could have possibly used to remain informed of Roberts's fate. But without the integrated communications network or a long-range radio, they are detached from the command centers at Gardez and Bagram.[1207]

The injured SEALs were unable even to retreat under the immobilizing fire of the enemy. They called out for a rescue of their own.[1208] An AC-130 gunship, GRIM 31, answered their call. The gunship strafed the enemy's positions. Its firepower effectively halted the enemy's assaulting fire, allowing the SEALs fall back.[1209] They retreated down a rocky slope as far as they could manage.

As daylight approached, the AC-130 itself became vulnerable. Under the cover of darkness, its relatively fast speed, lagging acoustic signature, and low visibility made it a hard target, allowing it to bring its heavy firepower fully to bear. But in the light of day, the one-hundred-plus million dollar aircraft and its crew of 14 vulnerably presented themselves as an enticing target to all within visual range.[1210] Naylor described the history of why the AC-130s here were ordered to operate only under the cover of darkness:

> The AC-130 was the vampire of the Air Force's fleet of attack aircraft, extraordinarily lethal at night but incredibly vulnerable in daylight. The gunship community was haunted by the memory of Spirit 03, an AC-130 brought down by an Iraqi SA-7 antiaircraft missile during the January 1991 battle of Khafji. Spirit 03 had stayed on station until 6:35 a.m. to help some embattled Marines, allowing an Iraqi air defender to use the early-morning light to line up the slow-flying aircraft in his sights. The AC-130 community was determined to never again lose a plane to daylight, and prior to ANACONDA the rule was that all AC-130s had to be out of Afghan airspace by dawn. Those rules had been relaxed to give the troops on the ground more coverage during ANACONDA, but GRIM 31 was still required by the Task Force DAGGER leadership to be clear of the Shahikot area before sunrise.[1211]

[1207] Hammer.

[1208] Hammer.

[1209] Hammer.

[1210] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1211] Naylor, *Not a Good Day to Die,* 199.

Unwilling to risk the sacrifice the AC-130 asset, command ordered it to return to base as the cover of darkness slipped away.[1212] As soon as the gunship departed the objective area, Al Qaeda fighters reopened fire on the retreating SEALs.[1213] Once again, they were immobilized, unable to depart the deadly area.

c. Rangers

At Bagram Air Base, some 108 miles to the north of Takur Ghar, a Quick Reaction Force (QRF) of high-quality Army Rangers remained on a 24-hour alert cycle for just such occasions as these.[1214] When lower-intensity conflicts flared-up, it was their job to go in and provide the forceful, timely, and exacting precision with which to meet the enemy's demands for a violent response. "They specialize in behind the lines evacuation and reinforcement missions."[1215]

Specialist Oscar Escano, a member of the 75th Ranger Regiment, was one of the QRF members on alert. In later interviews, he related the QRF job to that of the first-responders associated with the civilian 911 emergency alert system. "It's very much like the 911 system," Escano explained. "As a quick reaction force you don't have the benefit of being able to plan things out. You pretty much just get called and you get told that something has gone horribly wrong."[1216]

Captain Nathan "Nate" Self was also a member of the 75th Ranger Regiment and served as commander of the platoon of Rangers that composed the QRF. He received word at the Joint Operations Center in Bagram that they were being alerted to evacuate a unit of Navy SEALs.[1217] Within 15 minutes of receiving the word that the SEALs need

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[1212] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1213] Hammer.

[1214] Hammer.

[1215] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1216] Hammer.

[1217] Hammer.

an evacuation, Self and his Rangers launched from Bagram aboard two additional MH-47E's, RAZOR 01 and RAZOR 02. It was 5:55 AM.[1218]

Launching the QRF was the SOF version of a rescue effort.[1219] Captain Self led one unit of nine Rangers, designated Quick Reaction Force-One (QRF-1) aboard RAZOR 01. Specialist Escano would go in under the command of team leader Staff Sergeant Arin Canon, who would lead a second ten-man unit of Rangers (QRF-2) aboard RAZOR 02.[1220] Naylor provides a breakdown of the helicopter occupants in his book:

> There were twenty-one men on RAZOR 01: two pilots, the air mission commander, four crew chiefs, one medic from the 160th, three special tactics men, one enlisted tactical air controller, and nine Rangers. RAZOR 02 carried sixteen men: two pilots, four crew chiefs, and ten Rangers.[1221]

Among the QRF-1 members onboard RAZOR 01 were two medics. The first was Sergeant First Class Cory Lamoreaux, a medic who had volunteered for this mission when his team was alerted. Lamoreaux could have passed on the opportunity to go on this particular mission. He had served his tour and was preparing to return home when the alert had come in. Instead, Lamoreaux rose to the challenge and chose to join his team for this final mission. At Lamoreaux's side was fellow medic Senior Airman Jason D. Cunningham, a pararescueman. Together, they would join with the Rangers on their insertion to the objective to provide effective fire and combat medical assistance (see Figure 129).[1222]

[1218] Hammer.

[1219] Hammer.

[1220] Bradley Graham, "A Wintry Ordeal at 10,000 Feet," *Washington Post*, May 25, 2002, https://www.washingtonpost.com/archive/politics/2002/05/25/a-wintry-ordeal-at-10000-feet/f2dd16f6-cc53-40e6-9ec9-f1d9ab9a89ac/?utm_term=.0b6076d5d36e.

[1221] Naylor, *Not a Good Day to Die,* 332.

[1222] Hammer, "Al Qaeda Ambush Battle of Takur Ghar;" National Museum of the U.S. Air Force, "Battle at Takur Ghar."

"(From left to right) Tech. Sgt. Keary Miller, Senior Airman Jason Cunningham and Staff Sgt. Gabe Brown about three weeks before the battle. Behind them is a MH-47E, the same type of helicopter that took them to Takur Ghar. (U.S. Air Force photo)."

Figure 129. Senior Airman Jason Cunningham[1223]

The QRF preparations to depart were hasty. They departed so quickly that they had not yet received a situation report. They did not know what kind of situation they were headed in to deal with. All they knew was that time was of the essence and that someone needed their help. They would need to receive the vital details regarding the environment and enemy they were headed to face while en route.[1224]

[1223] Adapted from National Museum of the U.S. Air Force, "Battle at Takur Ghar."

[1224] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

While in transit, the Self and Canon received reports of: "a crashed helicopter, a man down, and an ambushed SEAL team."[1225] The information was sadly not rich enough to relay the intensity of the situation they were headed to face, but it is "all they have to go on."[1226] The sparse and vague information failed to encapsulate the fact that two helicopters had already been engaged and damaged during direct insertions at the very coordinates these Rangers were now attempting to reach.[1227]

Captain Self expected a hostile environment based on the information he received. Their approach would be in the daylight. It would make them an easier target. Self told his men to be ready for the worst. They may be landing under fire, and things could get ugly fast. Self's instructions were passed to his men on pads of paper: messages scribbled out in the churning back of the MH-47. The interior was too noisy for him to speak to them directly, and the team did not enjoy the luxury of an independent and integrated communications system. Only the two team leaders, Self and Canon, had networked radios.[1228]

Without an adequately integrated communications network, Canon and Escano, aboard RAZOR 02, were somewhat isolated from Self and his messages that might have expanded their understanding of the situation. The information-flow had fallen from a trickle to none at all. Escano described that he received no updates en route.[1229]

While the Rangers rushed to the scene, command contemplated the plan. They became reluctant to expose both helicopters to a potentially lethal situation. Command was not sure what was going on, and risking both helicopters seemed unwarranted. RAZOR 02 was ordered to return to Gardez and hold, to wait for call-in while RAZOR 01 proceeded inbound alone. "*Better to have only one helicopter shot down, not two*," was the reasoning Naylor discerned.[1230] This tactic would disperse the mass the Rangers

[1225] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1226] Hammer.

[1227] Hammer.

[1228] Hammer.

[1229] Hammer.

[1230] Naylor, *Not a Good Day to Die,* 340.

were able to bring to bear on the objective, but it would also mitigate the simultaneous loss of two assets if the situation rapidly deteriorated.[1231]

d. Ensnarement

Third Infil to Takur Ghar: Atop the mountain of Takur Ghar, Al Qaeda fighters again heard the now distinctly familiar acoustic signature of the approaching RAZOR flight. Without the cover of darkness, RAZOR 01 was fully illuminated and the betraying sounds of her approach disallowed any semblance of surprise to materialize. The Al Qaeda fighters, now experienced at snapping this trap on American choppers, patiently hid in their positions. They would hold their fire until there was no chance for the closing helicopter to escape. RAZOR 01 descended to its doom surrounded on all sides by the closing teeth of the Al Qaeda snare—teeth that had already fiercely snapped its two predecessors. Once RAZOR 01 decelerated below effective translational lift, its commitment to land became irreversible.[1232] The enemy opened fire.[1233]

[1231] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1232] *Effective Translational Lift (simplified):* Simply stated, effective translational lift allows a helicopter to produce more lift when it is traveling at a faster speed than when it is sitting still in a hover. This means that when a helicopter slows down, it loses lift. When it slows down to a certain point, the helicopter will require more power to hover, or else it will descend. A helicopter or tiltrotor's entrance and exit from effective translational lift can be heard and is acoustically detectable by the human ear.

Details follow: Helicopter rotor-blades operate on similar principles to aircraft wings. Both airfoils pass through the air and, due to their shape, create lift. The air going above the airfoil is force to travel a greater distance than the air beneath the airfoil. This creates more dynamic (moving) pressure above the wing, as opposed to the relatively static (unmoving) air beneath the wing. Fluid dynamics illustrate that dynamic fluids produce less static pressure than that produced by a relatively slower, more static fluid. The bottom of the wind is "pushed" on harder than the top by this pressure differential. Therefore, lift is created as a byproduct of differential dynamic and static pressures above and below the airfoil, respectively. Lift is consequently a function of speed. The faster the wing or blade travels, the more air it will go through, and the more lift it will create. A helicopter's rotor-blades can achieve a certain amount of brute "speed" while hovering over a single point, as the blades are spinning. This is normally accomplished by using a constant revolutionary speed and varying the angle at which the blade bites into the air. Regardless of this remarkable feat, the helicopter exudes a great deal of energy and effort to maintain flight in this "motionless" hovering state. It remains unassisted by lateral motion that could otherwise assist the rotor in creating lift by passing additional air across the airfoil's surface. (Interestingly, the rotor system is undeterred by the direction of lateral motion. Left, right, forward, and reverse all create relatively equivalent airflow increases). The additional lift generated by traveling faster is known as effective translational lift.

[1233] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

The enemy fighters tactically choose to send their first barrage directly into the cockpit. The point-blank assault shredded the cockpit in an explosion of metal, plastic, and glass. Sparks and bits of material flew and glinted in the harsh light. Both pilots were immediately hit.[1234]

Bullets raked across the aircraft, puncturing the fuselage as though it were made of paper. The popping and zinging of bullets perforating the thin metal resounded through the fuselage. It was an unwelcomed addition to the normal sounds of the chopper's blades mechanically pounding through the thin air on descent. Lamoreaux described how intense the grating machine gun fire was: "there was gunfire everywhere … you [could] see the effects of it, but you [couldn't] hear it."[1235] "I received three bullets into my helmet that didn't actually penetrate," Lamoreaux continued, recalling bluntly the intensity of the volley of fire.[1236] Metal, cloth, rubber, and plastic confetti sparked about the interior compartment. Piercing laser-lines of daylight instantaneously materialized in the dusty air, shining through the dimness of the interior cargo hold.

Sergeant Phil Svitak, the Chinook's right mini-gun gunner, was fatally shot. His body fell to the floor. With his death, the right side of the aircraft was now completely exposed and unable to defend itself from the continuing onslaught of lead. The unanswered calls of the enemy's weapons resulted in an increased focus and intensity of their fire. The right engine buckled and burst under the barrage, the combustion section exploding as its inner core was ruptured. The turbine threatened to send a thousand razor-thin fan blades flying radially as they spun at unimaginable speeds along their disintegrating axis. The remaining engine cried out, whining loudly as it attempted to compensate for the loss of its twin. Smoke streamed from behind the chopper. It lost lift, briefly yawed, and staggered, clawing to stay in the air.[1237]

[1234] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1235] Hammer.

[1236] Hammer.

[1237] Hammer.

For a brief moment, the aircraft seemed stunned, suspended in place. Bucking and straining, without positive control, the 27 ton Chinook faltered, slumping in the air.[1238]

A well-aimed RPG took clear advantage of the close proximity of the dazed and wallowing craft. The point-blank impact was devastating. "The aircraft was just shoved in the air to the side, and then just fell out from under us," Self recalled.[1239] The RPG most probably sheared the transmission drive shaft, disconnecting the remaining torque from the straining left engine from reaching out to the rotor blades. RAZOR 01 fell to the earth below.[1240]

At 6:10 AM, RAZOR 01 smashed into the rock of the mountaintop.[1241] Its crumpled hulk lay only 73 meters from an Al Qaeda stronghold. The fall and punctuating crash discombobulated the occupants within. The Rangers attempted to regain their composure. QRF-1's rescue mission was already failing. In order to avoid becoming casualties themselves, they had to push back against the enemy stronghold whose doorstep they were now on.[1242]

The freshly downed chopper excited the Al Qaeda militants. They had won a victory, successfully having slayed one of these great metal beasts. The carcass acted as a bullet-magnet, a stress-free target for the Al Qaeda fighters who now had the luxury of an easily discernable and motionless object to receive the brunt of their pent frustrations.[1243]

Self led the charge to launch his force from the death-trap RAZOR 01 had become. He raced out the back of the downed helicopter. He was welcomed by an attentive ferocity of small-arms and machinegun fire. The enemy had prepared to greet him and his men … they had been waiting for them. Two of Self's fellow Rangers fell to the earth behind him as they attempt to follow his lead. They were both instantly killed by enemy

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[1238] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1239] Hammer.

[1240] Hammer.

[1241] Naylor, *Not a Good Day to Die,* 342.

[1242] Hammer.

[1243] Hammer.

fire. Self registered their loss, but the constant enemy bombardment insisted on maintaining his full attention. He tried to buy his men some cover by returning fire, but his gun jammed. Self was forced to retrieve and use the rifle of one of his fallen comrades.[1244]

Self realized RAZOR 01 had been brought down in an indefensible location. There was nowhere to hide. "We were in such a bad place. There was no cover. The only cover was provided by our own gunfire," Self attested.[1245]

Three more Rangers were hit in the unyielding barrage of enemy gunfire as the battle exploded around them. Rangers returned fire, unleashing deadly accuracy against the numerically superior enemy forces. The high-attrition rate these SOF warriors wielded was discharged with unrelenting ferocity, but it was spend unappreciated against the enemy's significantly larger quantity and tactical positioning.[1246]

Less than 150 feet away from RAZOR 01's crumpled mass, the six SEALs remained in their own battle for survival. The enemy had closed on them. They were immobilized, trapped by enemy fire. Two of the six SEALs were seriously injured.[1247] Their radio batteries were almost dead, and they were now forced to save the little power remaining for the critical moment of an evacuation.[1248] The lack of integrated communications meant they were unaware of RAZOR 01's pending rescue attempt. They were unable to warn the inbound QRF of the ambush. Now, they were unable to coordinate their actions with the Rangers on the ground. Naylor wrote:

> The Americans on the mountaintop were fighting for their lives, and dying, in large part because their satellite communication had let them down when they needed it the most. Commo problems continued to hamper them throughout the day.[1249]

[1244] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1245] Hammer.

[1246] Hammer.

[1247] Hammer.

[1248] Naylor, *Not a Good Day to Die,* 347.

[1249] Naylor, 352.

General Hagenbeck frustratingly watched the entire operation disastrously unfold from the command center at Bagram Air Base.[1250] First, he watched the number of men that needed to be rescued climb from one to seven. Now, with the downing of RAZOR 01, he had observed the loss of five lives and there were over a dozen more trapped on the ground behind enemy lines.

Back at Takur Ghar, Lamoreaux took cover in the shell of RAZOR 01 and attempted to care for his fallen Rangers. Four men had been killed. Three more were critically injured and required immediate medical attention beyond that which he can provide. One of the pilot's hands was "almost completely severed."[1251] Lamoreaux attempted to use a vital signs monitor on the injured pilot, only to discover it had been riddled with bullet holes.[1252] He did the best he could with what he had. Time was running out, for all of them (see Figure 130).

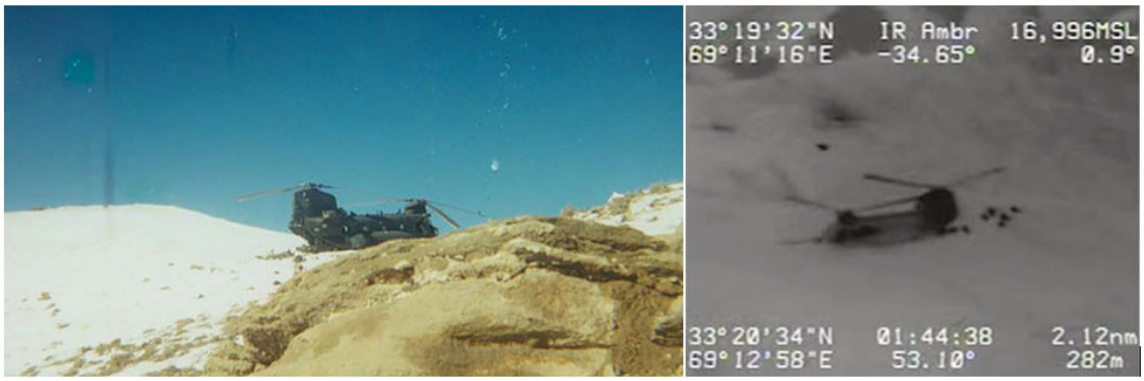


Figure 130. Photo and Predator Feed of RAZOR 01, Crashed atop Takur Ghar[1253]

1250 Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

1251 Hammer.

1252 Hammer.

1253 The image on the left is adapted from "Battle of Takur Ghar Timeline," while the image on the right was adapted from the YouTube video "Air Force Tech. Sgt. John Chapman Firefight Afghanistan Battle of Takur Ghar USAF Medal of Honor." Adapted from Erik Ofgang, "Battle of Takur Ghar Timeline," *Connecticut Magazine*, December 27, 2016, http://www.connecticutmag.com/history/battle-of-takur-ghar-timeline/article_65bf0156-c30a-11e6-ad3d-2309ccf37d8a.html; "Air Force Tech. Sgt. John Chapman Firefight Afghanistan Battle of Takur Ghar USAF Medal of Honor," YouTube, 2:43, posted by Down Range Film, August 03, 2016, https://www.youtube.com/watch?v=JHUh2h20IPE.

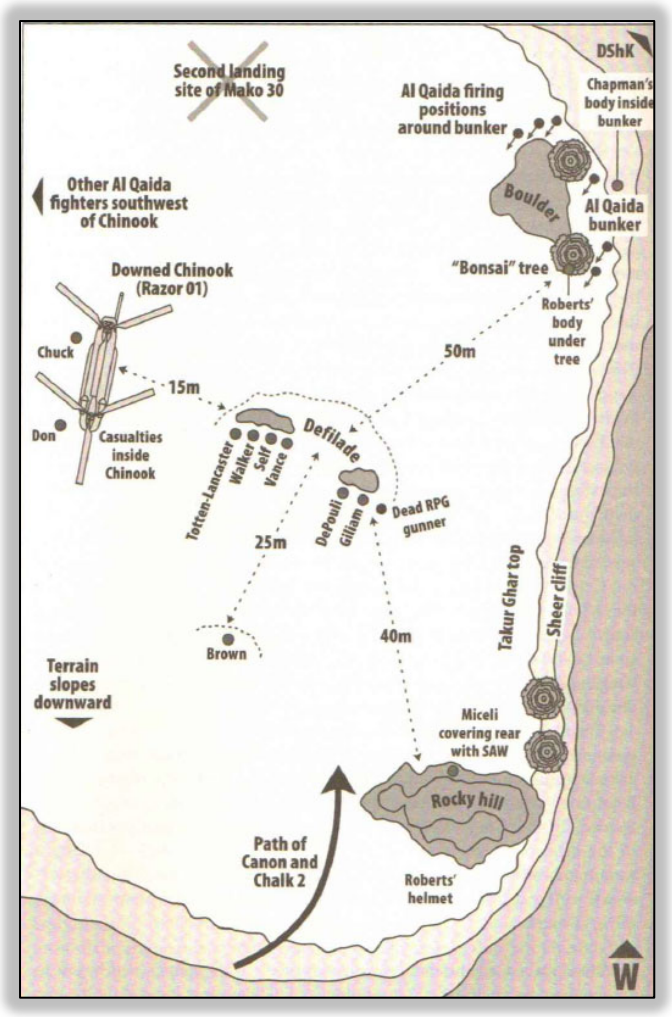
Self had watched his men absorb more of the enemy's wrath than he could stomach. He made the determination that they had to move from the open ground if they were to survive. His assessment was sound, but before he could take any actions to implement it, an enemy fired RPG detonated beside to him. Self was injured by the blast, but he remained largely intact, conscious, and undeterred. He picked himself back up and carried on towards several rock outcroppings a few yards away: the only source of cover in the immediate area. Two of his Rangers managed to join him. The rock outcroppings momentarily provided the shelter they needed to regroup.[1254] Self used this time to have Air Force combat controller, Staff Sergeant Gabriel Brown, radio a call for close air support.[1255]

The Al Qaeda positions were fortified, hardened, and tactically superior. They were almost impenetrable from the ground, giving them a crushing conventionally defensive superiority. "The gun battle was all one-sided," Self recalled. "The enemy was just unloading a ton of ammunition on us."[1256] Close air support could allow the Rangers to bring an appropriate level of conventional firepower to bear from their own side of the fight (see Figure 131).

[1254] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1255] Naylor, *Not a Good Day to Die,* 351.

[1256] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."



"RAZOR 01 assault on Al Qaida bunker atop Takur Ghar, March 2, 2002"

This image is adapted from Sean Naylor's 2005 book, *Not a Good Day to Die*.

Figure 131. The Battle for the Summit of Takur Ghar[1257]

Self's call was answered by a formation of two F-15E Strike Eagles. The F-15E Strike Eagle was a dual-role fighter that specialized in air-to-ground close air support. The responding fighters were equipped with 20mm multi-barrel machine guns and 500 pound Joint Direct Attack Munition (JDAM) bombs. The 500 pound bombs were too large to be employed in the close quarters occupied by both the Rangers and the Al

[1257] Adapted from Naylor, *Not a Good Day to Die,* 350.

Qaeda fighters. The explosive blast radius could kill the Rangers, too. Self opted instead for a strafing gun-run on the enemy positions (see Figure 132).[1258]

The F-15E, a dual-role fighter, is capable of providing air-to-ground close air support.

Figure 132. F-15E Strike Eagle in Afghanistan[1259]

At 7:00 AM, the F-15Es bombarded the Al Qaeda bunker positions, spitting venom of their own. But the speed and limited ammo capacity of the F-15s prevented them from providing effective fire. At their innately high speeds, these aircraft could not remain on target for long, decreasing the potency of their otherwise accurate fire. They were also extremely limited on the number of rounds they carried, and ran out of ammunition after only two passes.[1260] These aircraft, originally designed for air-to-air

[1258] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1259] Adapted from "An [sic] Strike Eagle Flies a Combat Patrol over Afghanistan," Pinterest, accessed November 11, 2017, https://www.pinterest.com/pin/533395149598062314/.

[1260] Naylor, *Not a Good Day to Die,* 352.

combat, were built with airfoils and weaponry simply not designed for this type of mission. Against individual enemies, cloaked and buried in the rocks of Takur Ghar, the F-15E's impressive arsenal of capabilities proved ineffective. Their efforts failed to suppress the enemy's continued fire against the Rangers below.[1261]

The situation had become desperate. Self's team had dwindled to only six still effectively able to fight. The enemy's stabbing volleys threatened to fragment their cohesion. Self's QRF was on the verge of becoming ineffectual.[1262] Their communications with the SEALs, the preceding helicopters, their sister-ship RAZOR 02, and the satellite communications with the various command centers had all fallen through.[1263] Their only sight picture was provided by coordination through a single alternative team stationed at a distant observation post elsewhere in the valley and the WILDFIRE predator drone overhead.[1264]

Meanwhile, back at Gardez, RAZOR 02, sat impatiently. They had been there for nearly an hour, having been "held back as reinforcements."[1265] While they were there, Hyder had confronted them. Together Hyder, Canon, and the pilots determined they could use an in-direct insertion to a lower offset landing zone. The landing zone was on a mountainous ridgeline, insulated down Takur Ghar's slope a safe distance away from the firefights and strongholds reported near the summit.[1266] Using it, they could realistically get close enough to reinforce QRF-1 and rescue the SEALs without being shot down, themselves. They waited for Bagram to clear them in.

[1261] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1262] Hammer.

[1263] Naylor, *Not a Good Day to Die,* 353.

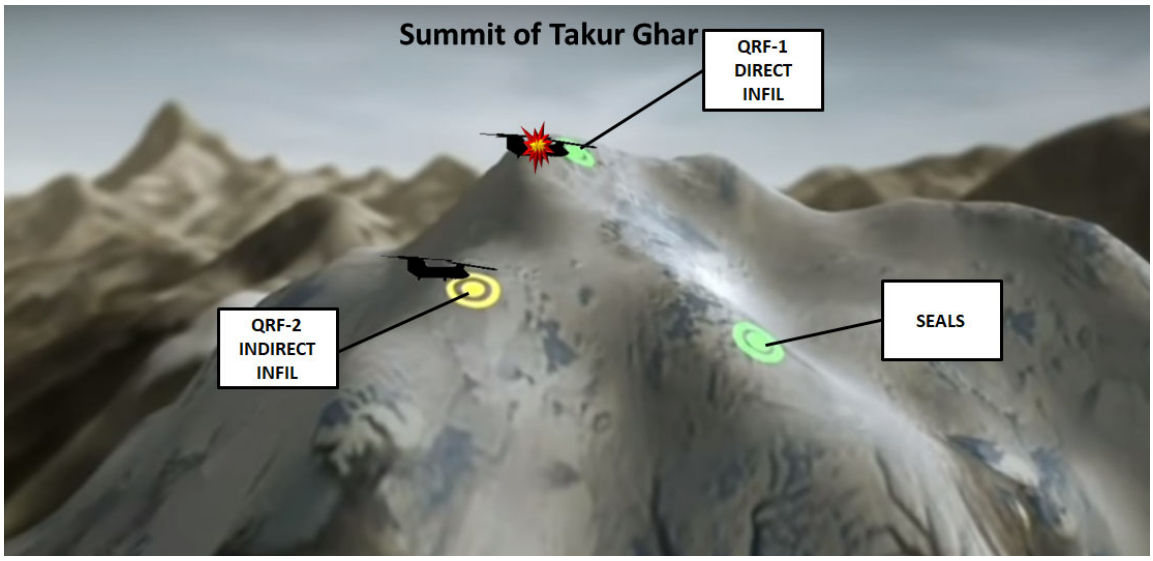
[1264] Naylor, 353, 357.

[1265] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1266] Naylor, 352–353.

5. Mission Transformation: From "Recon" to "Exfiltration"

Finally, the orders came: RAZOR 02 and QRF-2 were cleared into the fight.[1267] QRF-1 and the SEALs needed their help. They were updated on the fierce and devastating battle RAZOR 01 and QRF-1 had encountered. Canon and his men were charged with taking the summit and resolving the crisis.[1268] Their mission was to extract RAZOR 01, who was now immobilized near the peak. Then, if they survive, they could worry about the SEAL unit, presumably still isolated and under fire further down the mountainside.[1269] "What [had] started as a reconnaissance mission [was] now a desperate battle to save lives," said National Geographic (see Figure 133).[1270]



This adapted image was constructed from imagery obtained from National Geographic's Documentary, *Al Qaeda Ambush Battle of Takur Ghar,* from 28 minutes and 11 seconds into the video presentation.

Figure 133. Operational Picture of the Summit of Takur Ghar[1271]

[1267] Naylor, *Not a Good Day to Die,* 352–353.

[1268] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1269] Hammer.

[1270] Hammer.

[1271] Adapted from Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

a. Offset Infiltration

At 8:00 AM, RAZOR 02 inserted Canon and his ten man Ranger team, QRF-2, to the offset landing zone. "The landing was unopposed," Naylor related.[1272] Debarking with them was Hyder, who had joined the fight in a personal effort to rescue his SEALs. Naylor described the perilously thin ties between the SEALs and the Rangers, a consequence of their conventional military ancestral differences compounded by the acrid flavors of desynchronized leadership at multiple levels:

> [QRF-2 to Self:] "I've got Vic Hyder with me.… He wants us to go exfil his guys."
>
> Self wasn't surprised to hear that Hyder was with [RAZOR 02], but he was infuriated that the SEAL officer was trying to take the Ranger reinforcements away from the battle.
>
> [Self to QRF-2:] "No, I need you up here.… He can go and get with his guys, they're not in contact. We are in contact and have casualties. You're coming here."[1273]

Hyder believed the Rangers "had their situation under control."[1274] Naylor related how Hyder determined the "'immediate need' was to assist the two badly wounded SEALs."[1275] Undeterred, Hyder "struck out alone in MAKO 30's direction."[1276]

For QRF-2, the imminence of the terrain became apparent as soon as the chopper departed. They were 2,000 feet down the mountain from where RAZOR 01 was stranded. The rocky ground rose defiantly at a 70-degree slope before them, reminding Escano and the other Rangers of their own human impermanence.[1277] These mountains had stood there for eons. They would have to be championed if these men were to reach their dying companions above. QRF-2, loaded with heavy equipment and weaponry, trudged slowly upward through the snow and rocks. Progress was earned at an aggravatingly sluggish

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[1272] Naylor, *Not a Good Day to Die,* 353.

[1273] Naylor, 353.

[1274] Naylor, 353.

[1275] Naylor, 353.

[1276] Naylor, 353.

[1277] Naylor, 355.

pace. Their frustrations were provoked by the sounds of gunshots emanating from the mountain peak looming far-off in the distance. It would take hours to cover this ground.[1278]

At the peak, RAZOR 01 and Self's men had come under "heavy mortar fire." The mortar rounds seriously threaten to take the remaining lives Self was charged with protecting. He could not allow that to happen. Self reached again for the powerful and appreciated cover provided by close air support.[1279]

This time, two F-16 Falcons answered his call. Given the ineffectuality of the previous close air support, as well as the diminishing likelihood of survival, Self was forced to accept an additional level of risk. Self asked the fighter pilots to bomb the enemy this time. The F-16s toted 500-pound "dumb" bombs.[1280] These bombs had a blast radius large enough to completely destroy the Al Qaeda stronghold atop the mountain, if they made their mark.[1281]

But there were technical challenges preventing this plan from providing Self and his men the sanctuary they so desperately needed. First, these dumb bombs were ballistic. Once released, they would simply fall. Unlike precision munitions, these bombs would not be able to receive guidance corrections or maneuver towards their intended target. This made them far less precise, a significant and relevant factor in close-proximity firefights. Secondly, akin to the F-15s, the F-16s suffered from a design "feature" initially meant to make them more survivable in their role of attaining air superiority: excessive speed. The F-16's bombing runs were made at extremely high speeds, decreasing the amount of accuracy its dumb bombs could achieve. This meant the pilots would have to start aiming wide, and then work their aiming in towards the enemy positions with each subsequent bomb run.[1282]

[1278] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1279] Hammer.

[1280] Naylor, *Not a Good Day to Die,* 356.

[1281] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1282] Hammer.

The first 500 pound bomb missed completely. The next hit, but without enough accuracy to make contact with the Al Qaeda positions.[1283] Al Qaeda militants continued to rain down fire on Self and his men, who were now pinned down behind the limited rocks and holed remains of RAZOR 01.[1284]

Canon and his men continued their slow trudge up the side of the mountain. The thin air, the cold, and the exhaustive climb proved to be dizzyingly formidable. Unsatisfied with the deliberateness of their progress, the Rangers began to ditch their rear back armor plating. Their maneuverability had become more valuable to their survival than the protection the armor offered. Their progress was slightly improved.[1285]

Canon and his men were abruptly greeted by enemy mortar fire as they neared the summit. Unfortunately, they were in the open and the bare mountain offered no sanctuary for QRF-2. They had no way to evade the attack. The path before them was threateningly narrow, offered no alternatives, and came equipped with "shear drop offs" on either side.[1286] The Rangers continued upward, cognizant that an accurate mortar strike could potentially mitigate their chances of achieving the summit or saving their allies.[1287]

b. SEAL Link-Up

Hyder had been facing a comparably threatening and unhospitable environment alone for nearly an hour. But his gallant efforts had paid off. Hyder managed to evade the enemy and found MAKO 30.[1288] They were in poor shape. They had managed to escape the imminent enemy threat, but the surrounding area remained infested. Given the criticality of their wounds, they would not be able to ascend to the summit or backtrack to the offset landing zone RAZOR 02 had employed. They opted to make their way down a draw toward another landing zone, instead. The SEALs traveled slowly, their wounds

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[1283] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1284] Hammer.

[1285] Hammer.

[1286] Hammer.

[1287] Hammer.

[1288] Naylor, *Not a Good Day to Die,* 358–359.

having taken their toll. Hyder did his best to provide support and non-localized protective fire, realizing that their best option was to escape without having to engage with any additional enemy forces.[1289]

General Hagenbeck continued to monitor the mission from the Joint Operations Center in Bagram.[1290] At 8:30 AM, he dispatched two more MH-47 Chinooks from Bagram for Gardez and began the process of alerting additional reinforcement units. Among the occupants of these Chinooks were 35 SOF commandos. They would rendezvous with RAZOR 02 at a forward arming and refueling point (FARP) site. Collectively, they comprised a force large enough to get the Rangers and SEALs off of Takur Ghar; together, they represented a fighting chance.[1291]

By 8:45 AM, Lamoreaux and Cunningham found themselves sheltered in the crumpled and perforated remains of their chopper, along with three wounded: including the two injured pilots.[1292] Lamoreaux opted to keep the wounded personnel in his care onboard the aircraft. His hope was that the size of the aircraft, coupled with its visible obstruction of their positions, would at least provide some semblance of shelter … something unavailable outside. It was a tenuous position. The helicopter itself remained a constant target for enemy aimed-fire and pot-shots. But there was no way for Lamoreaux to get the wounded away to anywhere else.[1293]

Continuing to look for solutions, Self decided to explore the corners of the envelope – he reached out to WILDFIRE, the Predator reconnaissance drone tirelessly circling above. Self had Brown call through and ask the drone's pilot if the drone was armed. The request seemed odd to Brown. At this point in time, drones had not been utilized as strike assets in the war, although some had been outfitted with laser guided

[1289] Naylor, *Not a Good Day to Die,* 358–359.

[1290] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1291] Naylor, 360.

[1292] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1293] Hammer.

Hellfire air-to-surface missiles. But Self's breadth paid off. The drone had two Hellfire missiles on board.[1294]

Concerned about the blast radius of the Hellfire missiles, Self and Brown delayed calling for the strike for another half hour, but eventually the enemy mortars wore them down. Self determined the risk to be warranted. They asked WILDFIRE to aim its first weapon wide, which it did. After watching the first missile impact, Self called for the second one. It was the only airborne weapon Self had left at his disposal. He was counting on it to do the job. "Put it in the bunker," he ordered.[1295] As soon WILDFIRE received authorization to launch, it let its last laser precision Hellfire spin from the rail. It struck out, directly impacting the targeted Al Qaeda position. Naylor wrote:

> The second Hellfire shot was perfect. Rocks, dirt and branches flew over the Rangers' heads. They cheered. When the smoke had cleared from the top of Takur Ghar, the bunker had collapsed and part of the tree was missing. They took no more fire from there.[1296]

The hit was encouraging, but there were more Al Qaeda forces to contend with. The enemy remained undeterred. The mortar attacks continued from alternate launch sites. Self knew that they remained perilously close to the brink … to not going home.[1297]

Self and the three Rangers left with him were now only 150 feet from the enemy's bunker. Momentarily bolstered by the success of the Hellfire strike, and running out of options, Self and his men decided to capitalize on this momentum. They collected their courage and decided to charge the enemy's nearest stronghold: a bunker up the slope.[1298] They each looked at each other and nodded. Then Self said, "Let's go."[1299]

[1294] The National Geographic documentary on Takur Ghar explains that using a drone as a strike platform was still a novel concept at this point in time. This could explain why the drone's pilot had not offered this capability to Self and his men earlier in the fight, although National Geographic stops short of drawing this conclusion. Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1295] Naylor, *Not a Good Day to Die,* 357.

[1296] Naylor, 357.

[1297] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1298] Hammer.

[1299] Hammer.

"The Rangers launched themselves up the slope," National Geographic expounded.[1300] Self later recalled the moment: "About half way to the enemy positions, I saw an enemy fighter stick his head up with a machine gun and start firing at us."[1301] The enemy's DShK 0.50 caliber heavy machine gun instantly shifted the balance of power back to Al Qaeda's favor. It retained the ability to attrit Self and his men in an instant. A fully automatic heavy machinegun shielded within a bunker was more than a match for four men with light assault rifles. They would not stand a chance against it while running uphill across another 75 feet of barren terrain.[1302] Self recognized this as a tipping point, and took the only action he could. "They [were] forced to retreat. It [was] completely demoralized for the men," National Geographic explained.[1303]

It was now 10:30 AM. Four hours into their portion of the fight, the Rangers were continuing to see their options dwindle. They continued to face potential defeat. Every minute that passed was one fought for, without a guarantee that another would follow. "There was no clear path out of this situation," Self recalled.[1304]

c. Reinforcements

QRF-2 had been climbing for two and a half hours from RAZOR 02's offset insertion site. They had pushed on despite being under relentless, though inaccurate, mortar fire. Finally, their efforts reimbursed them. They finally closed on the summit and joined with Self and QRF-1.[1305]

The good news was that their force was now substantial enough in size to mount an attempt to take the summit. The bad news was that, as far as they know, they collectively comprise the "reinforcements." They did not know that anyone else had been

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[1300] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1301] Hammer.

[1302] Hammer.

[1303] Hammer.

[1304] Hammer."

[1305] Naylor describes how, in the final moments of their ascent, QRF-2 "made a grim discovery … a helmet with a bullet hole in it. From the state of the inside, it was clear the last person to wear it had been shot in the head. That person was Neil Roberts." Naylor, *Not a Good Day to Die,* 358.

alerted to rescue them. If they failed, they assessed it would take an agonizing amount of time before conventional assets could be mustered to extract them from this remote mountain top, if any were capable of coming at all.[1306]

Self determined that their best chance for survival included neutralizing the stronghold directly above their current position: the bunker with the DShK machinegun. His plan was simple: "we shoot and you move."[1307] QRF-1 would provide cover fire while QRF-2 led the charge.

The Charge: The bunker was quiet in the moments just before the Rangers charged. When the signal was given, all 14 Rangers opened fire. "The assault began with just a massive amount of fire power," Self remembered later.[1308] The enemy bunker reactivated, buzzing to life. The Rangers departed the meager sanctuary of the rock outcroppings. There were no other sources of physical shelter between their charge and the enemy position. "There was nothing," Escano recalled.[1309] The Rangers moved forward in surges, alternating between moving and firing as they traverse across the snow and rock, up the ridge. Their only option was to keep returning fire and moving forward against the entrenched Al Qaeda fighters.[1310] "The enemy had every advantage, every tactical advantage," Escano explained. "We were really fighting for our lives."[1311]

The main bunker, only yards away, continued to dispense relentless point-blank fire.[1312] The Rangers stormed the first gun position, and then the next, killing the occupants and silencing the previously overwhelming voice of the DShK. In the aftermath, what remained was a welcomed but gruesome scene. "There were dead bodies everywhere," Self later told.[1313] "As they search the bunkers, they [found] the man they

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[1306] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1307] Hammer.

[1308] Hammer.

[1309] Hammer.

[1310] Hammer.

[1311] Hammer.

[1312] Hammer.

[1313] Hammer.

came for. Buried under debris [was] Neil Roberts's body. A few meters away, they [found his] dropped equipment," National Geographic related.[1314] Sparse communications with MAKO 30 allowed the SEALs to confirm the identity of their fallen comrade. In another bunker, the Rangers found the remains of fellow American John Chapman (see Figure 134).

The Tree and the Donkey (top); a Bunker Entrance (lower left); and a Bunker (lower right)

Figure 134. Al Qaeda Positions Photographed after the Battle of Takur Ghar[1315]

[1314] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1315] Adapted from Adapted from Patil, "Operation ANACONDA."

d. The Eye of the Storm

It was 11:15 AM.[1316] Self allowed only a momentary relief as the men recuperated from their elimination of the enemies in the immediate area. He remembered the other reason there are here. There were still SEALs stuck on the other side of Takur Ghar, injured and picking their way through a minefield of enemy positions.[1317]

The advantage the Rangers enjoyed was fleeting. They were still surrounded by hundreds of Al Qaeda fighters entrenched in dozens upon dozens of nearly impenetrable bunkers strung out all along the mountains.[1318]

Lamoreaux, having been inside the helicopter, caring for the wounded, and cutoff from communication with the Rangers outside, heard the comforting silence and mistakenly understood the entire area to have been secured. Believing the enemy threat to have been neutralized, he focused on caring for his wounded. With the help of Cunningham, he began moving the wounded out the back of the crashed Chinook into the open, in hopes of a pending extraction.[1319]

e. Counterattack

At 11:30 AM, another of the Al Qaeda bunkers opened fire.[1320] The ground around Lamoreaux's feet popped and exploded, and peppering him with snow and dirt. "Before he can react, he takes several bullets to his body," said National Geographic.[1321]

Lamoreaux described the pain as "intense."[1322] He rolled over and pulled into the fetal-position, in part due to shock; partially in an effort to cover and apply pressure to his wounds while he assessed his own condition. In the same barrage of gunfire that cut Lamoreaux down, Cunningham was also badly hit. Cunningham's condition was critical.

[1316] Naylor, *Not a Good Day to Die,* 358–359.

[1317] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1318] Hammer.

[1319] Hammer.

[1320] Naylor, 362.

[1321] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1322] Hammer.

His wounds were massive, as was his blood loss. He would die soon without medical evacuation and extensive medical attention.[1323]

Al Qaeda forces had made their counterattack from across a saddle along the Takur Ghar mountain ridge, from a high point located southeast by just under a thousand feet.[1324] They were attacking from enough of a distance that their fire was fairly ineffective, but the quantity of munitions they threw at the Rangers was extreme. "That was some of the most intense gunfire that we had all day," Self recalled in Naylor's book.[1325]

To make matters worse, the Al Qaeda positions in the local area comprised only the first wave of fighters the Rangers might face. Observation posts from the valley report seeing multiple groups of Al Qaeda fighters making their way up the mountain, apparently eager to take part in their pending victory in the making. In this terrain, and under these circumstances, Al Qaeda was proving to be more mobile than the American forces. This gave them the freedom-of-maneuver, as well as allowing them the ability to handpicked the time and place from which they would engage the Americans.[1326]

Al Qaeda's counterattack was overpowering.[1327] "The enemy's tactics were impressive," Lamoreaux recalled; "We had been essentially ambushed, twice."[1328] Especially vulnerable were the casualties that had been moved from cover in the moments before the attack. They, along with their would-be caregivers, lay exposed and bleeding. The men providing care hunkered down, in place, and returned fire. Through his interviews, Naylor learned the callous resolve these men displayed: "*We're not leaving these guys* was the attitude. *We're gonna stay here and shoot it out*."[1329] Despite

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[1323] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1324] Naylor, *Not a Good Day to Die,* 361.

[1325] Naylor, 361.

[1326] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1327] Hammer.

[1328] Hammer.

[1329] Naylor, 362.

their resolve, “The ratio of healthy medical personnel to wounded troops was getting worse.”[1330]

“The Rangers, and particularly the machine-gunners, kept up a murderous rate of fire to suppress the enemy,” Naylor wrote. Al Qaeda tried to advance on them, and they laid down an impenetrable wall of lead and munitions to stop them.[1331]

For the fourth time, close air support assets swung in to blister the enemy with their fire. This time, Navy F-14 Tomcats unleashed a devastating barrage of 500, 1,000, and 2,000-pound bombs on top of the enemy forces across the saddle. The area was devastated in a dramatic display of explosive fire, dust, and flying debris. Bodies and rocks flew from the site, showering down the steep sides of the mountain. The F-14s effectively decimated the enemy positions. After the explosions, the enemy fire ceased. The war of attrition had finally silenced them, but the longevity of this victory remained uncertain.[1332]

By 1:00 PM, the summit of Takur Ghar had been secured. With the objective area effectively controlled, Self refocused on the survival of his force. The mountainside was “littered with dead and wounded American soldiers” in need of casualty evacuation and medical attention.[1333] There were six dead Americans and six wounded at the summit. The worst off was Cunningham who, along with Lamoreaux, had sustained life-threatening wounds that required immediate medical attention.[1334]

Desperate to save his dying comrades, Self had his men secure a potential landing zone on the other face of the summit. They were only experiencing ineffective pot-shots that dispersed enemy forces randomly flung in their direction. Self believed the area secure enough for helicopter casualty evacuations (CASEVAC), but he was not the final word on the matter. To get the helicopters his men needed to survive, he had to convince

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[1330] Naylor, *Not a Good Day to Die,* 363.

[1331] Naylor, 363.

[1332] Hammer, “Al Qaeda Ambush Battle of Takur Ghar.”

[1333] Hammer.

[1334] Naylor, 364.

those in command to risk these assets. Self called Masirah and urgently requested a medical evacuation.[1335]

"'We have three urgent-surgical casualties,'" Self explained over the radio to the command staff. These men would either "lose limbs or die" if they were not CASEVAC'd immediately, Self explained. His desperate pleas did not fall on deaf ears, but the risks were not lightly weighed.[1336]

Down the rugged slope of Takur Ghar, Hyder and MAKO 30 eventually stopped their "torturous march."[1337] It had taken them six hours, and they had covered less than a mile. Despite valiant efforts, the terrain and their wounds had effectively immobilized them. They found a place where they could take reasonable cover and prayed that it was large enough and safe enough to accommodate an extraction helicopter. They "settle into positions from which they could watch all avenues of approach," and prepare to wait it out.[1338]

6. Exfiltration and Casualty Evacuations

Having already lost two helicopters in this remote and difficult mountain, and having had a third shot to pieces, Trebon and the other commanders were unwilling to risk sacrificing another in the light of day. They knew a decision to wait would mean the loss of the critically wounded men atop Takur Ghar. Despite Self's assurances, Trebon believed that only the shroud of darkness could possibly give a CASEVAC helicopter the necessary cover it would need to safely extract the wounded men.[1339] He made the decision to hold any further rescue attempt until nightfall.[1340]

[1335] Naylor, *Not a Good Day to Die,* 364–365.

[1336] Naylor, 364–365.

[1337] Naylor, 366.

[1338] Naylor, 366.

[1339] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1340] Naylor, 364–366.

a. Unity of Command

In this desperate hour, Hagenbeck contacted four star General Tommy R. Franks, commander of U.S. Central Command, the man whose area of responsibility encompassed the entire theater. General Franks rightly recognized the fight had become one of attrition, and he needed to alleviate the flailing chain of command structure. He needed a single commander over all participating forces. Franks granted Hagenbeck command over all of the forces participating in Operation ANACONDA. The lines of command were finally drawn, albeit in blood.[1341]

Hagenbeck revisited the same decision that Trebon had just faced. He had mustered a substantial force at a rendezvous site. There were CASEVAC choppers, MH-47 Chinooks, AC-130 gunships, A-10 Warthog close air support platforms, Apache gunships, secondary medical transport platforms, and a new QRF of seventy men ready and waiting to launch an extraction operation to the summit of Takur Ghar. They were just waiting on Hagenbeck to authorize their launch. But Hagenbeck feared losing them. Naylor explained that the "harrowing experience of watching four men die in a few seconds live on the Predator feed as RAZOR 01's complement of Rangers ran off the back of the Chinook was … fresh in their minds."[1342] Hagenbeck recalled the difficulty of the decision:

> Were we going to risk *another* helicopter getting shot down and have to mount *another* rescue operation? It was a difficult decision. The rationale was quite clear. Look, we had already had a bunch of them shot down. How many more are you going to fly into the same location?[1343]

At 2:30 PM, Hagenbeck ordered the assault force to stand-down. They were ordered to prepare for an 8:15 PM extraction, just after dusk.[1344] Nightfall is still six hours away.[1345]

[1341] Naylor, *Not a Good Day to Die,* 365.

[1342] Naylor, 365.

[1343] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1344] Naylor, 365.

[1345] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

b. Waiting

Self is understandably "frustrated with the lack of [medical evacuation]." They had taken the summit of Takur Ghar and allowed the SEALs to escape immediate peril. They had achieved their mission objectives. He felt that his men had sacrificed to attain and retain control of the situation, enough so to allow a safe extraction of the remainder of his men.[1346] But his feelings did not convince Hagenbeck to change his mind.

The task of caring for the wounded until nightfall was almost as daunting as the battle that had preceded it. The medical supplies were essentially nonexistent. Cunningham appeared to be mortally wounded, and others were not going to be far behind.[1347] The Rangers attempted to stabilize them. The wounded might freeze before nightfall and help arrived. On the exposed mountain, maintaining 98.6 degrees against the freezing rock, snow, and wind became their most pressing concern.[1348]

As nightfall approached, the temperature plummeted further. The cold was bitter, and gripped the wounded tightly. It threatened to pull several of them from consciousness. Naylor described the painfully dreary passage of time on the bloodied peak:

> Soldiers stripped clothing from their buddies who'd been killed in action in order to keep the wounded warm … they went back to the helicopter … and tore … soundproofing and insulation from its sides to pile on top of the wounded.[1349]

Intermittent airstrikes effectively delayed Al Qaeda fighters from reestablishing firing positions against the battered team of Rangers.[1350]

At 6:00 PM, over six hours since Cunningham had been shot, his comrades watched him slip away. He succumbed to his wounds on the cold rocks and blood-stained

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[1346] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1347] Hammer.

[1348] Hammer.

[1349] Naylor, *Not a Good Day to Die,* 366–367.

[1350] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

snow of the mountain.[1351] "It was hard on all of us when he died" Lamoreaux attested later.[1352] Self also expressed the pain and weight of Cunningham's loss in a later interview[1353]:

> I felt a large load of responsibility that it was my inadequacy to … to convince the decision makers that we could get him out. That … part of it … partly … was m … it was partly my fault.[1354]

The strong man stumbled through the words as though they were bullets piercing his own soul.[1355]

c. Rescue

8:15 PM approached slowly, but it finally arrived with little fanfare. The command center at Bagram finally authorized the exfiltration and casualty evacuation.[1356]

The Rangers were eventually greeted with the familiar dull-beats of a fleet of approaching American aircraft. "RAZOR 02 was the first helicopter to land," Naylor extolled.[1357] The new QRF dispersed and established a perimeter against an enemy that had yet to reemerge in force. Self and his men loaded the wounded themselves. As soon as RAZOR 02 lifted, a second helicopter landed in its place. Self, his Rangers, the downed aviators, and special operators escorted their fallen comrades and they all departed together. A final Chinook landed to on-loaded the new QRF, who collapsed their perimeter and departed. They left Takur Ghar uninhabited, and unsecured.[1358]

A final fourth Chinook rendezvoused with MAKO 30 in the draw where they had taken shelter. Naylor wrote:

[1351] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1352] Hammer.

[1353] Hammer.

[1354] Hammer.

[1355] Hammer.

[1356] Hammer.

[1357] Hammer.; Naylor, *Not a Good Day to Die,* 367.

[1358] Hammer, "Al Qaeda Ambush Battle of Takur Ghar;" Naylor, 367.

> Aware the SEALs were not able to move because of their wounded, the helicopter descended straight down in a hover beside them, blades spinning just feet away from granite walls on three sides of the aircraft. Only the rear wheels touched down as the SEALs limped aboard and the helicopter ascended into the night sky.[1359]

All of the casualties were evacuated to Gardez, where the critically wounded were moved on to Bagram for immediate surgery.[1360]

7. Post-mission: Aftermath

It was seventeen hours from when the SEALs first attempted to infil at Takur Ghar until the last man was pulled from the mountain's peak. The Americans had secured the summit, but were willing to forfeit it for the survival of their men. The battle had claimed the lives seven brave Americans: one SEAL, three Rangers, an aerial gunner, and two Air Force special operators. It had wounded almost as many more, to include aviators who took these men to the objective: aviators who remained there to fight and bleed among them for the duration. Of those that left the mountain, all would live, though many would be marred for life (see Figure 135 and Figure 136).[1361]

[1359] Naylor, *Not a Good Day to Die,* 367–368.

[1360] Naylor, 367–368.

[1361] Naylor, 368.

Figure 135. Eight Men Gave Their Lives at Takur Ghar[1362]

1362 Adapted from "ROBERTS RIDGE BRACELETS."

The MH-47 Chinook crashed during the infiltration of Ranger QRF-1

Figure 136. The Remains of RAZOR 01 atop Takur Ghar (Post-demolition)[1363]

A little over a week after the Battle of Takur Ghar, conventional Afghan forces flushed the enemy from the Shah-e-Kot Valley and took Takur Ghar:

> Afghan forces finally swept into the Shahikot on March 12, accompanied by the Gardez [coalition forces]. The attack took the form of a pincer, with [a] column of rusting T-55 tanks advancing through the [norther gap].[1364]

[1363] Adapted from Adapted from Patil, "Operation ANACONDA."

[1364] Naylor, *Not a Good Day to Die,* 374.

"It was something of an anticlimax," Naylor wrote.[1365] After such a hard fought battle, to only hand the terrain away, and then it was eventually retaken with relative ease.

C. ANALYSIS

"Operation ANACONDA has gained legendary status as a debacle," said Richard B. Andres and Jeffrey B. Hukill in their 2007, "*ANACONDA: A Flawed Joint Planning Process*," published in Joint Force Quarterly.[1366] While the overall operation eventually succeeded in conquering the desired terrain and eliminating enemy fighters, it was only able to do so after the mission force was synchronized, integrated, and focused on a unified conventional strategy.

Takur Ghar represents a failure of the command elements present to recall the lessons they should have learned from Operation EAGLE CLAW: it is not feasible to assemble an *ad hoc* force from conventional components, sprinkle in a bit of SOF, and expect the mission force to be able to produce the effects of a relative superiority. Organizational structures, and the units that come from them, must be synchronized and integrated by relationship-focused leadership in order to operationalize a SOF assault force. The mission force must be able to adhere to the principles of the warfare strategy they are supporting. SOF assault forces designed to capitalize on relative superiority are less capable of employing the principles of attrition warfare. Their use such a capacity is possible and sometimes even plausible. But a basic understanding of the strategic differences between attrition warfare and relative superiority is a component that mission designs require if they are to be crafted with any real chance of success (see Figure 137).

1365 Naylor, *Not a Good Day to Die,* 374–375.

1366 Andres and Hukill, "ANACONDA."

"Sgt. Bradley S. Crose, 1st Battalion, 75th Ranger Regiment, 27, of Orange Park, Fla.; killed by enemy gunfire March 4 during Operation ANACONDA."

Figure 137. Helmet of Sergeant Bradley S. Crose, Killed during the Battle of Takur Ghar[1367]

Seven lives were lost atop Takur Ghar.[1368] Six additional men were seriously wounded. Two helicopters were shot down, and another was badly damaged. These losses represent more than just a cessation of the mission force's ability to carry forward due to a proximate lack of resources and untimely events. Each one of these men bravely gave their all. The extreme sacrifices of these SOF warriors warrant enough attention to ensure that such detriments are not endured in vain, and that senior leaders and elected officials give every effort to avoid such losses into the future.

1367 Adapted from "The U.S. Death Toll in Afghanistan," *Baltimore Sun*, May 26, 2002, http://articles.baltimoresun.com/2002-05-26/news/0205260244_1_ranger-regiment-operation-ANACONDA-afghanistan

1368 The count of heroes lost is available from multiple sources, but is confirmed here by the account portrayed in the *Baltimore Sun's* article. Adapted from "The U.S. death toll in Afghanistan."

Takur Ghar is easily the most difficult case study analyzed herein. It swerves clear of the usual direct-action assault mission type and falls into a myriad of strategic employment methods, organizational relationships, unit functional designs, and command structures. However, it is possibly this complexity that makes this case study so interesting and necessary to study.

1. Theory of Relative Superiority

When the entirety of the SOF missions undertaken at Takur Ghar is analyzed, it becomes apparent that the most significant deviations in relative superiority are attributed to the mission force's ability or inability to achieve adequate mobility. The largest increases in relative superiority are due to effective mobility and maneuver, while the inability to achieve the tenets of assault airlift most significantly strike against the mission force during the infiltration and exfiltration phases of the mission.

There was only two times U.S. SOF achieved relative superiority during the Battle of Takur Ghar. The first was when the Rangers used an unyielding sense of purpose and aerial strikes to impose a superior level of attrition warfare against the strategically advantaged Al Qaeda positions. In this instance, the Rangers were able to create enough sanctuary through offensive fires and maneuver to diminish the lethality of the enemy positions and achieve local terrain dominance for a moment in time. The second instance was when the rescue force arrived in mass to extract the SOF operators under the cover of darkness at the end of the battle. This renewed injection of adequate mobility allowed the exfiltration of the Rangers on the mountain side and the SEALs below. Even at this point they did not achieve enough relative superiority to attain the degree necessary to achieve sustained control of the terrain or continued survival of the total mission force. Instead, only enough momentary relative superiority was achieved to exploit it long enough to extract their remaining and deceased personnel.

Neither SOF direct-action forces nor relative superiority as a strategy are designed to hold terrain. This is a task better suited to conventional assets and conventional strategies. Yet this became the partial mandate upon Self and his Rangers. It became a necessary task to ensure their own survival. The situation had reverted to one of attrition

warfare. As such, it pitted a lightly-armed SOF element against a substantially advantaged adversary. It was only the extremely high level of skill and determination the Rangers extolled that allowed them to triumph from a point of such disadvantage (see Figure 138).

The Rangers at Takur Ghar were not unique in their position of having command expect them to take terrain and eliminate enemy forces in a conventional warfare manner. Operation ANACONDA was, after all, a conventional attrition warfare operation.[1369] "The mission of Operation ANACONDA was to attack and defeat foreign al-Qaeda that were located in the Shah-i-Khot Valley in Afghanistan," General Hagenbeck said, as described by Stone Phillips in his 2006 Dateline NBC news report, "Rescue on Roberts Ridge."[1370]

Even its success or failure was measured in conventional terms. "Operation ANACONDA's primary success was in destroying a sanctuary in which Taliban and al-Qaeda forces had regrouped," said *Time* magazine, just days after the operation ended.[1371] It is debatable as to how significant these enemy losses were, and it is also unclear how many Al Qaeda fighters escaped the Shah-e-Kot in the aftermath of the Battle of Takur Ghar.[1372] However, it is agreed that the operation, itself, if not the individual battles, were conventional in nature. Operation ANACONDA has been characterized as "the biggest battle of the Afghan campaign, in which eight American soldiers and scores of enemy personnel died."[1373] Big battles are not the type of battles SOF are designed or operationalized to prosecute. SOF are designed for operations capitalizing on the use of speed, distraction, concealment, and innovation to achieve objectives in ways that are not commonplace. Takur Ghar instead represents a conventional land-war in which SOF is utilized, in part, because of Trebon's desire for

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[1369] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1370] Stone Phillips, "Rescue on Roberts Ridge," Dateline NBC, November 06, 2006, http://www.nbcnews.com/id/13233811/ns/dateline_nbc/t/rescue-roberts-ridge/#.WancJSxK23A.

[1371] Karon, "What We Learned in Shah-i-Kot."

[1372] Naylor discusses the escaping Al Qaeda fighters from Shah-e-Kot in the final pages of his book. Tony Karon discusses the enemy losses at Takur Ghar in his Time article "What We Learned in Shah-i-Kot:" "Estimates of the enemy casualty count vary wildly in a range between 100 and 500," Karon stated. Karon, "What We Learned in Shah-i-Kot;" Naylor, *Not a Good Day to Die,* 369–377.

[1373] Karon, "What We Learned in Shah-i-Kot."

inclusion. For this, the SOF participants are castigated into serving in a subordinate position and in a conventional manner.

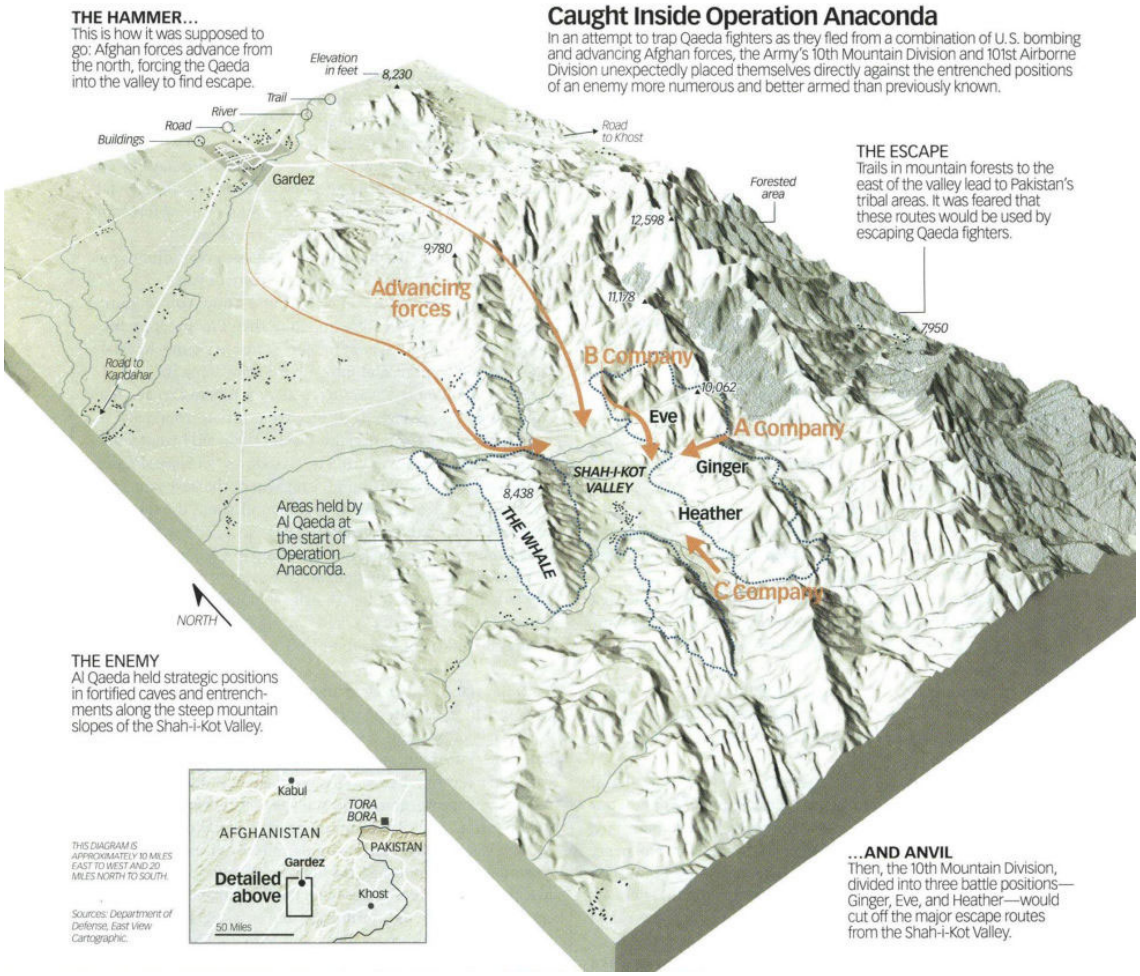


Figure 138. Friendly and Enemy Troop Movements amid the Topography of Shah-e-Kot Valley[1374]

Unlike traditional SOF direct-action missions, the battle for Takur Ghar utilized special operations forces in a very conventional manner: to obtain tactical adversarial reconnaissance in order to pinpoint enemy fighting locations in an effort to allow targeting by conventional strike assets. Reconnaissance for the purpose of directing

1374 Source John Sack, "Al Qaeda's Bloody Ambush: The Inside Story of Operation ANACONDA," *Esquire*, September 7, 2016, http://www.esquire.com/news-politics/a48104/operation-ANACONDA-somalia/.

attacks is not a particularly specialized mission set. It is one of the foundational necessities of combat dating back for centuries. It has always been a necessity to understand the enemy's location in order to bring force to bear.[1375] This conventional push did not necessarily require SOF direct-action mission assets in order to be executed, but they were utilized in its execution nonetheless. Sean Naylor discussed the various motivations behind why the SOF direct-action assets were so motivated to participate in his book: "Once [the Navy SEAL commanders] realized there was a fight going on they were gonna get their guys into the fight come hell or high water."[1376]

Operation ANACONDA's relative superiority can be bifurcated into the two primary missions and their associated mission forces. The first is the original mission objective given to MAKO 30 and RAZOR 03: establish an observation post atop Takur Ghar. This mission was scrubbed and a new mission of rescuing Roberts was developed that included the addition of RAZOR 04. The second mission that can be graphed with regard to relative superiority is the subsequent rescue mission that followed, to be carried out by Rangers of QRF-1 and QRF-2 onboard RAZOR 01 and RAZOR 02, respectively.

The following timelines have been primarily constructed using the information obtained from Sean Naylor and National Geographic, as well as a few peripheral sources in order to infer event times that were not made clear in the original sources. All sources have been annotated accordingly.

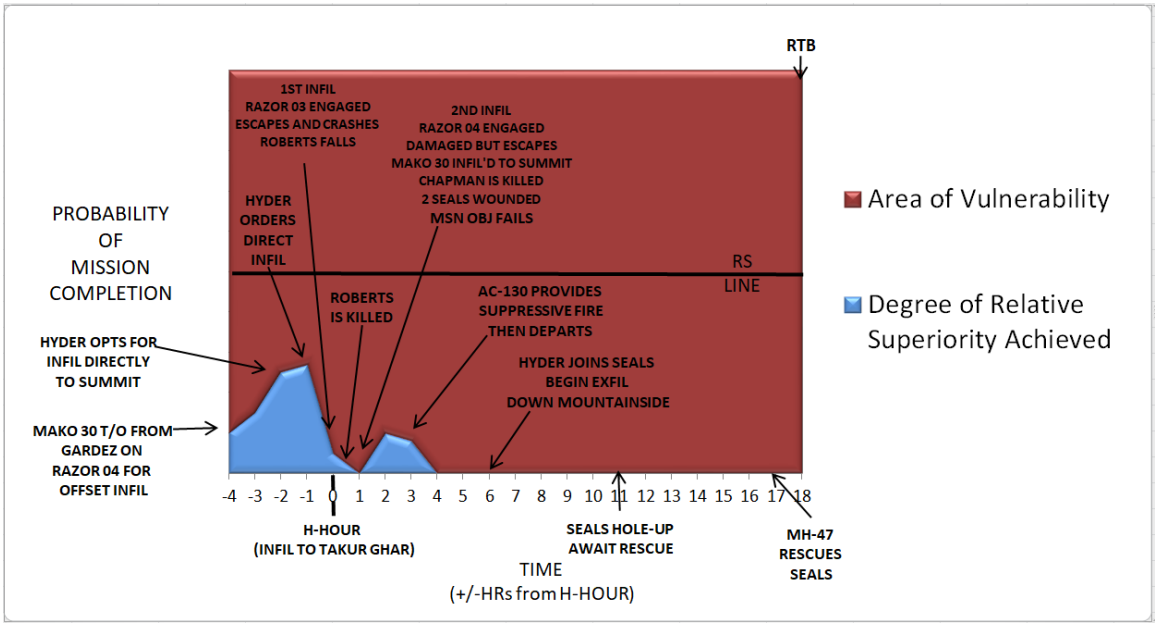
[1375] In his class "Seminar in Guerrilla Warfare," Dr. Gordon H. McCormick, Professor and Dean of the Department of Defense Analysis at the Naval Postgraduate School, Monterey, CA, described how there are two prerequisites to being able to successfully strike an enemy. One must be able to both see and hit a target. One must retain the ability to strike out with force, as well as the ability to illuminate the target of desire. Illumination alludes to the ability to gain the information necessary to see where and when to strike in order to make contact with the enemy. His example provided a metaphor to expand one's understanding:

> At a gun range, a marksman must not only be able to fire his (or her) weapon, but in order to successfully strike the target he must have the information available to aim the weapon at the appropriate target. If the marksman mistakenly fires at the wrong target, his strike is ineffective. If he fires and misses the target completely, his strike is ineffective. His strike is only effective if it hits the intended target. Information observed from his surroundings allows him to determine where to aim his weapon: which target is his, when it is safe to fire, how the wind is blowing, etc. But in all cases, he must be able to both aim his weapon and strike his target to achieve the desired effect. So, the two prerequisites for a successful strike against one's enemy are both the ability to see and the ability to strike. Illumination is most effectively achieved when the information obtained identifies when, where, and possibly even how best to employ the strike in order for it to be effective. Dr. Gordon McCormick "Guerrilla Warfare," (Lecture, Naval Postgraduate School, Monterey, CA, 2017).

[1376] Naylor, *Not a Good Day to Die,* 302.

a. SEAL Mission: Recon Morphs into Isolated Personnel Recovery

The original mission objective given to MAKO 30 and RAZOR 03 is to establish an observation post atop Takur Ghar for the purpose of directing aerial strikes against enemy positions that threaten the safety of the main body of the Operation ANACONDA coalition force. This observation post establishment mission is compromised after Roberts falls from the helicopter and RAZOR 03 subsequently crashes several miles away. The mission objective now becomes one of isolated personnel recovery. The SEALs attempt to return to rescue Roberts aboard RAZOR 04, but fail to achieve this mission objective due to an alert and defensively superior enemy force. When Chapman is killed and two SEALs are seriously injured, the SEALs are unable to press forward with any mission objectives and their own survival is the only component of mission completion remaining. Despite their successful egress some 17 hours later, the SEALs do not achieve mission success. Their primary mission objective, whether it is to establish the observation post or to rescue Roberts, has not been achieved (see Figure 139).



This model is inclusive of SEAL and air assault force components.

Figure 139. Relative Superiority Graph for Operation ANACONDA's Execution[1377]

b. SEAL Timeline:

11:23 PM, RAZOR 03 and RAZOR 04, with MAKO 30 and MAKO 21 respectively on board, depart Gardez for an offset infiltration to the foot of Takur Ghar.[1378] They eventually turn back due to lack of sufficient reconnaissance of the objective and infiltration areas.

1:15 AM, an unmanned Predator reconnaissance drone, call sign WILDFIRE, arrives overhead Takur Ghar.[1379] It is armed with two Hellfire missiles.

1:43 AM, RAZOR 03 and RAZOR 04 depart Gardez for an offset infiltration, but are prepared by Hyder to execute a direct infiltration if deemed necessary.[1380]

1377 Adapted from McRaven, *SPEC OPS*, 7, 322.

1378 Naylor, *Not a Good Day to Die,* 307.

1379 Naylor, 357; Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

1380 Naylor, 311.

2:20 AM, Hyder is left in charge of the Gardez command center.[1381]

2:21 AM, RAZOR 03 and her SEALs are given clearance by Hyder to approach and land directly to the summit of Takur Ghar.[1382]

2:38 AM, RAZOR 04, who has separated from RAZOR 03 to infiltrate to their individual objective, deposits MAKO 21 to the intended landing zone. They are airborne again within three minutes. MAKO 21 proceeds with their mission and RAZOR 04 heads back to Gardez.[1383]

3:00 AM, RAZOR 03 is engaged during infiltration. Roberts is accidentally left behind as the helicopter attempts to escape. RAZOR 03 crash lands shortly afterwards approximately four miles away.[1384]

4:30 AM (estimated), Roberts is killed.[1385]

5:00 AM, Second SEAL insertion - RAZOR 04 descends to land on the mountain ridgeline, it "immediately comes under fire."[1386] RAZOR 04 is badly damaged, but manages to complete the infil and egress the area. Chapman is killed, and two of the SEALs are seriously wounded.

5:15–5:45 (estimated), AC-130 gunship provides suppressive fire for SEALs until sunrise, when it is forced to depart.[1387]

8:00 AM, RAZOR 02 inserts Hyder and QRF-2 to the offset landing zone. "The landing [is] unopposed."[1388]

1381 Naylor, 311.

1382 Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

1383 Naylor, *Not a Good Day to Die,* 311.

1384 Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

1385 Naylor, 324.

1386 Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

1387 "Sunrise and Sunset Times Calendar: Afghanistan, March 02, 2002," Sunrise Sunset, accessed September 01, 2017, https://sunrise-sunset.org/calendar?month=March&year=2002&lat=33.93911&lon=67.70995300000004&location=afghanistan.

1388 Naylor, 353.

8:55 AM (estimated), Hyder links up with the remaining SEALs, two of whom are badly wounded. They begin an overland exfiltration down the mountain slope.[1389]

2:00 PM, Hyder and his SEALs hole-up in a draw, to await nightfall and exfiltration.[1390]

8:15 PM, the rescue force arrives with nightfall. The Rangers, special operators, aviators, and SEALs are all extracted, along with their wounded and dead.[1391]

9:00 PM (estimated), the rescue force returns to Gardez and the force disperses. Casualties are forwarded on to Bagram where they will receive the required medical attention.[1392]

The SEALs retained the ability to exercise a limited degree of relative superiority against the enemy based on their training, resolve, and the assets at their disposal. However, these advantages first began to be squandered when Hyder began to push for direct infiltration to the summit of Takur Ghar, a preference based on Trebon's insistence that the mission be carried out in a timeframe incompatible with appropriate regard for the survival of the mission force. As Hyder worked to make this option more feasible, the likelihood of mission success became less feasible.

As soon as this decision was made to go with the direct infiltration, the preexisting environmental conditions and strategy of the enemy immediately diminished the probability of achieving mission success. When the helicopter was attacked and Roberts fell, the probability of mission success fell to effectually unrecoverable levels. The mission could no longer focus on establishment of an observation post. Instead, that mission was scrubbed and the mission morphed into a recovery mission for Roberts. The initial mission had already failed to achieve its objectives. Before the second infiltration could even be accomplished, Roberts's death ensured the new mission objective had also

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1389 Naylor, *Not a Good Day to Die,* 358–359.

1390 Naylor, 366.

1391 Hammer, "Al Qaeda Ambush Battle of Takur Ghar;" Naylor, 367.

1392 Naylor, 367–368.

failed. Unaware of this condition, the SEALs continued inbound, risking their own survival for the already terminated life of their friend.

It is possible that the information that Roberts was already dead could have been relayed to the SEALs in a timely enough manner to have averted the subsequent close firefight and Chapman's ensuing death. However, such a coordinated effort would have required both integrated long-range communications (with which to share this developing intelligence) as well as propensity of the command elements to coordinate on these kinds of dynamic developments. Such information sharing is only normalized when the needs of a counterpart are adequately understood, something less likely to occur in an operation composed of units bounded by only loose weak ties.

During their first infiltration to the summit of Takur Ghar, the SEAL unit had the false perception of relative superiority, but in all actuality the defensive and stronger Al Qaeda position enjoyed superiority. Al Qaeda forces were the ones able to employ the element of surprise against the SEALs. There was only one way to get to the top of Takur Ghar, and its mark as the high ground in the area made it the most strategically desirable terrain to hold. The enemy forces knew the only means of insertion for an attacking force would be via helicopter, and they had planned to counter such an assault. That is why they had bunkers and fighting positions designed to attack likely insertion points.

Recall that Naylor wrote that, "the enemy had already demonstrated a determination to occupy the other high around the valley."[1393] The enemy knew this terrain was tactically and thus strategically valuable. The AFO and SEALs, as well as the coalition forces, knew this as well. They were all quite concerned about losing helicopters to such situations prior to Hyder and Trebon's insistence.

The devastating losses to the mission force that would occur if these likely events to transpire were not adequately weighed by Hyder or Trebon, or they considered the SEALs to be capable of countering the threat they believed to be present. It is likely that their focus on mission objective accomplishment overshadowed the wisdom they should have displayed in choosing not to expose the mission force assets to the high levels of

[1393] Naylor, *Not a Good Day to Die,* 306.

vulnerability that occurred when the helicopters were enveloped by direct close-range enemy fire. Were the survival of the mission force to have been given a higher priority by these leaders, contingent methods of insertion or even suppressive fire could have been planned for.

Recalling the words of Lee Richards from his executive directive, "Political Warfare Executive: Meaning, Techniques, and Methods of Political Warfare:"

> [The element of surprise] is achieved by artifice and stratagem; by secrecy and rapidity of preparation; by mystifying and misleading the enemy as to the objective…; by daring to do what is difficult and therefore unexpected; by mobility; and by sudden use of new weapons or new methods of using existing weapons.… "Surprise" might be summed up as "If three courses are open to you, take the fourth."[1394]

The unfortunate reality is that it was the Al Qaeda forces that wielded the element of surprise at Takur Ghar. By getting to the high terrain first, and by hiding their own presence, they were able to exploit surprise to the detriment of the SOF forces ascending into the trap they had constructed.

The Al Qaeda ambush that caused Roberts' fall, though it failed to down RAZOR 03, had the same end effect: it forced U.S. forces to repeatedly insert to the same location via a predictable means. This enabled Al Qaeda to utilize a relatively simple tactical trap to repeatedly force the Americans into a battel of attrition warfare. It was only an eventual deviation from this model, through the offset infiltration of QRF-2, that Americans were eventually able to reach the summit without incurring losses.

Following the first SEAL insertion, Al Qaeda fighters enjoyed the element of rehearsal given the repeated helicopter landing attempts to the same stronghold area. Once Roberts had fallen onto the mountainside, repeated rescue attempts were almost assured. The Al Qaeda forces were henceforth the ones with a simple plan: stay entrenched and let the American forces continue to expend assets into the kill box set before them. Wait and shoot. The plan was overly simple.[1395] The enemy forces

[1394] Richards, "Political Warfare Executive."

[1395] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

capitalized on this to attack RAZOR 04 during the second SEAL insertion and the following battle that cost John Chapman his life.

The final, and only slight, increase in relative superiority the SEALs' experience is merely enough to assist in their retreat. It is provided by the covering fires of the AC-130 overhead. This suppressive fire provides enough sanctuary for the SEALs to avoid a direct-attrition conflict with the enemy long enough for them to begin slipping out of the enemy's field of fire. Their probability of achieving mission success is only slightly improved during this period. Their probability of potentially recovering Roberts and surviving increases with the gunship's assistance. As the AC-130 gunship departs, any chance they might have of taking the summit and potentially recovering Roberts is lost. It is now known that Roberts was already deceased by the time the SEALs were pushing back in for his recovery, but despite his death, the SEALs' mission to recover him did retain a small chance of success until the point at which the AC-130 departed. Past this point, there was no possible way for the SEALs to achieve mission success. They were incapable of isolated personnel recovery and had already lost both Roberts and Chapman to the enemy's forces.

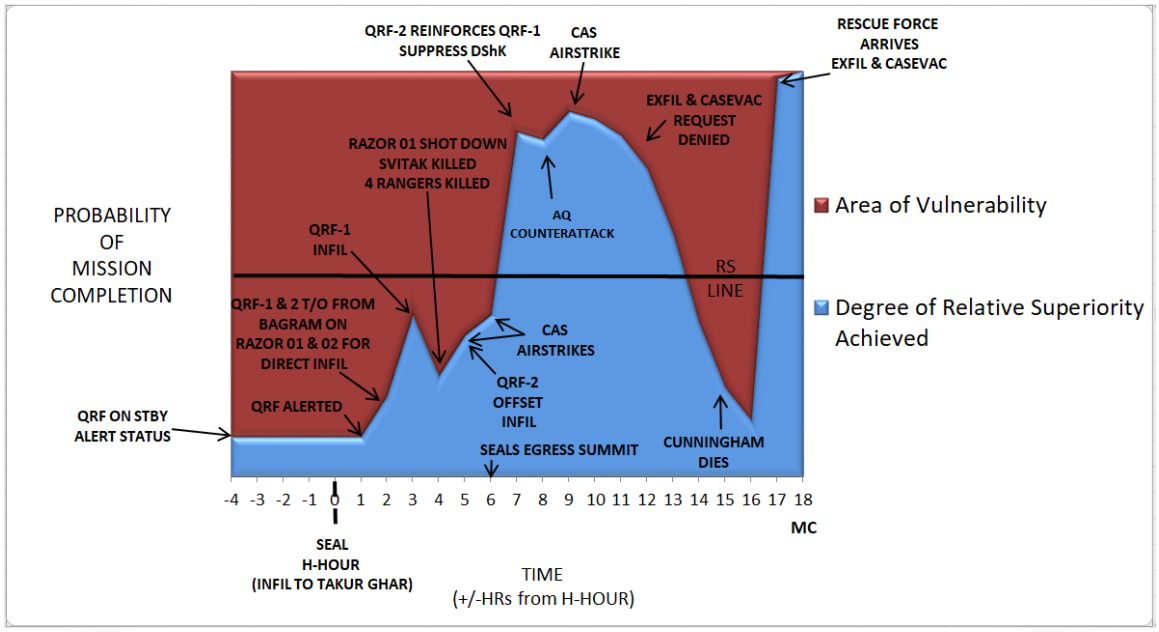
It is possible to argue that the SEALs' escape was benefited by the insertion of the Ranger QRF forces. Having Al Qaeda forces in the area distracted from pursuing the singular target of the SEALs most probably diminished the amount of focus the SEALs received from the adversary. However, a direct correlation is difficult to ascertain or determine based on the almost completely independent nature through which each of the SEAL and Ranger operations was planned and executed.

There is no increase in relative superiority for the SEALs during extraction as their mission objectives and survivability have both already been compromised.

c. Ranger QRF Mission: Rescue Extraction

The second mission that can be graphed with regard to relative superiority is the Ranger QRF mission to rescue the Navy SEALs. Their objective was to take the summit of Takur Ghar and ensure the extraction of the SEALs. Although the Rangers did not directly interface with the Navy SEALs atop Takur Ghar, QRF-1 and QRF-2 were

dedicated to ensuring the SEALs' extraction from the enemy controlled terrain. The only reason the Rangers were fighting a battle of attrition against the entrenched Al Qaeda forces was in an effort to rescue the SEALs. As such, despite the fact that Operation ANACONDA remained a territorial control operation, this was not the singular focus of the mission the Rangers were on. The Rangers only needed to control enough of the terrain to ensure enough relative superiority so that they could extract themselves after distracting the enemy forces from the SEALs, who were trying to get away (see Figure 140).



This model is inclusive of Ranger QRF and air assault force components.

Figure 140. Relative Superiority Graph for Operation ANACONDA's Execution[1396]

d. Ranger Timeline

5:55 AM, Rangers of QRF-1 and QRF-2 depart Bagram aboard RAZOR 01 and RAZOR 02, respectively.[1397]

1396 Adapted from McRaven, *SPEC OPS*, 7, 322.

1397 Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

6:10 AM, RAZOR 01 is shot down during infiltration. Gunner Svitak and four Rangers are killed, others are wounded. QRF-1 is stranded and pinned down in a heavy firefight. RAZOR 02, held in reserve, does not have integrated communications with QRF-1. Without a common operating picture of what is happening on the ground, QRF-2 is held in reserve at Gardez.[1398]

7:00 AM, F-15Es strafe the Al Qaeda bunker positions. Their attack is accurate but ineffective.[1399]

7:00 AM, RAZOR 02 and QRF-2, informed of the devastating consequences following RAZOR 01's shoot down, are ordered into the fight.[1400]

8:15 AM (estimated), two F-16s drop 500-pound "dumb" bombs on Al Qaeda positions. Their hits are not accurate enough to be effective.[1401]

8:30 AM, Hagenbeck dispatches a new, larger QRF from Bagram to a ground refueling rendezvous site, where forces will coalesce until the rescue mission is authorized to launch.[1402]

8:45 AM, Self and the remaining Rangers of QRF-1 rush the enemy DShK position, only to be driven back.[1403]

10:30 AM, QRF-2 reinforces QRF-1 at the summit of Takur Ghar. Together, the Rangers charge the DShK firing position and assault the surrounding enemy bunkers.[1404]

11:15 AM, QRF-1 and QRF-2 successfully eliminate the local enemy threat. The Rangers now control the summit of Takur Ghar.[1405]

[1398] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1399] Hammer.

[1400] Naylor, *Not a Good Day to Die,* 352–353.

[1401] Naylor, 356.

[1402] Naylor, 360.

[1403] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1404] Hammer.

[1405] Naylor, 358–359.

11:30 AM, Al Qaeda forces mount a counter-attack from a bunker on a peak separated from the summit of Takur Ghar by a shallow saddle.[1406] Cunningham and Lamoreaux are both shot and are critically wounded.

12:15 AM (estimated), F-14s bomb the Al Qaeda position out of existence. The other Al Qaeda positions are too far away and too low to effectively target the Americans at the summit of Takur Ghar.[1407]

1:00 PM, the QRF platoon leader, Captain Self, calls Masirah and urgently requests a medical evacuation. His request is denied.[1408]

2:15 PM (estimated), Hagenbeck, already in command of the non-SOF assets participating in Operation ANACONA, receives command over SOF (and thus all American forces) participating in Operation ANACONDA.[1409]

2:30 PM, Hagenbeck orders the newly assembled rescue force to stand down for now and prepare for an 8:15 PM rescue.[1410]

6:00 PM, Cunningham passes away from his wounds.[1411]

8:15 PM, the rescue force arrives with nightfall. The Rangers, special operators, aviators, and SEALs are all extracted, along with their wounded and dead.[1412]

9:00 PM (estimated), the rescue force returns to Gardez and the force disperses. Casualties are forwarded on to Bagram where they will receive the required medical attention.[1413]

[1406] Naylor, 362.

[1407] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1408] Naylor, *Not a Good Day to Die,* 364–365.

[1409] Naylor, 365.

[1410] Naylor, 365.

[1411] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1412] Hammer; Naylor, 367.

[1413] Naylor, 367–368.

The relative superiority graph for the Rangers at Takur Ghar confirms the necessity to achieve adequate mobility in order to realize mission success for SOF. This lesson seems to be heard learned by command elements and elected officials. "U.S. commanders' apparent belief that fires trumped maneuver in the Shahikot" is the most probably explanation for many of the failures demonstrated by the desynchronized forces, strategies, and chains of command employed here.[1414] One cannot achieve mission success with SOF by focusing only on one of these while ignoring the other. A focus on accomplishing mission objectives via effective fires while disregarding mobility as a mechanism for ensuring the adequacy of mobility for participating units is what led to the stagnation of assets in indefensible positions and diminished survivability of the mission force.

Captain Nate Self confirms the importance of mobility as a counterpart to fires in his own description of what allowed him and his men to triumph over the enemy forces they faced at the summit of Takur Ghar that fateful day: "What won the fight for us that day was our ability to move and shoot better than them, and that's pretty simple," Self admits.[1415] His statement serves as a testament to the importance of mobility across the vertical spectrum of tactical, operational, and strategic success.

The Rangers' relative superiority chart shows they clearly benefited from having a QRF on standby alert status. This gave them a mission-ready force that was ready for employment at a moment's notice. They were alerted and on-scene in less than an hour. While this increased the amount of mass they were able to bring to bear on the objective area in a relatively short period of time, it unfortunately does not necessarily equate to relative superiority. The superiority achieved by the Rangers was eventually earned through their extremely motivated and dedicated sense of purpose and their ability to attrit the enemy at a high rate using small-arms and aerial strikes. These equate to the successful employment of attrition warfare principles as much as to those of relative superiority. The Rangers were forced to rely on their ability to execute traditional

[1414] Naylor, *Not a Good Day to Die,* 372.

[1415] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

conventional Clausewitzian attrition warfare tactics – kill more of them and at a greater rate of attrition than they can do to you. But, given the muddled strategic aims of the operation and the heterogeneous nature of the leaders and members participating in it, this should come as no real surprise.

The two other most dramatic increases in relative superiority are directly correlated with the mobility of the assault force. In the first, QRF-2's eventual arrival at the Takur Ghar summit represents a significant and key moment in the turning of the tide for the Rangers. QRF-2 benefits from the indirect infiltration landing zone, where the visual and acoustic signature of the aircraft do not result in their being immediately engaged by enemy forces. As QRF-2 trudges up the mountainside from their indirect infiltration landing zone, relative superiority rises slowly, with each passing step. But when QRF-2 joins and reinforces QRF-1 relative superiority increases dramatically, the most dramatic upward spike of relative superiority for the Rangers throughout, barring extraction. It is the arrival through mobility, albeit through both air and ground mobility, that the Rangers achieved this advantage and bring substantial weight to bear against the enemy forces. Only now can they bring enough mass to bear to break the enemy stronghold. This advantage is what allows the Rangers to surmount the local enemy defensive positions and take the summit of Takur Ghar.

The second rise in relative superiority is during extraction and CASEVAC. This represents a significant boost to the survival of the mission force, whose objective has been to ensure the escape of the SEALs and to extract themselves from the mountain peak where they are surrounded by enemy forces. It represents the Rangers' successful exfiltration, thus achieving maximum survivability for the reaming force, despite the losses incurred up until the rescue force was authorized to act.

A point here warrants consideration: What were the parameters of mission success for the Rangers? It is a point that can become confusing as a SOF QRF reacts to extract a reconnaissance team from a location they were inserted to in support of terrain acquisition and attrition mechanisms.

Captain Nate Self describes the difficult of delineating the actual mission he and his men had to deal with atop Takur Ghar. His own description shows the blurred lines of focus between accomplishing the conventional mission of taking and holding terrain while eliminating enemy forces versus the specific QRF task to recover the SEALs and extract his own men safely:

> To be successful, you had to meet an objective. And so if the objective was … to insert on the mountain and use the mountain for a tactical gain throughout the rest of the fight, then no it wasn't. If success was getting as many people home as we could, given the hand that we were dealt, then it was successful.[1416]

It is chilling to contemplate that the level of success Self was forced to contend. His mission was measured in terms of the quantity of men whose lives he could salvage from a terrible situation, and saving all of them was not an option. That option had been removed immediately upon their infiltration, due to an inadequately planned, resourced, and prepared mission that he had not even been a part of. By the time the "hand was dealt," Self's best option was down to trying to save "as many people … as we could."[1417]

Despite the difficulty in determining the mission Self and his men faced in their subordinate role to conventional forces while trying to rescue the SEALs, it is reasonable to induce that the QRF's primary role was to ensure the SEALs safely exfiltrated the objective area. Any presumption that the QRF was being dispatched to secure the terrain is conjecture at best. Such a perspective unsubstantiated by the fact that the QRF was extracted at the end of the operation and none of the newly converged forces remained to occupy the mountain peak. Therefore, it is concluded that the primary role of the QRF was to provide an extraction capability for the SEALs, and thus the extraction of the QRF and the SEALs is reflected as an increase in probability of mission accomplishment for the Rangers.

[1416] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1417] Hammer.

The most profound revelation from examining the Rangers' relative superiority chart is the recognition that a lightly-armed SOF ground assault force is ineffective at contributing to relative superiority after the actions-on-the-objective stage of execution. Ground assault direct-action forces are too lightly armed and too lightly equipped to be effective at maintaining control over territory across extended periods of time. They require conventional reinforcements or extraction to terminate their vulnerability to the enemy and the elements.

It is true that the Rangers' ability to retain relative superiority was aggravated by the injuries the assault force had endured. Their wounded comrades were indeed unable to survive without adequate assault airlift to evacuate them from the objective area. This causes their area of vulnerability to expand at a higher rate over a given period of time. The deteriorating medical condition of the injured is reflected in their diminished level of relative superiority, a consequence of their reduced chances of survival. Indeed, Cunningham's life was lost to this reality. The sloping back-half of a bell curve in the loss of relative superiority is made apparent. Following the Ranger's dominance of the high terrain at Takur Ghar, and the subsequent battle against the Al Qaeda forces across the mountain saddle, relative superiority slopes off. This graph is meant to represent the lack of latent potential a ground assault force has to contribute to relative superiority during this stage of execution. Had the rescue force not arrived when it did, Lamoreaux may have succumbed to his injuries and the inhospitable environment and died as well.

2. Was Assault Airlift Being Adequately Achieved?

Assault airlift was not adequately achieved at the Battle of Takur Ghar. Many of the parts and pieces were present, but there were not enough of them and those that were present were not synergized effectively enough to achieve assault airlift. This is evidenced in the lack of assault airlift tenets and the subsequent diminished effectiveness of the mission force during the infiltration and exfiltration phases of the operation. The SEALs and Rangers had helicopters at their disposal, but due to their inadequate operationalization these machines and their crews fell short of providing the mobility and

maneuver the ground parties required to achieve all of the mission objectives and survival of the mission forces.

The SEALs had aircraft for their initial infiltration onto the mountainside. However, the expertise of the pilots and the AFO leadership were discounted, circumvented, or forced into compliance with the desires of Trebon and Hyder to immediately execute the SEAL insertion without regard for the tenets of assault airlift or even the theory of special operations. One can hardly blame them for their confusion. Operation ANACONDA typified confusion. As a transitional operation between the SOF-centric and conventional-centric war strategies, it represented a particularly volatile point in time. As elements of both strategies were present in the operation, it became unclear how best to proceed. The eclectic nature of the supporting and supported forces did little to resolve this, and actually served to amplify the differences in perspectives. It was only when Hagenbeck was belatedly given command of all participating American forces that the strategy polarized into one of attrition warfare. This polarization allowed the synchronization of efforts that constructed the significantly larger and more capable rescue force that eventually extracted the Rangers and SEALs. It is true that both the Rangers and the SEALs had, through exercise of extreme rates of attrition and the assistance powerful, though not always effective, aerial strikes, achieved dominance by this point. However, their dominance is attributed to their ability to properly employ the conventional attrition warfare principles, in line with the reality that ANACONDA was an attrition warfare operation. When the SEALs infiltrated directly to the summit of Takur Ghar, they were not aided by the principles of attrition warfare. Their mass on the objective was relatively low. They were a small attacking force directly confronting a larger and intrinsically more powerful defensive adversary. They were outnumbered and outgunned. The only thing that allowed the SEALs that survived to make it out was their ability to bring massive force to bear against their enemy, in the form of the AC-130 gunship cover. Even this only allowed them enough superiority to exercise maneuver for retreat. They used the AC-130 firepower, along with the eventual cover and sanctuary of the rocks along the downward slope of the mountain, to remove themselves from the attrition warfare scenario and place themselves back into a somewhat concealed position.

Unfortunately, this was only after Roberts and Chapman had both been killed, and the mission objectives of establishing an observation post and rescuing Roberts had both been forfeited.

The lesson here is that if the principles of relative superiority are ignored by those designing and leading a mission, then relative superiority will not be achieved, and any special operators involved may find themselves in danger of succumbing to the full weight of the attrition warfare principles the enemy has at their disposal.

Of course, the enemy attack that led to the unfortunate fall of Neil Roberts aggravated the peril and was a proximate driver behind the formation of the mission as it developed. However, Roberts falling did not dramatically change the vector of the mission. Enemy forces were most probably expecting to be able to ambush any helicopter landing to their position. Although they were probably momentarily taken aback by the exact timing of RAZOR 04's arrival, it is apparent that they were prepared to face off a direct aerial infiltration via helicopter. In such a case, they undoubtedly planned to destroy the attackers using the advantaged bunkers and firing positions they had established. It was an incredible feat of luck and airmanship, attributed in no small way to the extreme survivability of the MH-47 platform that allowed RAZOR 04 to escape at all. Otherwise, the entire team would have most probably shared the same fate as Roberts. His fall did prevent the departing, RAZOR 04 and MAKO 30 from simply egressing the area and sending in a larger more conventionally enabled force at some later point in time to prosecute the mission. Roberts's presence on the ground forced a time-sensitive aspect into the mission which. Up until then, there had been no real drivers making it time-sensitive enough to warrant the high risks associated with a direct aerial insertion against a prepared and anticipating enemy.

3. Was the Lack of Adequate Assault Airlift Due to Friction or a Synchronization Failure?

Where did the problems experienced at Takur Ghar stem from? Andres and Hukill perform an exceptional analysis of this very subject. They specifically state that these "problems stemmed from a flawed air-ground planning process that systematically excluded air component planners and leaders."[1418]

> In the months leading up to the operation, the combined joint task force (CJTF) made numerous decisions not to include experienced air component planners or their ideas for employing airpower. Similarly, while the CJTF communicated with ground commanders about the mission on nearly a daily basis for almost 2 months, joint leaders ***did not discuss the mission with the air component commander until 2 days before the scheduled D-Day***. As a result, ***airpower was not properly integrated into the plan***, contributing directly to a near reversal of fortunes during the first day of combat … [emphasis added].
>
> The shortcomings in ANACONDA's planning are not widely understood even by those who fought the battle. Six months after the operation, in an interview published in Field Artillery, Major General Franklin Hagenbeck, USA, the operation's joint force commander (JFC), argued that many of the problems stemmed from the air component's mistakes. Hagenbeck agreed to retract these charges when they were revealed to be inaccurate. Unfortunately, perhaps because of the inter-Service rancor aroused by the article, the Services let the issue drop rather than reexamining the underlying causes that gave rise to the problems. As a result, the military has largely accepted Hagenbeck's retracted but unanswered explanation.
>
> Because ANACONDA's planning problems have not been publicly acknowledged, they have yet to be corrected. Today, air component planners report that JFCs consistently fail to integrate lessons learned into planning processes until the last minute and that this often results in the vast network of Air Force, Navy, and Marine air, space, and cyber assets being underutilized or even unused in combat. Joint commanders' reluctance to include the air component in planning is based in deeply rooted Service culture, education, and training. The Services cannot correct this problem until they address its history and acknowledge that operations work best when all components are brought in at the start of the planning process and are fully represented in planning cells.[1419]

[1418] Andres and Hukill, "ANACODA."

[1419] Andres and Hukill.

Andres and Hukill have absolutely hit the nail on the head. The failures at the Battle of Takur Ghar were inevitable given the lack of integration in the mission force. Leadership failures are directly to blame for the failure of synchronization that led to an unintegrated mission force, the misapplication of strategic assets, and the subsequent inability of that force to efficiently pursue the mission's objectives or achieve mission force survival.

Despite the valiant efforts of the operators involved in the Battle of Takur Ghar, their defeat was all but ensured by the inability of the leaders in their chains of command to synchronize their varied organizational structures. The result was a failure to integrate the mission force's efforts in a manner most likely to allocate the resources on hand to secure either mission objectives or mission force survival. The unbalanced focus was instead merely on achieving mission objectives, an insufficient component to independently achieve mission success. The survival of the mission force only became a priority after the consequences of failing to appreciate its survival began to manifest. These were consequences that the same leaders found themselves unwilling to accept.

As Andres and Hukill point out, the error lies within the synchronization and integration of the force, not in the strategic method of employment chosen. Strategic methodologies are not chosen based solely on the desire of the employing force. The enemy gets a vote. That vote plays as large a role in the success or failure of the employed strategy as does the leaders choosing the strategy to begin with. The enemy gets a vote, and their vote matters. Failing to consider the strategy one's enemy has chosen to employ is one of the quickest ways to ensure defeat. At Takur Ghar, the enemy had voted for an attrition warfare scenario and was able to compel one within the context of the battle environment. They were primarily able to accomplish this due to their ability to reduce the mobility of any attacking force: the lack of mobility being a consequence of the physical terrain, altitude, and associated contextual environmental factors. Unfortunately, the coalition forces failed to recognize the strategy being employed or the context it was being employed within.

Takur Ghar represents the employment of SOF operators in support of conventional attrition warfare roles while expecting to reap benefits as though they were utilizing relative superiority as the strategy of employment. They wanted to use a smaller

attacking force, but they failed to exercise the principles that would enable a smaller attacking force to triumph. Instead, they ended up confronting the enemy on the enemy's own terms. The result was an attrition warfare scenario where a smaller attacking force faced off against a larger and strategically advantaged defensive force that was effective at resisting the attacker's efforts.[1420] This is a case of the misalignment of a strategy and the mission force designed to employ it. It represents an erroneous expectation of a smaller attacking force to be able to wage attrition warfare effectively against a larger defensive force. Yet, it is not the hammer that fails to drive the screw, but the carpenter who asks it to do so. The carpenter must be savvy enough to choose the right tool from his bag, and he must be technically proficient enough to use it properly.

Andres and Hukill's examination is thorough and profound. They go on to examine, in depth, the planning integration issues that plagued this ill-designed and poorly executed multi-service force. Leaving their own work to stand on its own, the focus here will move on to the assault airlift effects of these leadership and synchronization failures.

Leadership did not effectively synchronize the members of their mission force who had hailed from various and distinctly different military backgrounds. There were disparate organizational structures involved, representing all of the technical capabilities that should be required to accomplish the mission of both Operation ANACONDA as a whole, as well as the individual missions associated with the Battle of Takur Ghar. However, these organizations came from different conventional roots, and their ties were quite weak. Even inside the SOF community, the frictions between the ancestral conventional roots can be seen. The lack of cooperation between the Navy SEALs and SOF Army forces becomes quite apparent in this case study. There were clearly command conflicts between the AFO Special Forces and the Navy SEALs in the planning phase. These fractures again manifested themselves atop Takur Ghar when QRF-2 arrived. Self and Hyder had different mission priorities for QRF-2, whose mission focus

[1420] The effectiveness of the enemy force's ability to resist attack was more complete during the SEAL insertions and less complete during the Ranger attacks. This effectiveness can be measured as a consequence of troop quantities and attrition.

was eventually molded by their loyalty to their fellow Rangers. Of course, loyalty to kindred identity groups or individuals is not the enemy of success here. It is the lack of synchronization provided by a fractured command structure that leads to the manifestation of these issues on the battlefield. Were these same forces to have trained together and rehearsed together, they would have developed stronger ties with their counterparts from other conventional roots. These stronger ties would have inculcated a stronger sense of identity and purpose. The synchronization would have also provided the opportunity to work through technical challenges such as the communication dissonances that plagued ANACONDA. Overcoming these challenges and a stronger sense of identity and purpose would have allowed the mission force to integrate more effectively. This would have resulted in a higher likelihood that the initial plan, as well as its execution, would have addressed all relevant factors and stood a higher probability of efficiently achieving both the mission objectives and survival of the mission force.

4. Proximate Causes of Failure

Because assault airlift was never achieved at Takur Ghar, the normal inquiries as to how the tenets of assault airlift augmented relative superiority through simplicity, speed, and surprise become irrelevant. It is instead the causes of their absence that become the focus of inquiry. In other failure case studies, like Operation EAGLE CLAW, it has been possible to examine the varied levels of successes and failures of each of these assault airlift tenets due to their partially manifest presence. Here, however, with their almost total absence, it instead becomes necessary to instead focus on the proximate and underlying causes of failure.

The proximate causes of mission failure at Takur Ghar were uncontested frictions of war that debased the mission force. Unabated by the absent assault airlift characteristics, these frictions eroded the mission force's ability to prosecute the mission or achieve survivability. The result is a force whose mobility and maneuver were pulverized by the accosting frictions, leaving the mission force at the mercy of attrition warfare principles. It was a lack of timely maneuver that inspired Hyde to believe a direct infiltration would fulfil the desires of Trebon's request for the SEAL infiltration on their

first night in theater. It was a loss of mobility brought on by enemy fires that disallowed the SEALs to immediately return for Roberts when he fell. It was the lack of adequate suppressive fire that allowed RAZOR 04 and RAZOR 01 to be shot down. And it was a lack of adequately integrated communications that plagued the synchronization of the participating forces throughout the operation.

In Operation ANACONDA, assault airlift was not achieved, and the air mobility that was present served to complicate the execution of the mission because it was not properly synchronized, integrated, or employed. The missions objectives were complicated by the conventional nature the operation transpired within. The goal was not just to establish an observation post. The objective of ANACONDA was to establish observation posts, eliminate enemy positions, take and control terrain, empower Afghan forces to lead the charge, allow the combined participation of multiple SOF and conventional forces, and to retain the legitimacy of an international coalition effort. Shifting objectives in such a conventional warfare necessitate conventional assets to provide the firepower and abundance of resources these shifting objectives necessitate. The mission at Takur Ghar transformed from one of reconnaissance to one of isolated personnel recovery and again to that of a casualty evacuation and tactical withdrawal all within the span of 17 hours. Such levels of extended complexity are hardly conducive for the achievement of relative superiority.

Clandestine Bypass of Enemy Defenses: One of the ways to delineate between whether or not assault airlift was present at Takur Ghar is to look at whether or not the mission force was able to clandestinely bypass the enemy's defenses. They were not. The mission force, due to the speed of the mobility mechanism utilized, was able to embed itself into the enemy's territory, but it was not able to successfully employ assault airlift to bypass the enemy's defenses. This increased the complexity of the situation the mission force faced, as opposed to simplifying it.

The aircraft utilized were able to penetrate enemy territory, but penetration alone does not equate to bypass of enemy defenses. Penetration is something that any platform can achieve for a limited period of time. Even an unarmed craft can penetrate an integrated air defense network for a few moments. The ability to bypass the enemy's

defenses and thus simplify mission parameters is a tenet of assault airlift that was unachieved at Takur Ghar through simple aerial penetration of the domain.

Because the aircraft at Takur Ghar were not achieving the synchronization of assault airlift tenets necessary for them to bypass the enemy's defenses they instead found themselves descending directly into an ambush. The lack of synchronization is expressed in the lack of redundancy planning, the lack of integrated and long-range communications, inadequate suppressive fire, a complete lack of surprise, and the choice to use direct infiltration despite reality that doing so would ensure the enemy's awareness of the means of the approach method. All of these missing assault airlift tenets culminated to allow the utilized aircraft's speed to merely be used to imbed the mission force further behind enemy lines and into more precarious situations than they could afford to extract themselves from.

Simplicity is achieved through the combined effects of assault airlift, not one single tenet alone. Takur Ghar's SEAL insertions are specifically indicative of adding aircraft to a mission force and hoping that their presence alone mitigates exposure to enemy defensive threats. Unfortunately combat is rarely so simple and direct-action missions even less so. It simply does not work that way. Using mobility to fly into the heart of enemy defenses while allowing the enemy to be alerted to the infiltration only allow the enemy to bring their focus and attention onto the small force that now finds itself behind enemy lines. The result is almost inevitably a small force facing not only failed mission objectives but having its own survival threatened as the scenario reverts to one of attrition warfare. Mission failure is the inevitable result.

This failure was experienced during a conventional operation, but the same lesson can be applied to a direct-action mission. However, it is highly likely that a direct-action mission, typically being performed deep within enemy territory, would not have been so forgiven for this trespass. It is unlikely that the QRF could have reached the SEALs were they to have been infiltrated deeper behind enemy lines when their presence was exposed. It is also hoped that had SOF leadership alone been responsible for the strategic and tactical employment of these assets, all of McRaven's principles would have been given

enough due diligence to ensure contingencies were planned for in a manner allowing for a more acceptable outcome.

Inadequate Enemy Threat Reconnaissance: Operation ANACONDA retained appropriate environmental intelligence on the weather and topography, but dramatically failed to capture the required intelligence necessary to understand the enemy presence in the region. The lack of accurate threat intelligence directly contributed to the increased complexity the mission force faced as they attempted to conquer Takur Ghar. The developing information on the number of enemy forces in the Shah-e-Kot Valley and on the mountain itself was not adequately resolved or transmitted to the mission force. Estimates of enemy operatives varied from under two-hundred to one-thousand. Initial estimates indicated only one or two hundred enemy fighters embedded within a larger civilian population.[1421] That information was eventually replaced by the realization that there did not appear to be any civilians in the Takur Ghar area – the masses of people were apparently accumulating Al Qaeda fighters.[1422] The reconnaissance dissonances are illustrated in Karon's *Time* article released only days after the operation:

> It was initially believed that the enemy force numbered no more than 500.… Later, U.S. commanders were talking about an al-Qaeda force numbering more than 1,000. Reports from the battlefield certainly confirm the presence of a substantial number of … fighters.[1423]

This was a significant enemy threat reconnaissance discrepancy that was never fully resolved or realized until after the Takur Ghar battle had transpired. The lack of this critical information meant that the mission force was unaware of the magnitude of enemy forces infesting the region they were contemplating for infiltration. Such an intelligence failure proved to be fundamentally fatal to the employment of assault airlift and the survival of the mission force. The intelligence delivered to the mission force never fully captured this increasing threat, as quantified by the coalition's intelligence assets.[1424]

[1421] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1422] Naylor, *Not a Good Day to Die,* 267.

[1423] Karon, "What We Learned in Shah-i-Kot."

[1424] Naylor, 310.

The mission force remained ignorant of these factors as they contemplated the defensibility of this terrain given its inaccessible nature.

The mitigation technique employed by Hyder was to have the AC-130 gunship sensors probe the mountain for signs of enemy presence. The question arises: Why wouldn't the mission force know about the enemy presence following the AC-130 recon of Takur Ghar?[1425]

It is worth noting that the AC-130 may have been the favored asset for immediate battlefield reconnaissance, but it may not have been the most effective. First of all, the acoustic signature of the AC-130 gunship is highly likely to strike fear into enemy forces as it approaches. Those same enemies are most probably going to seek to ensure their own survival by minimizing their heat signatures and diminishing the amount of visual motion they produce. This behavior makes reconnaissance via AC-130 less effective when its noise signature illuminates its presence.

Secondly, the AC-130's navigational and visual systems were designed for targeting, not reconnaissance. It is easily possible that the gunship could have mistakenly reconnoitered the wrong location. The design of an aerial system can make a huge difference in its effectiveness when used for tasks that are outside its normal operational wheel house. While many military aerial navigation systems are designed to ensure tactical proficiency in their own niche, their specificity often limits their effectiveness in other regimes. It is the ever-present balance between versatility and flexibility. By becoming increasingly adept at targeting, the AC-130 systems have divested themselves from encumbrances that would make it a more reliable reconnaissance platform.

Naylor highlighted this common SOF overreliance on aerial assets to provide complete awareness of battlefield situations. Naylor detailed how GRIM 31, the AC-130 crew that provided suppressive fire to protect the SEALs, were themselves involved in a fratricide incident only a few days prior to the Battle of Takur Ghar.[1426] The AC-130H Spectre gunship inadvertently fell prey to a combination of technological navigation

[1425] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1426] Naylor, *Not a Good Day to Die,* 200, 205.

failures, limitations, and procedural communication errors that allowed the gunship to miss-identify friendly assets as enemy forces.

The gunship, pressed up against a perceived existential threat of vulnerability associated with sunrise, a diminishing fuel state, a diminished awareness of their actual location or the location of friendly forces, hastily misidentified a friendly convoy as an enemy force. Perceiving the potential error, a communications signal from ground-to-air failed to provide the clarity that could have acted as a failsafe to prevent the authorization to engage. The resulting fratricide left a scene of utter "devastation," and serves as a powerful reminder of the limitations encountered when using aerial reconnaissance platforms as the sole means of gathering threat intelligence.[1427]

Such specifically tailored assets can only be incorporated into wider uses as part of a more holistic approach. The gunship's outdated navigation system became a causal factor in the aircraft and her crew targeting the friendly forces who they mistakenly believed to be enemy fighters. Naylor wrote:

> A Central Command investigation into the attack on [the friendly] column found that it had been mistakenly engaged by GRIM 31. The major factor in the friendly-fire incident was the failure of the aircraft's inertial navigation system, which led the aircrew to believe they were over [location A] when in fact they were flying over very similar terrain just north of [location B], the investigators concluded.[1428]

There were procedures and systems in place to avoid friendly fire incidents, but these procedures failed to stop the fratricide incident from occurring. The incident serves as a reminder that it was the navigation systems on board the AC-130, not the sensors that were not adequately designed for reconnaissance. Reconnaissance may have been a bridge too far for the asset employed, despite the fact that it was regularly relied on for this function.

Versatility, flexibility, and maneuver: Simply stated, the inherent tenets of versatility, flexibility, and maneuver of assault airlift were absent from the Battle of

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[1427] Naylor, 197–206.

[1428] Naylor, *Not a Good Day to Die,* 205.

Takur Ghar. As such, they were unable to translate these attributes to the mission assault force. This left the mission force at the mercy of their dynamic environment, unable to simplify their situation or diminish their vulnerabilities to the exposure of time and enemy alike. The lack of force integration ensured that these abilities were simply lacking from the mission force that was employed atop Takur Ghar to any degree more than a soldier on the ground can provide for himself.

Securely Integrated Long-Range Communications: The communications utilized during Operation ANACONDA had technologically come a long way from those employed in Operation KINGPIN, but technological advance alone is not enough to achieve adequate communications. The technological advances enjoyed at Takur Ghar were mitigated by their lack of integration. The communications nets employed were reflective of their bifurcated chains of command, resulting in an unhelpful web of ineffective radio communications and randomly sporadic "absolutely critical" communications.[1429] This is evidenced in communications debacles ranging from failed dissemination of intelligence designating the summit of Takur Ghar to be an impregnable site for aerial infiltration to the failure of leadership to ensure the employed helicopters were outfitted with long-range satellite radios that could communicate with the command and control elements.[1430]

Other indirect examples of the communications fracturing follow: the need of QRF-1 and QRF-2 to relay intelligence and situational awareness information through their aircraft flight crews, amounting to the use of "the telephone game" to relay critical information as they prepared to face combat[1431]; the fact that the SEALs did not retain long-range communications and thus remained incommunicado with the infiltrating Rangers while the SEALs retained valuable enemy position information, having just been engaged in the area the Rangers were headed into; and the fact that RAZOR 01 remained unaware of the capabilities of the enemy threat they were headed to face despite the fact

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[1429] "Hall of Valor: Victor D. Hyder," Military Times, accessed September 05, 2017, http://valor.militarytimes.com/recipient.php?recipientid=28128.

[1430] Naylor, *Not a Good Day to Die,* 310; Patil, "Operation ANACONDA."

[1431] Naylor, 353, 357.

that two other helicopters had already been engaged at the same location they were headed to. All of these represent unintegrated and ineffective communications plan.

What about the SEAL's lack of sufficient power for communications? Can one blame the fact that the SEALs were unable to communicate acute information because their radios were out of power only a few hours after their infiltration on a lack of integration?[1432] Absolutely. No real preparations had been made to support the SEALs' needs in concert with their assigned tasks or the wider conventional logistics operation. These SEALs were expected to establish and remain at the observation post, but the hurried planning and preparations phases had failed to address the needs they would have while they were there. This was incidentally evidenced by the fact that MAKO 22, another SEAL team in the area, had to borrow AFO equipment in order to remain at their pre-established observation post. The lack of adequate planning the SEALs performed to achieve adequately integrated communications, along with the other examples above, resulted in a lack of integrated communications. These examples represent a failure to achieve appropriate communications integration for the combined and joint mission force at Takur Ghar.

Naylor highlighted the importance of integrated long-range communications to the operation, as well as its lacking.[1433] He specifically credits effective communications as the most probable causal factor between the effectiveness of varying levels of success associated with calls for precision fire against enemy emplacements during the initial stages of the operation.[1434] Naylor even credited communications with being a probable delineating factor when quantifying the success of one air strike observation post verses another. He states that one observation post "initially enjoyed more success than [another], probably because the team had two satellite radios, enabling them to streamline their calls for fire," as opposed to the other post's single radio.[1435] If a journalist can identify the tactical importance of securely integrated long-range communications then

[1432] Naylor, 347.

[1433] Naylor, *Not a Good Day to Die,* 268.

[1434] Naylor, 262.

[1435] Naylor, 262.

military professionals entrusted with the successful execution of SOF direct-action missions should be able to do no less.

Statements such as this one, posted from Neha Patil's Alchetron site entitled, "Operation ANACONDA," point out the lack of planning and preparation that had gone into preparing the airlift assets for fulfilling this critical communications role:

> Unfortunately, the RAZOR Chinooks had not been equipped with functioning satellite radios to maintain communication with the HQ in Bagram or, even more critically, the AFO Teams lead.[1436]

Had assault airlift been planned for, synchronized, and integrated into Operation ANACONDA, it is possible that an airborne communications network could have been utilized that would have enabled a more complete sharing of critical time-sensitive information during the battle. The aircrew radios need not be sacrificed for such an endeavor. The antennas and power sources need only be installed and made available to the mission force. There is no reason why aircraft should not be utilized to transceive critical information during combat, such as the combined air-ground common operating picture. There is no reason that this information cannot be shared with the forces that are on the ground, in the air, and in transit all at the same time. And the "telephone game" is not the most efficient way to achieve this information sharing. But the addition of antennas and networks requires funding and training, something conventional forces, and even SOF these days, may find in short supply. Nonetheless, it is incumbent upon leadership to ensure these resources are acquired and implemented to prevent the unnecessary frictions of an unintegrated communications structure from further diluting the efforts of a mission force already mired in the fog and friction of combat.

Joint Publication 3-05 indicates that "SOF require precise, detailed intelligence which must often be produced and disseminated in austere environments with limited data transport architectures."[1437] It does so in reference to organic SOF intelligence, surveillance, target acquisition, and reconnaissance (ISR) as opposed to special reconnaissance assets. Nevertheless, this is at least an official nod in the direction of

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[1436] Patil, "Operation ANACONDA."

[1437] Joint Chiefs of Staff, *Special Operations*, II-6.

recognizing that integrated communications structures must be brought into austere environments when the need arises. Air assets particularly highlight themselves as available to fill this role, given they are present in the austere environments with the special operations mission forces and do not constitute a structure that must be replenished with each subsequent deployment. Furthermore, drone, dirigible, and robotics technologies make it possible to incorporate communications redundancies that can significantly minimize the sorts of failures experienced at Takur Ghar.

Operation ANACONDA serves to illustrate the need for C4ISR to be included in the modern doctrine as a component supported by and integrated with assault airlift. The requirement already exists, and it is merely a manner of oversight if it is not included in assault airlift official doctrine. Securely integrated long-range communications are required for SOF to effectively operate, even in support of conventional forces. They allow timely reactance and adaptation to developing critical situations, as well as synchronization of disparate efforts to capitalize on every opportunity to exploit the advantaged enemy's weaknesses.

Precise Direct or Offset Delivery and Extraction: The SEALs and Rangers who infiltrated directly to the summit of Takur Ghar were both taken by surprise and ambushed by enemy forces that were prepared for the eventuality of their arrival. These operators were not prepared to face the enemy's defenses despite the fact that intelligence assets had determined that the area was occupied. The warnings that should have alerted them of these waiting perils never made it through the broken communications and command structures.

Unlike traditional direct-action missions where national-level assets and authorities are allocated in support of the operation, Operation ANACONDA and specifically the infiltration to Takur Ghar did not benefit from any such prominence. There were no diversionary strikes to distract the enemy from the planned infiltrations. There were no plans of deception to shield the SOF operators in the cloak of stealth and confusion. Instead, they infiltrated directly to the enemy stronghold as the only detectable target of interest.

Although the decision to utilize a direct infiltration to the summit of Takur Ghar was seemingly meant to increase the speed of Operation ANACODA, it may have been the most detrimental decision of the operation. The decision to infiltrate directly to the top of Takur Ghar ensured that the mission forces assaulted the enemy stronghold with a complete lack of surprise. The acoustic signature of the aircraft warned of their impending arrival far enough in advance to allow prepared and battle-hardened Al Qaeda fighters to simply roll out of their cots and sling their arms to the ready. This completely squandered any chance of surprise the mission force may have enjoyed.

Rather than contemplating the survivability of the mission force under such circumstances, command elements seemed more preoccupied with whether an aircraft could reach the summit of Takur Ghar as opposed to whether or not it should under these circumstances. Although precise direct delivery of the ground assault force was possible, the failure to account for the survival of the mission force under these unforgiving circumstances meant that the direct insertion failed to simplify the mission or increase the speed with which it was prosecuted. To the contrary, the choice to directly infiltrate was possibly the largest single contributor to mission failure and the longevity of exposure the mission force experienced. The increased exposure translated into an increased area of vulnerability that continued to wear away the survivability of the mission force throughout the execution phase. The lack of mobility brought on by the losses incurred during the direct infiltration greatly complicated the mission, so much so that the mission objective of setting up an observation post was abandoned for one of simple extraction. Even this task was too difficult to easily accomplish with the mission force deep inside enemy held territory and under the intensified scrutiny of enemy forces brought on by the direct infiltration.

Direct infiltrations expose air assaults to direct enemy confrontations, while indirect infiltrations allow the possibility of a less contested and more clandestine approach of the ground force. Time, distance, and terrain can all be shields protecting assets during indirect infiltrations. These are all but absent as barriers between enemy and friendly forces during direct infiltrations.

The contrasting success between QRF-1 and QRF-2's insertion methods illustrates how direct-infiltrations are inherently more risky than indirect infiltrations. It is more likely that the threats encountered during direct infiltration will have a higher probability of diminishing the mission force's ability to proceed with the mission.

There are cases where direct infiltration is called for, such as was the case during the Son Tay raid. At Son Tay, there was an immediate need to get to the POWs in a timely manner to avoid reciprocity killings by their guards. This required a direct infiltration. However, such instances also warrant the planning and preparation, specifically the synchronization of assets to create an integrated mission force capable of confronting and triumphing against such odds. If such attentions are not paid to the threats present in the objective area, the mission force is often better served by a more covert indirect infiltration that salvages enough stealth or buffering protections to allow the ground assault force to proceed in a more clandestine or less vulnerable fashion.

It is true that QRF-2 was not unopposed during their land-ingress following their offsite infiltration from RAZOR 02. However, their exposure to direct enemy threats increased more slowly because of their indirect infiltration. This resulted in it more enemy effort required to target QRF-2 in comparison to QRF-1 or the preceding SEALs. This added bulwark eventually allowed QRF-2 to successfully navigate the battlefield and reinforce QRF-1 who had been immobilized by the losses experienced during their own direct infiltration.

Aerial Refueling: Because Operation ANACONDA was not a direct-action mission, it did not suffer from the same time constraints as direct-action missions. This means that it did not require the same mechanisms for success that are necessary in direct-action scenarios. It was not a deep penetration direct-action operation, but a progressive pressing forward of a line of battle. Because of this, the attrition-warfare and territorial-dominance nature of Operation ANACONDA negated the need for aerial refueling as a means of simplifying the refueling mechanisms for the participating aircraft. This is categorically attributed to the operation's nature as a non-direct-action undertaking.

As a consequence of its conventional objectives to occupy terrain and eliminate enemy forces, Operation ANACONDA transpired across relatively short distances, and aerial refueling was not required. This highlights one of the key differences between conventional warfare strategies and those of relative superiority. One could initially view the non-requirement of aerial refueling at Takur Ghar as a break with the assault airlift tenets defined in this research. Such a conclusion ignores the fact that this case study was intentionally chosen because it falls outside the scope of normal direct-action missions. The Battle of Takur Ghar, as a land-war operation designed to take and hold terrain while attriting the enemy's forces, did not require the deep-reach that most direct-action raids require. This mitigated the necessity for aerial refueling and allowed ground refueling sites, such as the one utilized by the rescue force providing exfiltration in the final hours of the operation. These ground refueling sites adequately provided the reach required for the operation by providing an area of sanctuary for the participating aircraft to refuel. This is only possible because friendly forces were able to secure the ground refueling sites (FARP sites), minimizing the risk to the aircraft. It is noteworthy that aerial refueling would still pose a lower level of risk to the participating forces, but its inclusion here is not required to make the operation feasible.

Suppressive Fire: As previously stated, it is imperative that assault airlift platforms be provisioned to provide sufficient suppressive fire to counter direct enemy threats to the assault force. Failure to do so invites enemy threats to diminish the resiliency of air platforms and eliminates their ability to contribute towards the mission objective or survivability of the mission force.

The need for suppressive fire to achieve a higher degree of relative superiority through assault airlift is illustrated dramatically during RAZOR 01's insertion of QRF-1. When the MH-47's electrical compartment is struck by the enemy-fired RPG and power to the two onboard M134 miniguns is lost, the aircraft losses its ability to provide its own suppressive fire. Unlike Operation KINGPIN, where the ground assault force had prepared to and practiced providing suppressive fire from their small arms weapons during infiltration, and where multiple aerial platforms were prepared to provide this level of suppressive fire, no such planning and coordination had been accomplished by the force

headed into Takur Ghar. The consequences are an unabated enemy onslaught that downed the aircraft and killed four men within minutes.

It could be argued that the airlift platforms proceeding into Takur Ghar were appropriately armed and that their ineffectual defensive suppressive fires were attributable to the excessive violence with which the enemy ambush was sprung upon them. However, this answer accepts this as an acceptable outcome if similar precautions are taken in the future. This is unacceptable and future leaders must look to this example to learn that these levels of suppressive fire alone are insufficient to counter an enemy ambush.

Integration of suppressive fires with assault airlift platforms becomes increasingly relevant to the survival of a mission force when direct-action missions are considered in contrast to those of territorial conquest. Both face enemy threats, but direct-action missions, especially those using direct infiltration, pit their small attacking force openly against strategically advantaged enemy strongholds behind enemy lines. These attacking forces specifically face the probability that the enemy will have been alerted to their presence; a situation which can almost instantaneously change would be dominators into hostages, POWs, or battlefield casualties.

Security or detection compromises may leave operators cut off from their only routes either in or out of enemy territory, requiring the mission force to momentarily fight in order to “punch a hole” to get through. It is a scenario that is pondered all the way from the Presidents who authorize such missions to the men who embark upon them. In these cases, direct-action mission forces rarely have the luxury of time to call for reinforcements before situations go sour. Instead, they must rely only on their own moral factors and the equipment at hand. This equipment must be light and agile, but it must be at least effective enough to counter the known threats if the mission force is to stand any chance of success.

5. Survivability: How Was Assault Airlift Operationalized to Increase Mission Force Survivability?

Given that assault airlift was not achieved at the Battle for Takur Ghar, the airlift platforms operating at the battle were only able to attempt to augment survivability during the infiltration and exfiltration stages of execution, by the nature of their use as mobility assets. These airlift assets squarely augment survivability when RAZOR 03 escaped under fire during the initial insertion when Roberts fell; during the indirect infiltration of QRF-2 that led to the reinforcement of QRF-1; and during the final extraction of the Rangers, SEALs, special operators, and SOF aviators some 17 hours later. The lack of assault airlift simply precluded the air assets from being integrated well enough to increase the survivability of the mission force during any other stages of the mission or to any greater degree in these instances.

The first insertion of MAKO 30 by RAZOR 03 contributed to the survival of the mission force by allowing all but one of them to escape the grasp of the enemy's trap. While this may initially seem like an easily overlooked fact, it warrants a deal of attention. Had RAZOR 03 not been able to extract itself and its mission force, save Roberts, from the enemy's trap, the situation would have almost assuredly have resulted in the loss of all on board. Subsequent rescue attempts would have been almost inevitable, and the outcomes of the Ranger insertions can only be imagined to be different than they were. No doubt exists that the extraction of RAZOR 03 under fire after the first failed insertion of the SEAL unit accounts for saving the lives of every operator that was onboard that aircraft: pilot, SEAL, et alii.

The second infiltration of MAKO 30 by RAZOR 04 resulted in a failed attempt to rescue Roberts, resulting in the death of Chapman and serious wounds being inflicted on two more of the SEALs. During this infiltration, the unintegrated capabilities of RAZOR 04 were able to do no more than ensure the survivability of the aircraft and her crew. RAZOR 04 was not integrated well enough to provide significant manifestation of the tenets associated with assault airlift, and thus never reached a level of relative superiority that would allow it to further assist the SEALs. The aircraft was damaged so badly during the initial infil that it had to limp back for repairs, effectively removing it from the fight.

This recognition is not meant to detract from the bravery or efforts of the men who operated these machines. It is rather an acknowledgment that the decision to lean forward with their hasty re-employment simply did not contribute to mission force survival.

The third infiltration attempt resulted in the downing of RAZOR 01 and the immediate loss of four lives, with only a periphery increase in the survivability of the retreating SEALs. The fourth infiltration by RAZOR 02, to the offsite landing zone, did avoid the same drastic consequences that had been experienced by the preceding direct-infiltrations, but it is difficult to credit the airlift with increasing the survivability of QRF-2 by not falling into an enemy trap.

Instead, it is more plausible to credit this insertion with the timely delivery of QRF-2 to a location that would eventually allow it to reinforce QRF-1. This reinforcement dramatically increased the survivability of the Rangers and allowed them to achieve dominance over their enemies atop this desolate mountain. Without QRF-2's assistance, it is highly probably that the Rangers of QRF-1 and their wounded would have perished. The only detractor from this is the realization of how much more effective these assets could have been used to augment the survivability of the mission force had they been properly synchronized and integrated with their counterparts.

The final extraction bolstered relative superiority and the survival of the mission force, albeit belatedly, when the newly assembled QRF provided exfiltration and casualty evacuation flights during the beginning of the second period of darkness. This increased the survivability of the remaining personnel by removing them from harm's way and allowing them to receive urgently needed medical care, even though it came too late to save Cunningham.

This extraction effort was delayed because of Hagenbeck's lack of understanding of the actual threat these helicopters would now be facing coupled with his immediate reluctance to risk additional assets in the immediate aftermath of having just lost so many lives. This is a point Self and Hagenbeck disagreed on, but their relationship was not strong enough for Self to convince Hagenbeck to trust his assessment of the situation.

This lack of trust is unfortunate, but it is indicative of command relationships that are only weakly tied to the troops they command. Trust is not given, it is earned, and earning trust takes time. This is one of the reasons McRaven stresses the importance of rehearsals: to work out the variables so that the mission force can trust their plan, their equipment, their leadership, their partners, and themselves. There were no such joint rehearsals performed for Operation ANACONDA.

Medical Support: The casualty evacuation plan for Operation ANACONDA was essentially based on mission accomplishment. Although the SEALs and Rangers had received basic medical training, and the Rangers were augmented by two medics, the RAZOR flights at Operation ANACONDA were able to do little more than transport these men to and from their objective, and with varied levels of success even here. There had not been any additional planning as to how best to stabilize and extract a wounded assault force member from the objective site. The slim amount of planning time Trebon allowed simply did not allow for it.

Two-Way Mission: The infiltration at Takur Ghar was staggered, with teams inserting over a period of 17 hours from when Roberts precariously arrived to when GRF-2 was delivered to their offset infiltration point along the mountain's ridgeline.

Usually infiltration occurs first, followed by the actions-on-the-objective, followed by the exfiltration of the assault mission force. However, it is conceivable for exfiltration to commence even prior to infiltration completion. This tactic is more readily associated with typical conventional combat, when mass on an objective takes time to muster and casualties and logistics require men and equipment be moved to and from a conventional objective simultaneously. It is not typical for a successful SOF direct-action mission to utilize the tactic of staggered infiltration, with the exception of those preparing the environment for the operation itself, such as human intelligence operatives. Nor is it a typical characteristic for SOF direct-action missions to utilize simultaneous infiltration and exfiltration. This tactic is more readily seen as a trademark of conventional combat.

During SOF direct-action missions, infiltration is usually either a speedy direct-access action completed with violent surprise and swift precision or, in less time-sensitive

situations, infiltration can be achieved by using a slower, lower-profile approaches (such as indirect infiltration). When time is not immediately of the essence, access to an objective area can be achieved by covert undercover operatives, or SOF direct-action forces that slowly infiltrate over a long period of time, such as was the case during the Vemork Heavy Water Raids of 1943, where operations.[1438] However, neither of these tactics utilizes a simultaneous infiltration and exfiltration sequence of events. Simultaneous infiltration and exfiltration are symbolic identifiers associated with conventional combat actions and possibly SOF direct-action missions that have become fouled.

During SOF direct-action missions, as with conventional operations, combat injuries and certain unanticipated circumstances may require casualty evacuations or ground assault force extractions at unplanned and untimely moments. In these cases, even SOF direct-action missions may experience exfiltrations that begin before the completion of actions-on-the-objective. However, this level of resource synchronization signifies a high level of assault airlift achievement resulting in an abundance of relative superiority. Unfortunately, the leadership responsible for operationalizing the mission force for Operation ANACONDA failed to achieve this level of synchronization and integration.

6. Root Causes of Failure

If the proximate causes of failure were symptomatic of leadership, organizational, and strategic discontinuities, then these are surely evidences of an overall lack of force synchronization. These evidences lead to the realization that a lack of proper asset synchronization and mission force integration were largely responsible for the inability of the mission force to surmount the level of risk encountered.

[1438] During Operation GROUSE and Operation FRESHMAN, Norwegians and British commandos parachuted in and landed by gliders, respectively, to offset locations, from whence they commenced a more methodical (time consuming but clandestine) approach to attacking the Vemork Heavy Water Plant. Their efforts were designed to disrupt German attempts to achieve nuclear power and weaponization. Dr. Kalev I. Sepp, "The History of Special Operations: Special Mission Units," (Lecture, Naval Postgraduate School, Monterey, CA, October 17, 2016).

7. Synchronization: What Factors Were Critical to Operationalizing the Joint Mission Force?

Lack of Synchronization: The proximate causes of mission failure at Takur Ghar were brought on by the lack of synchronization that could have otherwise countered the frictions of war that degraded the achievement of mission force objectives and survivability. These proximate failures were attributed to the severe the lack of adequately integrated mobility and mission forces, resulting in an almost total inability to achieve assault airlift and its accompanying tenets. Commanders, simply failed to acknowledge the importance of mobility and maneuver despite fact that the AFO and coalition forces were mired by a lack of these capabilities. However, the lack of assault airlift and the symptomatic lack of integration apparent in the mission forces was only a symptom of the underlying problem. The underlying root cause of these failures was an overall lack of relationship-focused leadership; the absence of which led to an unbalanced and disjointed organizational structure where synchronization and integration were neglected.

Lack of Relationship-Focused Leadership: Like Operation EAGLE CLAW, Operation ANACONDA suffered from an amalgamation of DOD organizations from various conventional ancestral backgrounds. The leaders present failed to build and strengthen the bonds necessary between these organizations for the total mission force to effectively integrate their combined efforts. By the time ANACONDA transpired, these ancestral divisions had even fragmented the SOF community internally, with SEALs, Rangers, and air commandos all operating near each other but not with each other.

The most significant leaders whose influence affected the ability of the mission force to gel were Brigadier General Trebon, Lieutenant Commander Hyder, and Lieutenant General Hagenbeck. Collectively, they presented a collage of individual and organizational self-interests that served to distract, detract, or bolster overall mission efforts and the survivability of the forces in Operation ANACODA. They individually worked to serve the varying interests of themselves and their incongruent organizations. The leadership styles displayed by Trebon and Hyder showcase an arrogant lack of humility. This arrogance blindly hides from these decision makers the basic recognition

that other organizations' assets may indeed possess superiority levels of expertise or capabilities required to functionally address a given issue.

Trebon was not a technical expert in the operations he was attempting to command and control. His background was that of a C-141 Starlifter pilot, a strategic mobility asset that would rarely have been pushed into tactical use. Yet, Trebon insisted on commanding the Takur Ghar operation, even inserting himself into the tactical decision making process of the ground forces.[1439] His personal desire to command the operation was symptomatic of unbalanced, if not destructive, leadership.

Even when Trebon realized his lack of technical expertise was prohibitive to his ability to adequately command and control the mission, he was still unwilling (or unable) to either invest in becoming adept at the details of his operational functional components. Nor would he relinquish the opportunity to personally command the operation. The details of his motivations may remain unknown, but his actions themselves speak volumes about his lack of respect for the men serving under his chain of command. He chose to continually insert himself beyond his own capability at the cost of the survival of men under his command. Trebon's recognition that he was "in over his head" but that he refused to give up on the opportunity to vindicate his authoritative position was evidenced when he disseminated control to his subordinates while retaining command himself.[1440] Behavior of this sort is clearly shows Trebon knew his expertise was not sorted for the task at hand. Yet, he refused to humble himself and include the advice of those with the appropriate level of expertise in the command decision making process (see Figure 141).

[1439] Naylor, *Not a Good Day to Die,* 319.

[1440] Naylor, 320.

Figure 141. Brigadier General Gregory L. Trebon, Commander during Operation ANACONDA[1441]

Was the use of SEALs for reconnaissance a wise decision by Trebon? Possibly, but it is highly likely that the SEALs, as well as the rest of the SOF assets, were merely being used as a crutch to fill a role the conventional forces should have been filling on their own. Trebon committed to the engagement of SOF in this capacity, but that alone did not validate it as an effective use of these forces. Trebon justified his position to engage SOF in a reconnaissance role using reasoning such as that put forward by Joint Publication 3-05. Joint Publication 3-05 states that:

> SOF are not dedicated reconnaissance assets for [conventional forces]. Rather, the [Joint Force Commander] typically tasks SOF to provide [special reconnaissance], and may establish a joint special operations area (JSOA) for that mission. On a case-by-case basis, the [Joint Force Commander] may task SOF to conduct [special reconnaissance] for

[1441] Adapted from "Biographies: Brigadier General Gregory L. Trebon," United States Air Force, October n.d., 2004, http://www.af.mil/About-Us/Biographies/Display/Article/104801/brigadier-general-gregory-l-trebon/.

> essential intelligence in a [conventional forces'] operational area when the [conventional forces] lacks the reconnaissance capability.[1442]

While it is acceptable that SOF fill this role on a case-by-case basis, Major General Dailey made it clear that Operation ANACONDA did not represent a use of SOF in concert with their original mission tasking of counter-terrorism manhunts in the region.[1443]

Operation ANACONDA involved using American SOF to work by, with, and through indigenous Afghan forces to fight against the Taliban and Al Qaeda forces in Afghanistan. Although the operation utilized the capabilities of SOF operators because of their unique skillsets and relationships with indigenous forces, it was largely a conventional conflict between two opposing forces. The Al Qaeda fighters had taken the high and prominent terrain in the region of Shah-e-Kot Valley, and the Americans and Afghans were infiltrating the region to achieve dominance and thus control the area. While the reconnaissance mission required to support this operation was one that was difficult, to be sure, it did not represent a skillset that could not have been fulfilled by any number of conventional reconnaissance units. Brigadier General Trebon, without any experience in the capabilities of ground reconnaissance units and with limited expertise with regard to how ground forces operate, chose to personally insert his decision making into the employment of his SOF operators as reconnaissance assets. Naylor summarized:

> [The Task Force] was commanded by Brigadier General Gregory Trebon, an Air Force one star, a former C-141 pilot. At a key moment in the Takur Ghar fight, he took control from guys on the ground and handed the rescue to his headquarters near Oman. He also gave a lot of action to the SEALs, who do not have background that Army special operators have to fight on land.[1444]

Trebon's military career (available on his published bio), shows a career focused on strategic air mobility that came to revolve around special operations and joint operating environments following the 1980 failure of Operation EAGLE CLAW.[1445] He flew

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[1442] Joint Chiefs of Staff, *Special Operations*, II-6.

[1443] Naylor, *Not a Good Day to Die,* 142.

[1444] Friedman, "Sean Naylor-Operation ANACONDA."

[1445] USAF, "BRIGADIER GENERAL GREGORY L. TREBON."

strategic mobility platforms and then moved into SOF staff and command roles. On paper, this had quantitatively prepared him for the position of leadership he was dealt in Operation ANACONDA. Yet these jobs did not arm him with the wisdom necessary to operationalize and employ an integrated mission force. Instead, it is advanced that his technical leadership style was what held him back. His unbalanced focus on ensuring the mission in Operation ANACONDA was a feather in his cap made his leadership unbalanced and unconducive to his ability to synchronize, integrate, and operationalize the special operators that were under his command.

Trebon was a mobility pilot whose relationships with SOF would seem to have been established and strengthened during his service in a number of joint and special operations-focused staff positions following his operational career as a mobility pilot. Unfortunately, it does not appear that his experiences bestowed upon him an appreciation for the intricate limitations, requirements, and capabilities of assault airlift or SOF ground operations.

Trebon was a conventional Air Force general.[1446] He had never flown tactical combat aircraft. He was unfamiliar with the expertise required to perform assault airlift, airstrikes, or close air support. He was most assuredly unfamiliar with the risks and requirements he was placing on SEALs by having them ordered in as tactical reconnaissance assets. Trebon's career had been spent hauling logistics, troops, bullets, and beans through relatively secure ports. The breadth of his experience with SOF stemmed from his supporting role as deputy commander to Dailey, where he was supposed to be able to provide technical advice on the air contributions to SOF assets. It appears his professional expertise may not have even been suited for this role, given his background. However, this is something many leaders face.

What made this challenge uniquely difficult for Trebon was the fact that he had "gotten in over his head" committing SOF to Operation ANACONDA, and he did not appear to be humble enough to solicit sound technical advice from those with superior levels of expertise in this area over his own. Had he been willing empower those who

1446 Naylor, *Not a Good Day to Die,* 303.

were most technically proficient at dealing with the functional issues on hand, the mission force would have stood a greater chance of survival and mission success. Instead, he insisted on pressing the SEALs into action without taking the advice of those who understood the context of the situation better than he did.

Trebon failed to recognize the danger to the mission force. He failed to grasp the significance of sending in helicopters, exposed both visually and acoustically, into defended enemy positions without the appropriate level of threat mitigation. He provided no conventional operations to distract the enemy from this insertion. No significant deception tactics were attempted. And these failures are unanswered by a review of his resume, where his former assignments with both air and ground SOF should have "checked the box" in providing him the experiences necessary to surmise these threats. It becomes apparent that relationship-focused leadership and the accompanying humility it requires are key components of operationalizing an integrated force that will necessarily confront functional tasks outside the lane of the individuals who are selected to command them.

The timeline did not warrant the use of air as the means of mobility utilized, nor did it allow for the proper planning to ensure assault airlift, and thus the survivability of the mission force, could be achieved. Trebon directed the SEALs to infiltrate without providing them with the level of trust they deserved when they requested a 24 hour delay. The delay could have been absorbed with relatively little operational loss. In fact, Naylor relayed in the opening chapters of his book how there were great swaths of time throughout Operation ANACONDA when the American forces simply squandered time waiting on Afghan forces to take the lead.[1447] But Trebon ignored these factors, and many lives were lost in order for these lessons to be relearned.

If the timeline did not warrant the endurance of such unnecessary risks, then why did Trebon do it? It can be surmised that the leadership style Trebon exercised was one highly focused on the mission. He was highly invested in pushing the mission forward. His focus was not on increasing the relationships his mission force would need to

[1447] Naylor, *Not a Good Day to Die, 127–128.*

succeed. He was instead focused singularly on the mission's objective. His singular-focus on accomplishing the mission objectives detracted from what could have been more a balanced approach that gave appropriate deference to the survivability of the mission force. He failed to synchronize the mission force with either the SOF or conventional coalition forces already in theater. Trebon did not ensure the integrated training, relationships, trust, and credibility necessary for effective operationalization of his mission force were achieved. This was his job, as their leader, but it was a function he, unfortunately, was unable to fulfill.

The overall lack of synchronization and integration here are reminiscent of the *ad hoc* and egocentric command structures of Operation EAGLE CLAW, some two decades before. In both cases, synchronization of heterogeneous assets from disparate conventional ancestral roots was forfeited in order to focus on the egocentric inclusion of certain assets into a mission plan. These are indications of a lack of relationship-focused leadership.[1448]

It is relevant to presume that there is a strategy that is most likely to be able to achieve success given the context of an environment and the enemy faced within these domains of conflict. If leaders focus on identifying the appropriate strategy to employ in a given domain, they stand a better chance of being able to properly employ assets to achieve success within that domain. Of course, no asset is designed to achieve success in every domain, and no leader is expected to be able to understand every domain in which his or her forces may content. But without humility, these leaders are less likely to recognize or admit to their own ignorances. They are less likely to seek or adhere to the wisdom of experts coming from backgrounds diverse from their own … experts whose advice may be indifferently relevant.

Lieutenant Commander Hyder complemented Trebon in his singular focus on mission accomplishment, separated by his profound loyalty to the SEALs he served with. Hyder's reputation had already been soiled prior to the Battle of Takur Ghar.[1449]

[1448] Reed, "Toxic Leadership," 67–71; Bullis and Reed, *Assessing Leaders to Establish and Maintain Positive Command Climate*, 1.

[1449] Naylor, *Not a Good Day to Die,* 300–301.

However, it is admirably noted that Hyder, despite his faults, was eventually willing to personally risk his own life in an effort to save the remaining lives of his SEAL team. In this light, Hyder less represents a stalwart warrior attempting to save fellow companions at the risk of great personal costs. He risked his life to save his fellow SEALs: a mentality that is greatly revered in both conventional and SOF communities.

Hyder was subsequently submitted for and received a Silver Star for his participation in the Battle of Takur Ghar, though the accusations of inappropriate behavior and self-promotion followed him beyond the end of his career.[1450]

General Franklin L. Hagenbeck's leadership cannot go without mention, as it served three primary roles with respect to this analysis of Takur Ghar. First, he served as the overall coalition force commander, filling the role of a conventional general. His mission was to push back and eliminate the enemy. Hagenbeck used the resources at his disposal to do just that, to include his relationships with the SOF AFO and SEALs (see Figure 142).

[1450] The following is the citation accompanying Lieutenant Commander Hyder's Silver Star medal:

> "The President of the United States of America takes pleasure in presenting the Silver Star to Lieutenant Commander Victor D. Hyder, United States Navy, for conspicuous gallantry and intrepidity in action while serving as a member of a special operations unit conducting combat operations against enemy forces in enemy territory from 3 to 4 March 2002. Initially assigned as a Liaison Officer, Lieutenant Commander Hyder attached himself to a quick reaction force en route to a mountaintop stronghold to rescue a joint SOF element engaged in a fierce firefight with a determined enemy. Arriving on the battlefield, he moved 800 meters through icy and precipitous terrain while close air support and mortar rounds impacted around him. After linking up with a friendly element, he carried one of the wounded team members for six hours as the team moved to break contact. During security halts, Lieutenant Commander Hyder provided situational updates to higher headquarters with his mobile phone. His reports from the field were the only source of information on the team's status and thus were absolutely critical to the ongoing rescue planning. During one such security halt, Lieutenant Commander Hyder engaged and killed with rifle fire an enemy fighter approaching the team's position. Arriving at a defendable position, he continued to provide command and control until the team could be evacuated nearly ten hours later. By his courage in the face of the enemy, composure under immense stress, and complete dedication to duty, Lieutenant Commander Hyder reflected great credit upon himself and upheld the highest traditions of the United States Naval Service." "Hall of Valor: Victor D. Hyder."

Naylor describes Hagenbeck as, "[the] 10th Mountain Division commander in charge of all U.S. forces in ANACONDA except for the … elements."[1451]

Figure 142. Lieutenant General Franklin L. Hagenbeck[1452]

Secondly, Hagenbeck represented a conventional tendency to trust SOF without understanding how it functioned … a reverence that almost approaches the "halo effect." He believed, when told by Hyder that SOF could probably take Takur Ghar directly, that these SEALs retained the ability to do so. In fact, he was excited by the prospect. Unfortunately, this conventional fascination with mythical SOF power is too often the case. Conventional forces frequently latch on to the supposed capabilities of SOF while grappling to understand their associated limitations. This is not unique to Hagenbeck, but is a product of the human tendency to assign one's own characteristics to others. Hagenbeck failed to recognize the potential harm that could come to an exposed SOF element embedded in and surrounded by hostile enemy forces. His desire to believe in the

1451 Naylor, *Not a Good Day to Die,* xiiv.

1452 Source Danny Wild, "Lieutenant General Franklin L. "Buster" Hagenbeck Superintendent United States Military Academy, West Point," Flickr, 2009, https://www.flickr.com/photos/dannywild/4224763850.

SEALs' ability, along with the divided command structure, dissuaded him from asking the relevant questions that might have mitigated this too-aggressive plan. Hagenbeck, like most conventional military strategists, assumed that the attacking force would find a way to mitigate the enemy's intrinsically stronger defenses. He did not prepare himself for the inevitable outcome. He did not understand that SOF's advantage is generally gained through the achievement of relative superiority, something they were not afforded given the lack of preparation they endowed toward this objective.

Lastly, Hagenbeck represents the commander in the best position to oversee the entirety of the forces operating in Operation ANACONDA, as eventually became the case when the SOF were brought under his command to provide a belated unity in the command structure. In this light, Hagenbeck is represents a manifestation of the typical conventional command perspective that they would rather control SOF assets than empower them for fear that their own lack of understanding and control will lead to an outcome they do not prefer. They are fearful of employing tools they do not understand how to use. Therefore, SOF often discover themselves in subordinate roles to conventional forces prosecuting attrition warfare strategies. Of course, this is not the lesson to be taken, but rather a perspective to be considered. Rather than eliminate strategic options and assets due to an inability to understand their integration, the military would benefit more greatly from developing leaders with the strategic understanding and leadership capabilities to operationalize these unique forces for proper employment.

Hagenbeck describes the Takur Ghar mission as a "success" given that the primary objective, the mountain top of Takur Ghar, was eventually achieved. From his conventional perspective, this makes sense. However, his point is hard pressed when faced with scrutiny. The men sent to the top of the mountain suffered severe casualties and were eventually evacuated from the mountain's peak, leaving the terrain unguarded and open for enemy reoccupation. It is more likely that General Hagenbeck's tone is struck to pay homage and honor to the sacrifices of so many brave soldiers who gave their lives and had their lives changed on the side of that mountain. His tone corroborates but does not actually validate the proposition that achievement of the mission objectives

justified the costs by which they are achieved.[1453] Unfortunately, the cost of an achievement is not always reflected in the value of the achievement obtained.

Organization and Operationalization: The largest organizational and operationalization issues faced at Takur Ghar stemmed from the bifurcated chains of command and the egocentric perspectives they presented.[1454] The SOF forces in ANACONDA were cooperating with the conventional coalition forces, but they were not synchronized or integrated with them. Instead, there was a great deal of confusion as to the unity of efforts. This confusion manifests itself rather severely in the lack of unified and integrated communications. The resultant effect was a lack of shared intelligence and competing command initiatives. The forces were each competing for their own individual goals and the resultant frictions did not allow for the right information to reach the right people in time for its dissemination to avoid catastrophic effects.

On a more localized level, and more specifically pertinent to the lack of assault airlift, is the fact that these dissimilar organizational structures began to compete for the use of the airlift assets, whose needs and vulnerabilities were lost in the wash of interests being sought by Trebon, Hyder, and Hagenbeck. As each of these leaders attempted to push forward their own mission agendas, the key tenets necessary to achieve assault airlift were dismissed or ignored altogether. Only the AFO leadership recognized the profound threat that the Al Qaeda positions atop Takur Ghar represented to the airlift assets. Their voice was circumvented and stifled by Hyder and Trebon.

On a whole, Operation ANACONDA was largely a conventional force blessed as "SOF." What factors lead to this poorly integrated amalgamation of SOF and conventional forces, christened "SOF" and operationalized for employment? Conventional ancestral roots were definitely part of the reason. The mission did not necessarily call for such an eclectic force, but everyone seemed to want their players in the game. "At the National Command Authority level … this is the only game in town,"

[1453] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

[1454] Naylor, *Not a Good Day to Die,* 320.

one officer recalled telling his men, "Now is the time to perform."[1455] Operation ANACONDA represented the action, and each of the disparate conventional services, as well as the SOF operators who had thus far been responsible for the bulk of advancements in Afghanistan, wanted a piece of the pie. They each exercised the authorities within their control to gain their piece, without investing to create the integration and synchronization necessary to operate as a joint and fully integrated SOF mission force.

The other reason this force was so poorly integrated was a desire to accomplish the relatively large tasks of territorial dominance and enemy attrition with a smaller number of forces than would otherwise conventionally be used. Instead of "plussing up" the troop size to provide the normal three-to-one attack ratio called for in conventional strategy, senior leaders chose to instead attempt to accomplish the task using a smaller force.[1456] They seemed to merge an amalgamation of forces in an *ad hoc* fashion in the hopes of composing a large "SOF" force, capable of attriting the enemy with the smaller number of forces they had seen work in SOF missions before. However, there was one key misunderstanding at stake here: larger forces are less likely to be able to move nimbly enough to exercise the level of integration necessary to operationalize speed, simplicity, surprise, purpose, rehearsals, and security. The ANACONDA force was too large to achieve relative superiority, but it engaged forces as though it retained the benefits of having done so. The resultant costs are now obvious.

Operation ANACONDA became a conventional operation involving both conventional and SOF troops in an effort to uproot the enemy from their stronghold in the mountains of southeast Afghanistan.[1457] The dissonance between force compositions and strategic misalignment of the use of relative superiority by a force on an attrition warfare mission failed to provide the desired result. Commanders, either through ignorance or inability, failed to understand the strategic differences between a force designed for

[1455] Naylor, *Not a Good Day to Die,* 172.

[1456] This three-to-one attack ratio is attributed to Dr. Sepp during his lecture on Psychological Warfare and Deception. Kalev I. Sepp, "Psychological Warfare and Deception: Deception in Vietnam and the 1973 Middle East War," (Lecture, Naval Postgraduate School, Monterey, CA, August 30, 2017).

[1457] Hammer, "Al Qaeda Ambush Battle of Takur Ghar."

attrition warfare or relative superiority. The lack of understanding this difference resulted in a non-existent attempt to synchronize the conventional coalition force elements to the degree required to achieve relative superiority.

Lack of Integrated Forces: Merging the SOF AFO teams with the conventional forces seemed to be in hopes of creating a larger "SOF" force, but the integration required to operationalize this mission force never materialized. The combination of these forces seemed to be an attempt to circumnavigate the third SOF truth, "Special Operations Forces cannot be mass produced."[1458]

Mass production is a process necessary for the large numbers of troops, materials, and equipment needed to fight attrition wars. While it is enticing to want to achieve attrition warfare via the smaller numbers of assets employed for direct-action missions, neither of the methods employed in Operation ANACONDA succeeded. Adding SOF to conventional forces in a hope to mass-produce SOF did not produce a nimble and effective mid-sized conventional force. Neither did subordinating SOF under conventional command and control umbrellas result in a more resilient SOF mission force capable of withstanding conventional attrition principles of war. This "conventionalization of SOF" (described by Patrick Rogan in "The Blunt End of The Spear: The Conventionalization of SOF Personnel") is something that has been highly prolific throughout the wars in Afghanistan and Iraq, but its modern presence does not equate to its effectiveness.[1459]

Unfortunately, this approach of conventionalizing SOF fails to produce a larger SOF component. It disseminates SOF experience into conventional forces, but falls short of creating a highly integrated joint force dedicated to countering the non-existential threats that SOF commonly face. Instead, it more readily places SOF at the forefront of the conventional battles while leaving those specifically trained in such tasks relegated to menial supporting roles. Ironically, it is SOF who is considered to be in the supporting

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1458 "SOF Truths," United States Army Special Operations Command, accessed August 22, 2017, http://www.soc.mil/USASOCHQ/SOFTruths.html.

1459 Patrick Rogan, "The Blunt End of the Spear: The Conventionalization of SOF Personnel," SOFREP, May 9, 2017, https://sofrep.com/76631/blunt-end-spear-conventionalization-sof-personnel/.

role under the command of conventional generals, while SOF man the front lines of combat and conventional forces form support structures behind them. Naylor wrote of the ironic hodgepodge of force implementation that birthed the mindsets that would later lead to ANACONDA's poorly integrated force structure:

> The infantrymen – trained to close with and destroy the enemy – were put to work cleaning latrines and functioning as military police. Only those elements designated as the quick reaction force had a job that fell within the mission profile of an infantry unit.[1460]

These sort of conventional and SOF mergers fail to fulfill the role of either. They do not serve as a magic formula capable of eliminating size and attrition rates as relevant factors in attrition warfare scenarios. Nor do they mass produce SOF. They instead pit relatively lightly armed SOF against larger attrition warfare forces. They provide a demoralizing experience for conventional infantry whose art of war is cast aside while an unwarranted "elite" status is bestowed upon the SOF warriors manning the front lines. Neither of these effects is deemed helpful, and it is hoped that the lessons relearned at ANACONDA will not necessitate relearning again at some future date.

D. CONCLUSION

Operation ANACONDA suffered from a lack of adequate mobility, a prerequisite for mission success in the predominance of direct-assault missions and whose lack can apparently poison even semi-conventional missions utilizing SOF in supporting roles. The air elements at Takur Ghar were plagued by a disconnected and confusing chain of command. The egocentric necessity for inclusion that certain leaders imposed on the operation while ignoring relevant factors critical to the survival of the mission forces ensured that the integration of airlift assets never fully materialized.

The soldiers in Operation ANACONDA did not benefit from relationship-focused leadership that could have empowered them with the resources and synchronization that would have been required for them to cohesively operate as a mission force. The consequent disconcerted operationalization of the mission force dispersed their

[1460] Naylor, *Not a Good Day to Die,* 230.

insufficiently integrated efforts into a number of unsynchronized directions. The focus on achieving specific objectives while guarding the resiliency of the mission force was lost in the face of significant opposition.

Operation ANACONDA typified SOF's use in supporting conventional attrition warfare, with devastating consequences. The operation negates the wishful thinking that "sprinkling" SOF air or ground assets onto an incongruent strategy can somehow make it palatable. Instead, the achievement of assault airlift, like all SOF, requires high levels of mutual trust and integration at each level of the command structure: levels of integration that are best achieved through relationship-focused leadership.

ANACONDA serves as a caveat against sole reliance on "checked boxes" in determining the leaders best capable of synchronizing, integrating, and operationalizing a joint force constructed from ancestrally diverse components. Like Operation EAGLE CLAW, it serves as a warning against substituting SOF and conventional forces with one another simply to ensure multiple service variants are represented in an operation.

When a situation and enemy demand the use of a strategy, that strategy and the forces most capable of successfully executing it should be employed by leaders familiar with how to do so. Anything short can lead to disaster. Such was the case at Takur Ghar, where SOF forces were sacrificed against a conventionally superior and entrenched defensive force.

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V. CASE STUDY #4—"OPERATION NEPTUNE'S SPEAR"

McRaven's Capstone: The Usama bin Laden Abbottabad Raid

A. INTRODUCTION[1461]

> Tonight I can report to the American people and the world that the United States has conducted an operation that killed Osama bin Laden, the leader of al Qaeda, and a terrorist who's responsible for the murder of thousands of innocent men, women, and children.
>
> —President Barack H. Obama,
> Address following Operation NEPTUNE'S SPEAR.[1462]

"U.S. ATTACKED: HIJACKED JETS DESTROY TWIN TOWERS AND HIT PENTAGON IN DAY OF TERROR," the *New York Times* headline screamed.[1463] "BUILDINGS BURN AND FALL AS ONLOOKERS SEARCH FOR ELUSIVE SAFETY," and "PRESIDENT VOWS TO EXACT PUNISHMENT FOR 'EVIL,'" the large, bold text read.[1464] "WAR ON AMERICA," the *Daily Telegraph* punctuated.[1465] It was 11 September, 2001: 9/11. America had been hit at home. The World Trade Center Twin Towers had fallen. F-16 fighter aircraft screamed

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[1461] Portions of this work include excerpts and revisions from previous work of the author: David J. Damron, "McRaven's Capstone: Getting There - How the Theory of Special Operations and Air Mobility brought down Osama bin Laden," a research article written as postgraduate student for "History of SOF," Naval Postgraduate School, Monterey, CA, 2016. The original work can be made available upon request: djdamron@nps.edu.

[1462] Lauren Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR: Presidential Leadership and Political Risk," *Journal of Political Risk*, vol. 2, no. 7, (July 2014): n.p., http://www.jpolrisk.com/the-decision-in-favor-of-operation-neptune-spear-presidential-leadership-and-political-risk/.

[1463] "U.S. ATTACKED: HIJACKED JETS DESTROY TWIN TOWERS AND HIT PENTAGON IN DAY OF TERROR," *New York Times*, September 12, 2001, http://www.nytimes.com/packages/html/nyregion/9-11imagemap.html.

[1464] N. R. Kleinfield, "A Creeping Horror: Buildings Burn and Fall as Onlookers Search for Elusive Safety," *New York Times*, September 12, 2001, http://www.nytimes.com/packages/html/nyregion/9-11imagemap.html; Serge Schmemann, "President Vows to Exact Punishment for 'Evil,'" *New York Times*, September 12, 2001, http://www.nytimes.com/packages/html/nyregion/9-11imagemap.html.

[1465] Jonny Cooper and Nick Allen, "9/11 Anniversary: As It Happened," *Telegraph*, September 11, 2011, http://www.telegraph.co.uk/news/worldnews/september-11-attacks/8755389/911-anniversary-as-it-happened.html.

across the nation's greatest cities at rooftop level. There was fear. The Pentagon had been hit. There were questions about the safety and viability of the world's only hyper-power. Flight 93 had gone down leaving its intended target unknown. Those who were protected by the great strength of the United States ponder whether or not its strength might wain. Those that had railed against it reveled in seeing this giant brought down to a knee (see Figure 143).

Figure 143. Decimation of the 9/11 Attacks[1466]

1466 The top left image of the attack in New York was adapted from Cooper and Allen, "9/11 Anniversary." The top right image of the attack in New York was adapted from Associated Press's release by ABC7, "9/11 Memorial Held as U.S. Remembers Terror Attacks 16 Years Later." The bottom left image of field where Flight 93 was brought down was adapted from Imgur, "The Impact Crater of United Airlines Flight 93." The bottom right image of the Pentagon attack was adapted from the YouTube video "Pentagon Attack 9/11 Rare Footage," posted by ArchAngel Network. Adapted from Associated Press, "9/11 Memorial Held as U.S. Remembers Terror Attacks 16 Years Later," ABC7, September 11, 2017, http://abc7.com/9-11-memorial-held-as-us-remembers-attacks-16-years-later/2403437/; Cooper and Allen, "9/11 Anniversary;" "Pentagon Attack 9/11 Rare Footage," YouTube, 8:38, posted by ArchAngel NetWork, December 21, 2015, https://www.youtube.com/watch?v=HiBE2i_Ut4Y; TheInfamousWolf, "The Impact Crater of United Airlines Flight 93," Imgur, September 11, 2013, https://imgur.com/gallery/feGUL15.

The nation faced a danger that threatened the existence of her people in their homeland. Wars were waged to ensure their security: Operation ENDURING FREEDOM in Afghanistan followed by Operation IRAQI FREEDOM in Iraq, both couched in the context of an even larger global war against terrorist networks.[1467] As the initial excitement associated with the opening of these wars faded into the grueling longevity of their existence, the one man who had been deemed most responsible for the planning of the 9/11 attacks remained at large: the terrorist mastermind known as Usama bin Laden (UBL).

bin Laden managed to escape being killed or captured in the months following the 9/11 attacks. He took sanctuary in Afghanistan, narrowly escaped U.S. SOF in Tora Bora, and fled to the mountainous border of neighboring Pakistan. bin Laden had presumably escaped the grasp of America's justice. For a decade, he remained elusive.

By 2011, the Al Qaeda network had been all but destroyed: their power lost to the diminishing returns of efforts wielded uselessly against the crushing conventional edge of America's military forces abroad.[1468] There were no more weapons of terror free-flowing out of the once-sanctuary of Afghanistan towards the United States. Instead, foreign fighters flowed *to* the mountainous battlefields to confront America's might amidst their peaks. The international community had stood together and, at least momentarily, dissuaded the network's spread of terror. They had used their specialized operators and conventional forces to systematically dismantle the network, piece by piece. It had taken years, but the sanctuaries Al Qaeda once called home were no longer dark and shadowy places. These spaces had been illuminated, at least fleetingly. The militant network's places to hide had all but vanished in Afghanistan, and with this sanctuary's dissolution went the network's ability to existentially threaten the American people in their homes and places of work.

But the American people were not satisfied with this eventuality. They demanded bin Laden pay for the deaths he caused. They insisted on a manhunt to bring him to

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[1467] Clarke, *Against All Enemies.*

[1468] The term "crushing conventional edge" is attributed to Professor Robert "Bob" O'Connell of the Naval Postgraduate School. Dr. Robert O'Connell, "Deterrence, Coercion, and Crisis Management," (Lecture, Naval Postgraduate School, Monterey, CA, 2016).

justice. Their elected officials aspired to it; their morale demanded it; and those who had died in New York, Washington, DC, Pennsylvania, and abroad warranted it.

America's special mission units were not immune to this effect. Their purpose for over a decade had been to bring bin Laden to justice. Their morale, as well as their reputations, demanded closure. Mitigation of bin Laden's capacity to threaten the existence of Americans was not enough. Only killing or capturing the man believed responsible for 9/11 would suffice.

McRaven on McRaven: This case study is the story of how Admiral William H. McRaven's theory of special operations brought UBL to justice in a raid that served as the capstone of America's war to end global terrorism. It is about the defining moment for McRaven and the SOF enterprise he helped build from the ashes of Operation EAGLE CLAW. In a sense, Operation NEPTUNE'S SPEAR served as McRaven's culminating military achievement; his opportunity to use his foundational theory of special operations to demonstrate relative superiority as a dominant strategy in a war he had led SOF through. It serves as an opportunity to use McRaven's model to analyze McRaven's achievements. It is McRaven on McRaven.

Many of the potential sources associated with Operation NEPTUNE'S SPEAR remain classified at the time of this writing, but the open sources utilized here provide enough credibility to make analysis with the information at hand usefully substantive. The recency of this case study ensures national security necessarily obscures many details of the raid that could otherwise contribute toward a more accurate and detailed description of the events that transpired. There are limited accounts of the details that transpired that night in Abbottabad. However, the accounts that do exist are able to tell the story in a meaningful manner: interviews with the President and commander of the operation; highly researched and specialized journalist articles; the Central Intelligence Agency (CIA) timeline; eyewitness accounts of civilian observers; and the first-hand account of participant operators. Enough credible sources exist to extrapolate the measurements, deductions, and inferences necessary to conduct the analysis herein.

President Barack H. Obama, inaugurated in 2009 as the 44th President of the United States, served as commander-in-chief during the execution of the Abbottabad raid just over two years into his first term in office. His position as commander-in-chief makes his testimony regarding the UBL raid a significant and trustworthy unclassified source of information regarding the planning, preparation, and execution of the Abbottabad raid. He provided his insights and perspectives on the raid in a 2016 interview with *CNN* national security analyst Peter L. Bergen, five years following the raid's execution. Bergen's publicly available *CNN* interview with the President, "Architect of bin Laden Raid: The Anxious Moments," and his writings on the raid serve as a credible sources of information for analysis.[1469]

In addition to President Obama's interview, Admiral McRaven was authorized to grant an interview with Bergen regarding Operation NEPTUNE'S SPEAR. In it, he provides his own perspective on the mission, the factors incorporated into its design and launch, as well as the use of his theory of special operations in its employment.[1470] McRaven serves as the conceptual mastermind behind the theory of special operations, the architect of the bin Laden raid, and the officer in command of the operation responsible for bringing closure to the most significant SOF manhunt of the modern era. McRaven's unique position makes his open source assessments and statements invaluable to this analysis.

Lauren Hickok provides an excellently researched account of the planning and preparation that led up to the UBL raid in her 2014 article, "The Decision in Favor of Operation NEPTUNE'S SPEAR: Presidential Leadership and Political Risk," published in the *Journal of Political Risk* in July of 2014.[1471] Hickok's work is detailed and well researched. It provides an inside perspective on the decision making and factors ascertained at the senior executive levels leading up to the resolution to plan and launch the UBL raid.

[1469] Bergen, "Architect of bin Laden Raid."

[1470] Bergen.

[1471] Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

There are also useful details to be gleaned from the firsthand accounts of those who witnessed the raid. Robert O'Neill, a member of the raiding party on that fateful night, wrote a 2017 book entitled, *The Operator: Firing the Shots That Killed Osama bin Laden and My Years as a SEAL Team Warrior*. His book was vetted by USSOCOM prior to its publishing, and provides a great deal of detail about the actions that took place on the objective that may otherwise have remained unavailable for years to come due to information classification constraints.[1472]

B. EVENT SUMMARY

In 2011, nearly a decade after the fateful 9/11 attacks and the near miss of U.S. SOF efforts to kill or capture UBL in Tora Bora, intelligence assets ascertained a probable location of UBL. He was suspected to be hiding in a compound in Abbottabad, Pakistan, across the eastern border of Afghanistan and deep inside Pakistani territory. Intelligence garnered from prisoners in the notoriously surreptitious Guantanamo Bay Naval Base had betrayed the possible whereabouts of the exiled Saudi Prince, as reported by Ben Armbruster in his 2011 article, "Rumsfeld: Bin Laden Info From Gitmo Detainees Was Not Obtained Through 'Harsh Treatment' Or 'Waterboarding.'"[1473] A courier named Abu Ahmed al-Kuwaiti had been exposed. He was reportedly making deliveries to the Abbottabad compound. Intelligence indicators suggested the individual on the receiving end may have been bin Laden himself.

Abbottabad represented the closest American forces had yet come to capturing or killing UBL. They had been unceasingly hunting him for a decade. President Barack H. Obama knew this might be their best shot, possibly ever. Some five years later, in his CNN interview, President Obama would relay that, "This was going to be our best chance to get bin Laden," (as quoted by CNN's Nicole Gaouette in 2016, "5 Years Ago the U.S.

[1472] Robert O'Neill, *The Operator: Firing the Shots That Killed Osama bin Laden and My Years as a SEAL Team Warrior,* (New York: Scribner, 2017).

[1473] Ben Armbruster, "Rumsfeld: Bin Laden Info From Gitmo Detainees Was Not Obtained Through 'Harsh Treatment' Or 'Waterboarding,'" ThinkProgress, May 02, 2011, https://thinkprogress.org/rumsfeld-bin-laden-info-from-gitmo-detainees-was-not-obtained-through-harsh-treatment-or-waterboardi-717251558430/.

Killed Osama bin Laden. Did it Matter?").[1474] But the intelligence as to whether or not the man in Abbottabad was actually UBL remained uncertain. The President acknowledged that the benefits of a strike would only outweigh the costs in the aftermath if it does indeed turn out to be Usama bin Laden, and if any mission force sent in can make it back home safely.[1475]

Hickok describes in her 2014 article how CIA intelligence analysts perceived the intelligence to be both time-sensitive and finite in nature (a sentiment and situation backed up by Bergen in his 2012 book, *Manhunt: The Ten-Year Search for Bin Laden from 9/11 to Abbottabad*).[1476] "We have to act now," one intelligence analyst explained, "al-Kuwaiti might not be there next month … the intelligence is not going to get any better."[1477] CIA Director Leon E. Panetta relayed this sense of urgency to President Obama: "we need to move or this particular intelligence might dissipate."[1478]

1. Planning

President Obama ordered options developed "for targeting the compound in Abbottabad," Hickok reported.[1479] Four options were generated and delivered to the President in March 2011:

> (1) bombing the compound [via a stealth B-2 Spirit bomber], (2) a drone strike on the compound [either of these options would mitigate any chance of subterranean tunnel escape], (3) a helicopter assault on the compound,

[1474] Nicole Gaouette, "5 Years Ago the U.S. Killed Osama bin Laden. Did it Matter?" CNN, May 02, 2016, http://www.cnn.com/2016/05/02/politics/terrorism-bin-laden-raid-2016-isis/index.html.

[1475] Gaouette, "5 Years Ago the U.S. Killed Osama bin Laden."

[1476] Peter Bergen, *Manhunt: The Ten-Year Search for Bin Laden from 9/11 to Abbottabad* (New York: Crown Publishers, 2012), 164.

[1477] Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

[1478] Hickok; Bergen, *Manhunt,* 164.

[1479] Hickok; Bergen, 164.

> employing U.S. Special Operations Forces, and (4) a joint operation carried out by the United States and Pakistan.[1480]

The general sense developed that a SOF direct-action assault offered the best chance of achieving the mission's objective. Aerial strikes risked losing the intelligence that could confirm the mission's success. They would invariably destroy any evidence or intelligence that could prove useful into the future.[1481] Trust in Pakistan's ability or desire to cooperate on such a raid did not exist to the degree that their cooperation could be relied upon. Hickok relayed Secretary of State Hillary R. Clinton's sentiment on the issue. Clinton stated, "'we could not trust Pakistan … the President immediately took that option off the table."[1482] These factors narrowed the options to one: SOF.

The lack of cooperation and coordination with Pakistan would pose a significant risk to a SOF direct-action mission force. The inability to share intelligence with Pakistan would mean that the U.S. SOF mission force would be required to clandestinely penetrate denied sovereign battlespace to generate the opportunity to complete its mission. It would most assuredly draw the attention of the Pakistani military, constantly on alert due to their pseudo-nuclear cold war with neighboring India. Pakistan's constant military vigil and alerted over-watch would ensure they were watching and prepared to counter any encroachment into their sovereign territory. Hickok relayed how diplomats and statesmen ascertained the threat:

> [Secretary of State] Clinton had wondered how the U.S. could avoid generating a response from Pakistan if their radar picked up the helicopters. Clinton noted, "if the Pakistani military, always on a hair trigger out of a fear of a surprise attack from India, discovered a secret

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[1480] This quote is from Hickok's "The Decision in Favor of Operation NEPTUNE SPEAR." Hickok's excellence in comprehensive research provides her account here, plus the opportunity to examine the plethora of sources from which she gained her insights. Her referenced sources are listed below: Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR;" Daniel Klaidman, *Kill or Capture: The War on Terror and the Soul of the Obama Presidency* (Boston: Houghton Mifflin Harcourt, 2012), 235–241; Bergen, *Manhunt,* 173–174; Eric Schmitt and Thom Shanker, *Counterstrike: The Untold Story of America's Secret Campaign against Al Qaeda* (New York: Times Books, 2011), 258.

[1481] Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

[1482] Hickok; Bergen, 178–192.

> incursion into their airspace, it was possible they'd respond with force."[1483]

Not only would Pakistani conventional forces be prepared to counter an incursion, they were prepositioned all around the target compound. The Kakul Military Academy (Pakistan's most prestigious military training facility) along with the military brass, soldiers, and armaments it hosted, all lived within a stone's throw of the compound.[1484] The academy itself was less than a mile away from the objective area, and the surrounding neighborhood was heavily populated by Pakistani military personnel.[1485] This denoted a significant conventional threat to the mission assault force if U.S. SOF were to be sent into Abbottabad. Hickok elaborated:

> Vice Admiral McRaven had asserted that the assault on the compound would not be difficult; the challenge would be "delivering the force to the target and safely extracting it without triggering a shooting war with Pakistan." He considered the mission in Abbottabad "sporty," yet "doable."[1486]

Hickok also relayed how other senior leaders also feared the conventional Pakistani assets near the target area, and the threats they posed to the survival and safe extraction of the mission force:

> Secretary Gates feared that challenges arising during NEPTUNE SPEAR [sic] could preclude its success; in one worst-case scenario, "the Pakistanis could get a number of troops to the compound quickly, prevent extraction of our team, and take them prisoner." Gates thought Pakistan's military was likely to respond, given the important infrastructure nearby:
>
> "The Abbottabad compound was thirty-five miles from the Pakistani capital of Islamabad, six miles from a nuclear missile facility, and within a couple of miles of the Pakistani Military Academy (their West Point), the boot camps and training centers for two storied Pakistani regiments, a

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[1483] Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR;" Hillary R. Clinton, *Hard Choices* (New York: Simon and Schuster, 2014), 193.

[1484] Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

[1485] "What Was Life Like in the Bin Laden Compound?" BBC News, May 09, 2011, http://www.bbc.com/news/world-south-asia-13266944.

[1486] Quote from Hickok, with Schmitt and Shanker referenced. Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR;" Schmitt and Shanker, *Counterstrike*, 258.

Pakistani intelligence office, and a police station," [see Figure 144, Figure 145, Figure 146, and Figure 147].[1487]

President Obama allowed Admiral McRaven three weeks to ascertain the viability of this option. McRaven would use this time to organize and rehearse a mission plan using the joint SOF elements he had access to through his command position inside of United States Special Operations Command.

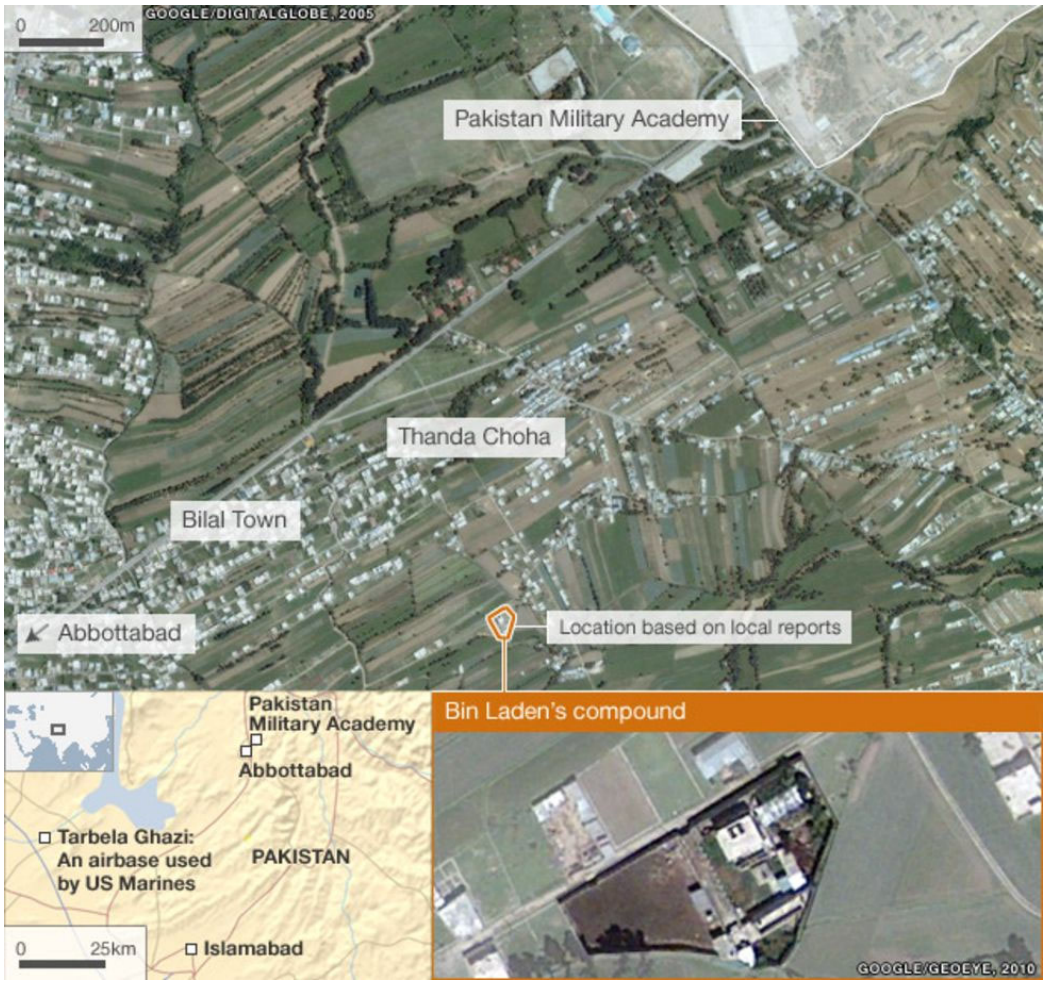
Figure 144. Location of UBL's Abbottabad Compound (1 of 4)[1488]

[1487] This excerpt is from Hickok, who quotes Robert Gates's 2014 book, *Duty: Memoirs of a Secretary at War*. Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR;" Robert Gates, *Duty: Memoirs of a Secretary at War* (New York: Knopf, 2014), 539–541.

[1488] Adapted from Spiegel Group, "Tödliche US-Operation: Jagd auf Bin Laden [Deadly U.S. Operation: Hunting for Bin Laden]," Spiegel-Online, May 02, 2011, http://www.spiegel.de/fotostrecke/toedliche-us-operation-jagd-auf-bin-laden-fotostrecke-67495-8.html.

Figure 145. Location of UBL's Abbottabad Compound (2 of 4)[1489]

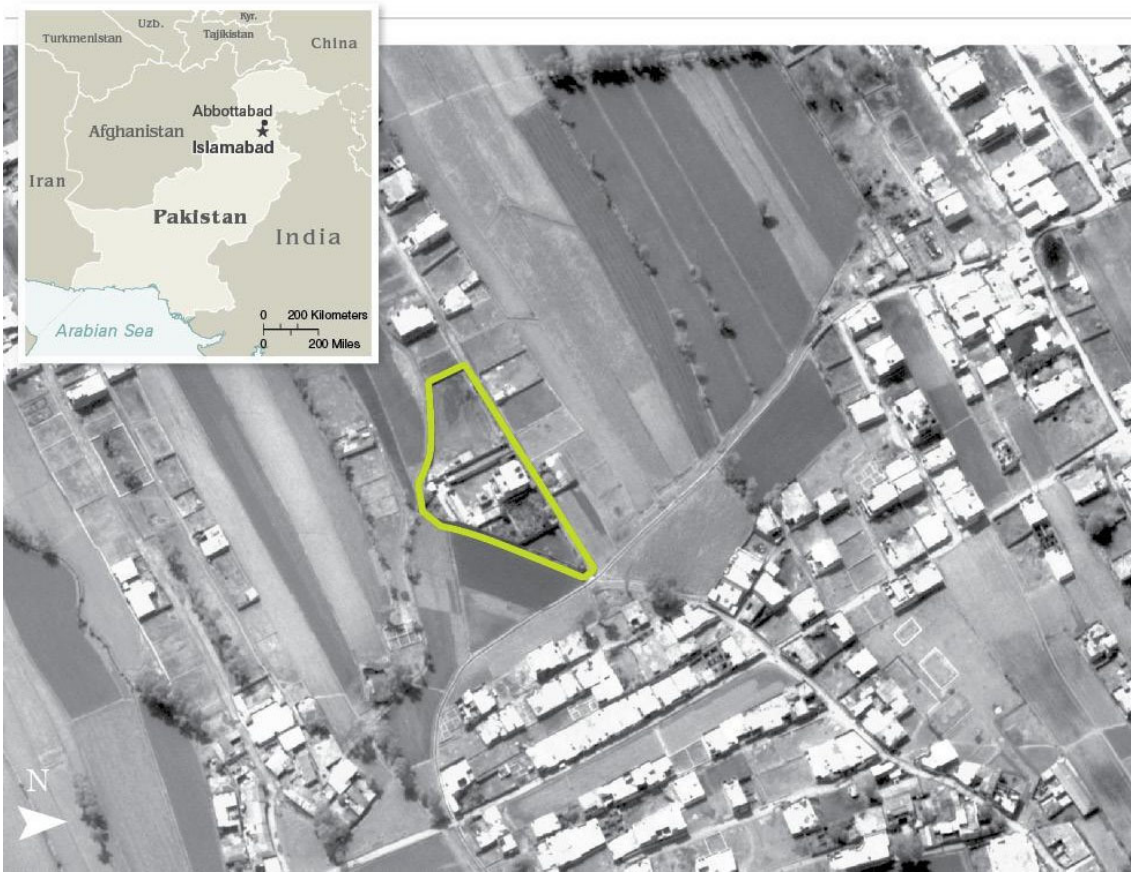
[1489] Source "Map of Osama Bin Laden's Compound in Abbottabad, Pakistan," Gene Thorp, *Washington Post*, accessed September 25, 2017, http://www.mapmanusa.com/cci-twp-persp-2.html.



This figure depicts the location of the Abbottabad compound in relation to the Kakul Military Academy.

Figure 146. Location of UBL's Abbottabad Compound (3 of 4)[1490]

[1490] Adapted from "How the Lives of Osama Bin Laden's Neighbours Changed Forever," BBC News, May 02, 2016, http://www.bbc.com/news/world-asia-36161089.



Locally, the compound was referred to as "Waziristan Haveli [Wasiristan mansion]."[1491]

Figure 147. Location of UBL's Abbottabad Compound (4 of 4)[1492]

During the planning phase of the UBL raid in Abbottabad, McRaven went back and reviewed his Naval Postgraduate School (NPS) thesis. He ensured the mission plan took into account the valuable lessons he had previously learned about successful special operations.[1493] Hickok referenced McRaven's previous works when she reported:

> The strategic principles informing the planning process for NEPTUNE SPEAR [sic] were "deeply informed by the key principles [McRaven] had laid out in Spec Ops"—repetition, surprise, security, speed, simplicity, and

[1491] Information about indigenous references to the compound was obtained from BBC News, "What Was Life Like in the Bin Laden Compound?" BBC News, "What Was Life Like in the Bin Laden Compound?"

[1492] Adapted from Spiegel Group, "Tödliche US-Operation."

[1493] Bergen, "Architect of bin Laden Raid."

> purpose—and ultimately the endeavor produced "a simple plan, carefully concealed, repeatedly rehearsed."[1494]

Based on McRaven's studies at NPS and his subsequent command experiences inside the SOF community, he knew the mission's chances for success could be increased by advancing as simple a plan as possible. "A simple plan" could be developed by "limiting the [mission's] … objectives," exploiting accurate "intelligence," and mitigating risks with "new technology."[1495] The first and latter of these factors could specifically be addressed by utilizing assault airlift assets as the transportation mechanism for the mission assault force.

The objective was singular: capture or kill Usama bin Laden. McRaven prudently selected this singular target for the assault force and did not detract from this objective by planning to simultaneously achieve additional secondary or tertiary objectives (though after the primary mission objective was achieved, McRaven did authorize a mission delay in order to gather intelligence). This single objective would allow a concerted effort. Every man on the mission assault force would only have one goal in mind: capture or kill bin Laden (see Figure 148).

[1494] Hickok interestingly provides the following addendum:

> "In an interview at the Aspen Institute after the conclusion of Operation NEPTUNE SPEAR, Vice Admiral McRaven explained the principles of Special Operations, and the way that they differ from conventional war, remarking that Special Operations could often be characterized by 'a smaller force going up against a well defended adversary.'" Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

This remark substantiates McRaven's understanding of the difference between a special operation wielding relative superiority and conventional attrition-based warfare strategies. William H. McRaven, O*pening Remarks: At the Point of the Spear: The Role of Special Operations Forces in America's Post-9/11, Post-Iraq/Afghanistan Defense Strategy*, (Aspen, CO: 2012 Aspen Institute Security Forum, July 25, 2012); Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR;" Bergen, *Manhunt,* 169; McRaven, *SPEC OPS*.

[1495] McRaven, 11–13.

"Usama bin Laden … ([Associated Press] Photo/Al-Jazeera via [Associated Press Television News)," Hollie McKay, "Pakistan Officials Adamant that 'Hero' Doctor Who Helped Capture Usama bin Laden Remain Behind Bars."[1496]

Figure 148. Usama bin Laden: Orchestrator of Al Qaeda's 9/11 Attacks[1497]

Unlike many of the *in extremis* case studies McRaven had used to develop his theory of special operations, the UBL raid was surrounded by an expectation, at the highest levels, that the assault force would survive the encounter and be exfiltrated intact, along with their cargo. These were all prerequisites to achieve mission success. President Obama had made it clear to McRaven that he would authorize the strike with the expectation that the assault force would be able to come home.[1498] Without their safe return, the mission would not be worth undertaking. This expectation was a critical factor in the analysis to determine the feasibility of the mission and the mode of mobility that would be utilized by the assault force.[1499] McRaven chose to use SOF assault airlift in the form of a helicopter assault force for the planned infiltration and exfiltration of the Abbottabad raid.[1500]

[1496] Hollie McKay, "Pakistan Officials Adamant that 'Hero' Doctor Who Helped Capture Usama bin Laden Remain Behind Bars," Fox News, 2017, http://www.foxnews.com/world/2017/09/21/pakistan-officials-adamant-that-hero-doctor-who-helped-capture-bin-laden-remain-behind-bars.html;

[1497] The image on the left is adapted from Peter Bergen's "An Isolated Osama bin Laden Struggled to Keep His Bodyguards," while the image on the right is adapted from McKay's "Pakistan Officials Adamant … Doctor … Remain Behind Bars." Adapted from McKay, "Pakistan Officials Adamant … Doctor … Remain Behind Bars;" Peter Bergen, "An Isolated Osama bin Laden Struggled to Keep His Bodyguards," CNN, March 01, 2016, http://www.cnn.com/2016/03/01/opinions/osama-bin-laden-letters-bergen/index.html.

[1498] Bergen, "Architect of bin Laden Raid."

[1499] Bergen.

[1500] Bergen.

The Plan: CNN's 2017 report, "Death of Osama bin Laden Fast Facts," indicated the plan would be fairly simple. The mission assault force would assemble in Jalalabad, Afghanistan, some 160 miles to the west of the Abbottabad compound.[1501] From Jalalabad, a 25 man-strong ground assault force would board two assault helicopters, transit the mountainous border using the terrain to mask their presence, and then descend on the compound in the middle of the night. The ground assault force would action-the-objective and then exfiltrate with the target onboard the same two helicopters.[1502]

McRaven chose a helicopter assault force infiltration to minimize the strike force's time on the ground and thus reduced the risk to his force by reducing their time in harm's way.[1503] Any of the other proposed insertion methods would have required more time on the ground for infiltration, and would have significantly increased risks during exfiltration.[1504] McRaven's decision validated the importance of assault airlift in SOF direct-action.

When later interviewed about the planning, McRaven discussed the infiltration and exfiltration options he had considered at the time: driving a convoy across the land, parachuting the ground assault force in, or aerial transport provided by SOF assault airlift (manifest in the form of the helicopter assault force). Infiltration by either convoy or parachute would fail to deliver the ground assault force to the location of the objective in a timely enough manner. Parachuting in would require time for the ground assaulters to regroup after landing, and they would be vulnerable to detection and counterattack during their landing and regrouping stage. Overland transportation meant slowly penetrating hundreds of miles of potentially hostile territory while avoiding detection. Mobility via overland-means posed unnecessary risks to the assault force by exposing it to the

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1501 "From 'Jalalabad, Afghanistan' To 'Abbottabad, Pakistan:' Measuring Distance Tool," Google Maps, accessed September 28, 2017, https://www.google.com/maps/dir/Abbottabad,+Pakistan/Jalalabad,+Afghanistan/@34.117574,70.7287637,8z/data=!3m1!4b1!4m13!4m12!1m5!1m1!1s0x38de3111557ac517:0x6e59a635b12e952c!2m2!1d73.2214982!2d34.1687502!1m5!1m1!1s0x38da070e07073f8d:0x7517fab9e7379634!2m2!1d70.4729434!2d34.4198488.

1502 "Death of Osama bin Laden Fast Facts," CNN, September 09, 2017, http://www.cnn.com/2013/09/09/world/death-of-osama-bin-laden-fast-facts/index.html.

1503 Bergen, "Architect of bin Laden Raid."

1504 Bergen.

increased numbers of Taliban, Al Qaeda, and Pakistani threats along the overland route to and from the objective area. This would specifically diminish the probability of a successful extraction.[1505] Overland and parachute infiltration assault force mobility options both increased overall chances of detection and significantly enlarged the extraction timeline, thereby expanding the area of vulnerability. The requirement for a "two-way mission," the timeliness demanded by the operation, coupled with the environmental threat layout, demanded assault airlift to fill this capability gap.

McRaven determined only a clandestine assault airlift insertion would allow delivery of the ground assault force exactly where they need to be, precisely at the right time, allowing them to capitalize on the fleeting elements of surprise and speed. Only assault airlift would provide the abilities required to adequately simplify the infiltration and exfiltration of Pakistan's territory, an ostensibly hostile environment due to the non-cooperation between Pakistani and American SOF elements. Assault airlift would provide a means to penetrate deep within this denied space and place the assault force within a moment's reach of UBL. Only assault airlift would allow the timely extraction that would simplify the mission by allowing the bypass of potentially massing conventional forces after the raid kicked off.

McRaven planned to directly infiltrate the Abbottabad compound based on the assault force's need to tactically exploit surprise and the necessity for rapidity. If the compound were alerted to the assault force's approach, a preplanned evacuation plan (an eventuality that the occupants were highly likely to have anticipated) could be expeditiously affected. A direct infiltration to the compound would minimize the time for such a counter-operation to transpire. Furthermore, a direct infiltration by assault airlift would specifically decrease the amount of time the assault force would spend on-the-ground and in harm's way. This would directly limit the area of vulnerability the assault force was exposed to by diminishing the time of contact.

[1505] Bergen, "Architect of bin Laden Raid."

Even as McRaven developed the plan for Operation NEPTUNE'S SPEAR, intelligence for the UBL raid remained uncertain.[1506] While the compound itself could be analyzed visually, via satellite imagery, there was no certainty as to the identity of the man inside. Bergen reported that the man had been nicknamed "the Pacer" because his figure had been seen walking back and forth within the compound.[1507] But this person may or may not have been UBL. The man responsible for the 9/11 attacks might not have even been in the compound. Both McRaven and President Obama later acknowledged how this lack of certainty had the potential to induce mission failure, should the ground assault force have successfully infiltrated the compound only to find the man inside was not the terrorist mastermind they were looking for.[1508]

Nonetheless, even without certainty of the outcome, the potential strategic benefits hoped to outweigh the potential strategic losses. President Obama authorized McRaven to continue planning towards the raid with the best intelligence available. McRaven faithfully did so, knowing that his efforts would give the President options, should he decide to authorize the strike.

2. Preparation

The UBL raid against the Abbottabad compound would be prepared and executed under the codename Operation NEPTUNE'S SPEAR.[1509] It would consist of elements jointly integrated under the USSOCOM command structure for operational employment (see **Error! Reference source not found.**).

[1506] Bergen, "Architect of bin Laden Raid."

[1507] Bergen.

[1508] Bergen; Gaouette, "5 Years Ago the U.S. Killed Osama bin Laden."

[1509] Eric Greitens describes the meaning of the SEAL insignia, and thus sheds light on the operation's name. In his 2011 book, *The Heart and The Fist: The Education of a Humanitarian, The Making of a Navy SEAL*, he describes the relevance of the insignia: "The trident, the scepter of Neptune, or Poseidon, king of the oceans, symbolizes a SEAL's connection to the sea." This symbology lends meaning to the operation's name. Neptune's Spear describes the striking force of a mythical god and the symbol of power-projection worn by these special operations warriors. Eric Greitens, *The Heart and the Fist: The Education of A Humanitarian, The Making of A Navy SEAL* (Houghton Mifflin Harcourt, 2011), 211.

The ground assault force would be composed of a specialized SEAL unit.[1510] This special mission unit was well versed in counter-terrorism manhunts. Their very existence was dedicated to the pursuit of UBL. This unit had pursued the terrorist for years, and had closed on him at every possible turn, only to have him slip away. They were familiar with the operating environment, and they were proficient at the skillsets the raid would require. They had worked along the border between Afghanistan and Pakistan, man-hunting terrorists and insurgents across the ambiguous delineator. Even still, Abbottabad was "by far, the farthest that [the SEALs had] ventured into Pakistani territory," Nicholas Schmidle says in his article, "Getting bin Laden: What Happened That Night in Abbottabad," posted in the *New Yorker* in 2011.[1511] It posed significant transportation risks.

These SEALs would be transported by specialized SOF aviators. These specialized aviators had become highly integrated with SOF ground components during the decade-long war against terrorist networks, throughout which they had executed numerous missions on a global scale, to include counter-terrorism operations in both Afghanistan and Iraq. These specialized aviators would make an excellent counterpart to the SEAL contingent in forming an integrated mission assault force (see **Error! Reference source not found.**).

Naylor's account of the events indicated the ground assault force may have preferred a more familiar transportation platform (the trusty and reliable MH-47 Chinooks) instead of the option reportedly used in the end-game.[1512] Despite this

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[1510] Hickok said of the SEALs selected for the UBL raid:

> "The U.S. Navy's SEAL [unit] was designed to be small and mobile, a quick reaction force with the capability to kill terrorists and rescue hostages. In recent decades, the unit has become more conventional, and has also grown in size, but its basic mission remains the same. 'SEAL' stands for the 'Sea-Air-Land' units of the U.S. Navy, because these units have the capacity to operate with ease on sea, air, and land." Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR." Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

[1511] Nicholas Schmidle, "Getting bin Laden: What Happened That Night in Abbottabad," *New Yorker*, August 08, 2011, https://www.newyorker.com/magazine/2011/08/08/getting-bin-laden

[1512] Operational testing indicated that the MH-47s carrying the QRF would be able to infiltrate to the ground refueling site with a low probability of being detected by the Pakistani radar systems in the area. Naylor, *Relentless Strike*, 391–402.

preference, Admiral McRaven contended an approach deserved more emphasis. He believed a presence would be crucial to the operation's success.

McRaven insisted on the use of modified MH-60 Black Hawks. He believed these features would be critical to achieving the necessary element of surprise. The infiltration would not only have to "best" the defenses of the compound itself, but also those of the surrounding Pakistani military defenses. Despite the misgivings of the ground assault force, who were far more comfortable aboard the familiar MH-47s, McRaven deferred to the intelligence and assault airlift technical expertise that insisted the added advantages of the modified MH-60s were worth the compromise.[1513]

During the preparation for the Abbottabad raid, McRaven took extensive efforts to ensure the security of the mission was not compromised.[1514] None of the operators or the conventional chain of command elements associated with the mission or area of responsibility were informed of the developing mission.[1515] Even General David H. Petraeus, the theater commander responsible for operations in Afghanistan and Pakistan, was not aware of the operation until shortly before the raid.[1516]

Bergen reported how McRaven justified his regular "trips … to Washington:"[1517]

> McRaven developed something of a cover story for his frequent trips back to Washington. The civil war in Libya was beginning to intensify in the first months of 2011 and options were being considered in Washington that might include the insertion of Special Operations Forces [sic].[1518]

[1513] Naylor, 391–402.

[1514] Bergen, "Architect of bin Laden Raid."

[1515] Bergen.

[1516] Bergen.

[1517] Bergen, "Architect of bin Laden Raid."

[1518] Bergen.

While in Washington, McRaven was actually engaging with the intelligence community and executive branch. He was ensuing the parts would be in place should the President decide to pull the trigger for the Abbottabad raid.[1519]

McRaven only had three weeks from when the mission was first proposed until the President authorized execution.[1520] Although the exact amount of time available to rehearse was not initially known, McRaven prepared to confront the compressed timeline by exploiting every moment available. He accomplished this by planning to utilize tactics that had become routine for the assault force components. The raid against the Abbottabad compound would use tactics that the participating operators had already executed, repeatedly, in their counterterrorism man-hunting exploits throughout their experiences in Afghanistan.[1521] Night raids on compounds in similar environments had become commonplace for these SEALs and aviation operators. They were extremely proficient at the requisite skillsets, and these experiences minimized the unknown variables.

Utilization of such "routine" tactics greatly simplified rehearsals.[1522] Because each of the operators had essentially executed their tactical role hundreds of times previously in a combat environment, they were intimately familiar with the technical skillsets required to accomplish these tactics and mitigate the inclusive objective environment. McRaven would still need to ensure the assault force elements were properly synchronized with any supporting assets, integrated with each other, and familiarized with the target compound itself. The biggest concern he faced was ensuring

[1519] Bergen.

[1520] Bergen.

[1521] Bergen.

[1522] McRaven, *SPEC OPS*, 108–109.

the mission assault force achieved enough relative superiority, particularly through speed and surprise, to allow a successful extraction of the mission force and their high-value target following actioning the objective.[1523]

McRaven, a vetted SOF leader intimately familiar with direct-action missions, understood the criticality of integration as mechanism enabling an assault force's ability to perform. Despite the familiarity between the air and ground assault elements that had developed over the decade prior, McRaven would necessarily have them focus on the practice of full-dress rehearsals to identify any potential unexpected risks.[1524] These mission rehearsals would ensure seamless integration of the individual operators that would to embark on this mission together.

[1523] Hickok states:

> "Vice Admiral McRaven's recommendation to launch Operation NEPTUNE SPEAR rested on his favorable assessment of [the assault force]. Operation NEPTUNE SPEAR would be routine, similar to many successful operations in Afghanistan and Iraq. Under Vice Admiral McRaven's command, the jackpot rate —that is, the 'rate of missions in which Special Operations forces captured or killed their targets in Afghanistan and Iraq'—had increased from 35 percent to more than 80 percent. From the earliest stages of the planning process, Vice Admiral McRaven had asserted that the assault on the compound would not be difficult—the real challenge would be managing Pakistan's reaction and military response—either during the flight phase or in the fighting on the ground." Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

Hickok's references for this statement include McRaven's, O*pening Remarks: At the Point of the Spear,* Bergen's, *Manhunt,* and Mark Bowden's 2012 book, *The Finish: The Killing of Osama Bin Laden*. McRaven, O*pening Remarks: At the Point of the Spear*; Bergen, *Manhunt,* 173–174; Mark Bowden, *The Finish: The Killing of Osama Bin Laden* (New York: Atlantic Monthly Press, 2012), 154.

[1524] Bergen, "Architect of bin Laden Raid."

The Central Intelligence Agency remains one of the few official sources of information about the Usama bin Laden Abbottabad raid.[1525]

Figure 149. Scaled Model of the Abbottabad Compound[1526]

Hickok's excellently documented research again enlightens by providing the following assessment of the training environment, extrapolating on accounts provided by Mark Bowden, among others.

McRaven directed a full-scale model of the Abbottabad compound be built so the assault force could increase their familiarity with the obstacles they would face in Pakistan. Due to the restrictive and unsolidified timeline constraint, the model was built to resemble the actual compound, but the materials used for construction did not exactly mirror those observed in Abbottabad. Instead, the assault force would have to make due with materials that were both readily available and affording to an expedited construction and utilization for the rehearsals. In particular, the outer rim of the compound at

1525 "Minutes and Years: The Bin Ladin Operation, Timeline of the Raid," Central Intelligence Agency (CIA), April 29, 2016, https://www.cia.gov/news-information/featured-story-archive/2016-featured-story-archive/minutes-and-years-the-bin-ladin-operation.html.

1526 Adapted from CIA, "Minutes and Years."

Abbottabad retained a 10 to 18 foot concrete wall the assault force would need to be inserted over during infiltration.[1527] Building an actual concrete wall of this height would presumably consume an inordinate amount of time, hindering the preparation and rehearsal efforts of the assault force (see Figure 150).[1528]

Because of how long it would take to build a concrete wall of this height, the model was built with a simple chain-link fence instead.[1529] The materials for this were readily available and allowed a timely construction. The difference between concrete and chain-link for rehearsal were not deemed substantive, but this seeming "detail" would turn out to be a lesson learned. In the end, it would directly affect the ability of the assault airlift assets to execute their portion of the mission, potentially increasing the entire mission assault force's area of vulnerability and exposure to risk.

[1527] Bergen, "Architect of bin Laden Raid."

[1528] According to Rumofrd.com, it can take up to 28 days for a concrete wall of this type to dry. Until that time, the durability of the wall may not support use, an effect which can also be degraded by temperature. Rumofrd.com, "*Q: How Long Does It Take for Mortar to Dry?*" Reference, accessed November 12, 2016, https://www.reference.com/home-garden/long-mortar-dry-3dd305ecb97ba59a#.

[1529] Rumofrd.com, "*Q: How Long Does It Take for Mortar to Dry?*"

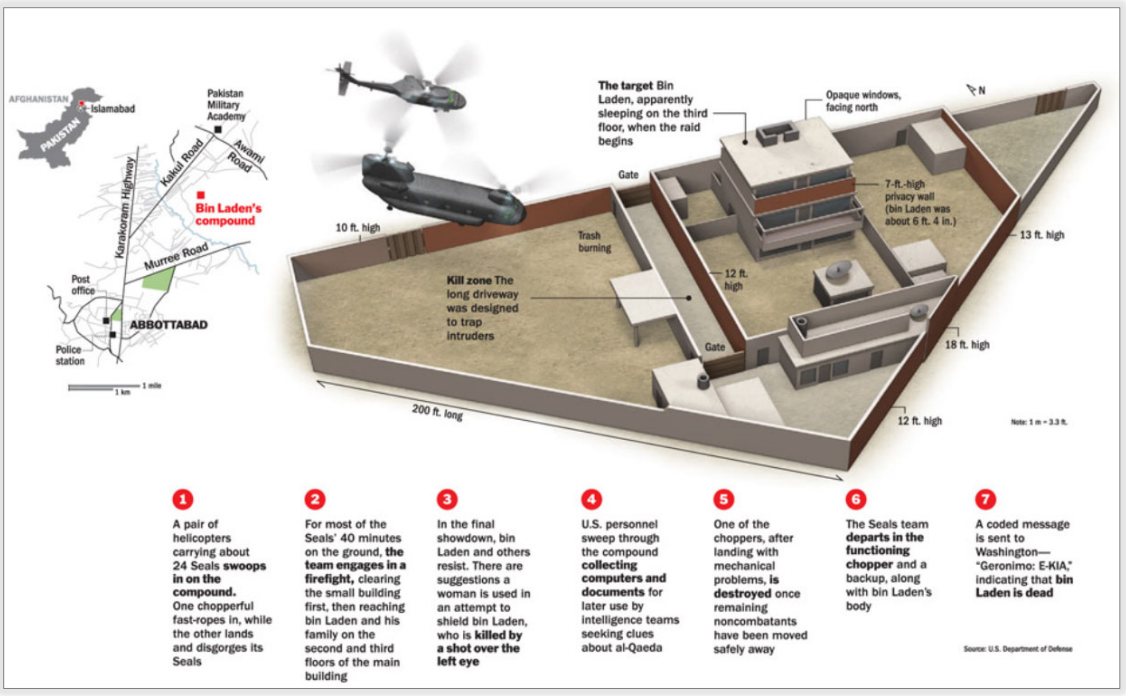

Figure 150. Diagram of Abbottabad Compound[1530]

As rehearsals commenced, it became clear that the precisely deliver of the ground assault force directly to the objective area would be critical to the operation's success. In order to assault the compound in a timely manner, part of the ground assault force would need to be infiltrated directly inside the outer perimeter wall into an area known as the "animal pen."[1531] Nicholas Schmidle describes the refining of the plan in his 2011 article, "Getting bin Laden: What Happened That Night in Abbottabad."[1532]

> The assault plan was now honed. Helo one was to hover over the yard, drop two fast-ropes, and let all twelve SEALs slide down into the yard. Helo two would fly to the northeast corner of the compound and let out [six men], who would monitor the perimeter of the building. The copter

1530 Adapted from Department of Defense, "Osama bin Laden's Last Minutes," *Time*, accessed November 12, 2016, http://content.time.com/time/interactive/0,31813,2071398,00.html.

1531 Bergen, "Architect of bin Laden Raid."

1532 Schmidle, "Getting bin Laden."

> would then hover over the house, and … the remaining [seven] SEALs would shimmy down to the roof.[1533]

Fast-roping required smooth and constant attention, a delicate piloting maneuver. McRaven specifically emphasized how critical a precise delivery was to the pilots who would be operating these pivotal aircraft: the assault helicopters *must* deposit the ground assault force inside the compound in order for the assault force to maximize the impact of the element of surprise. Failure could significantly increase the amount of resistance from inside the compound. It could also mean delays that might expose the assault force to Pakistan's conventional forces in the area. The lead pilot acknowledged this concern and personally guaranteed to McRaven that he could get the helicopter inside the animal pen, as long as he was not killed first. McRaven decided this was sufficient and the mission pressed forward.[1534]

On 29 April 2011, President Obama announced his decision: Operation NEPTUNE'S SPEAR would be a "Go."[1535] Hickok describes how the next day, "President Obama spoke briefly with Vice Admiral McRaven by phone and provided the official order for Operation NEPTUNE'S SPEAR to begin. After noting his confidence in the team, he concluded":

> Godspeed to you and your forces. Please pass on to them my personal thanks for their service and the message that I personally will be following this mission very closely.[1536]

3. Execution

The mission would launch on the first of May.

a. Infiltration

CNN reported that the assault force consisted of the two modified MH-60 Black Hawks with 25 assaulters loaded between them.[1537] They began their infiltration into

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[1533] Schmidle.

[1534] Bergen, "Architect of bin Laden Raid."

[1535] Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

[1536] Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR;" Seth Jones, *Hunting in the Shadows: The Pursuit of Al Qaeda Since 9/11* (New York: Norton, 2012), 423–424.

Pakistani airspace. 45 minutes later, they were followed by three MH-47 Chinooks carrying another 40 or so SEALs as part of the standby Quick Reaction Force, which would wait to reinforce or rendezvous with the main assault force at the forward ground refueling site.[1538]

From this point forward, not only would the mission assault force be facing off against the occupants of the target compound, but also the Pakistanis. Unaware of the operation due to security concerns, the Pakistani forces represented a conventional defensive force postured to repel the assault force if its presence were discovered. McRaven's planned use of assault airlift to mitigate this potential threat by attaining and maintaining relative superiority as early as possible would now be put to a final and potentially lethal test.

McRaven had determined through rehearsals that the first point the Pakistani defenses could detect the assault force helicopters would be after the assault force flew out from around several mountain peaks in the foothills of the Hindu Kush mountain range. This would be on their final leg en route to the compound in Abbottabad. Up until this point, the assault airlift assets would be able to avoid detection through terrain masking and tactical route planning. However, the sanctuary provided by the mountainous terrain diminished with the terrain as it dropped off approaching the objective area. Once the helicopters were exposed, their acoustic signatures could possibly alert the Pakistani military and civilian populations to their presence. This represented an increased threat of exposure to the mission assault force. This increased probability of detection would require the expense of relative superiority to surmount. From this point forward, surprise, speed, and purpose would be paramount to executing the mission successfully.[1539]

[1537] CNN, "Death of Osama bin Laden Fast Facts."

[1538] Nicholas Schmidle's 2011 article in the *New Yorker* articulates there were four MH-47 Chinooks utilized in the raid, and that only two of them crossed into Pakistan. He reported that the two helicopters containing the QRF remained at the border, while the other two acted as escort gunships to clear the ingress route. Schmidle, "Getting bin Laden."

O'Neill, *The Operator,* 294, 299.

[1539] Bergen, "Architect of bin Laden Raid."

The helicopter assault force churned through the night, eventually emerging into the targeted valley. They were still protected by a strategically chosen moonless night.[1540] Cloaked in darkness and shrouded in the momentary misperception of the native population below, they closed on the compound. Their deep penetration within Pakistan aided in identifying their presence as an immediate threat. It would not be expected for an intruder to be discovered this far into sovereign space. The momentary confusion following any detection would help further delaying any response the Pakistanis may muster. Presumably, this could help buy enough time to action-the-objective before all of the assault force's advantages were spent. Through the darkness of the night, amid the various sprawling walls, earthen roads, and wadis so familiar to the region, the compound itself emerges into view.

A power outage had conveniently stricken the area surrounding the Abbottabad compound. The area was even darker than anticipated, further decreasing the visual signature of the impending aircraft. There were no lights to reflect their presence. Possibly the disrupted environment may have increased the response time of any watchful eyes. But it also meant the aircrafts' acoustic signatures reverberated uncontested. Either through good luck or bad, the helicopters would be the only sounds approaching the compound in the dark of this night.[1541]

The lead helicopter would approach the animal pen for their fast-rope insertion of the breaching force, while the second would deposit its small security element outside the compound walls before raising to fast-rope its contingent of SEALs into the compound. Snipers would provide suppressive fire from the helicopters as the aircraft assailed the compound and the ground assault force fast-roped in.[1542]

As the lead helicopter descended for its terminal approach to the compound, friction began to interfere with the mission plan. The helicopter loomed over a 10 foot

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[1540] O'Neill, *The Operator,* 301.

[1541] There have been speculations, referenced in both Naylor's and O'Neill's books, indicating that the power outage in Abbottabad could either be attributed to the poorly constructed and maintained infrastructure or to an effects-based operation performed by a more covert means. Either is highly plausible given the extremely vulnerable state of the electrical infrastructure. O'Neill, 304.

[1542] O'Neill, *The Operator,* 304.

section of the wall, just as it had before in rehearsals. But this time something was different. The chain-link fence used for rehearsals had been porous, allowing air to easily penetrate it. In rehearsals, this had allowed the downwash of the helicopter to pass through the fence without significant interruption from this barrier. It had enabled the manifestation of the full aerodynamic effects required for the helicopter to sustain lift and control its flight. Unfortunately, the concrete nature of the actual wall at the target compound did not allow the air to pass through it in the same manner. The turbulent downwash from the helicopter's blades could not penetrate the concrete wall. The air hit the wall and deflected upwards, disrupting the airflow entering the helicopter's rotor system.[1543]

The helicopter's stability began to suffer. The unstable platform began to agitate, and then descended uncontrollably. The ground advanced with increasing imminence. The helicopter had begun to lose lift due to its slower speed coupled with the interference the concrete wall had created. Both of these effects combined to rob the aircraft of the precious lift it so desperately needed.

As the aircraft fell, the pilot, instilled with the personal commitment he had to McRaven and the mission, exerted years of honed skills to delicately nurse the stuttering aircraft forward. Even as the aircraft faltered, he demanded it into the intended target area.[1544] The main body of the helicopter just cleared the wall when the tail section impacted the 10 foot obstacle on the way down. The pilot continued to fly the aircraft, almost by sheer determination, to the ground. It settled askew against the wall, but just inside the compound: in the animal pen. They were in.[1545]

b. Actions-on-the-Objective

The ground assault force faced a situation not unlike that of those who had risen from the wreckage of HH-3 "BANANA" at Son Tay, some four decades prior.[1546] But

[1543] Bergen, "Architect of bin Laden Raid."

[1544] Bergen, "Architect of bin Laden Raid."

[1545] Bergen, "Architect of bin Laden Raid."

[1546] Gargus, *The Son Tay Raid*, 269–288.

there was one critical difference: a crash landing was not part of this mission plan. Like the Son Tay raiders before them, McRaven's SEALs would have to find it in themselves to rise up from the wreckage and continue forward to prosecute their mission. They did. They rose, regrouped, and immediately advanced.

McRaven later noted that these men had rehearsed plans and backup plans so many times that a contingency like this had already been thought through. The decisions on how to react had already been made and the plans practiced. Immediately after the aircraft went down, McRaven and the assault force simply moved on with "Plan B," to continue prosecuting the mission.[1547] The assault force moved forward, undeterred by such triviality.

The second helicopter watched the lead-ship go down into the animal pen. It set down outside the courtyard to release its security element and remained there, as part of the contingency plan.[1548] Clearly hovering over the objective was a bad idea, recalled Robert O'Neil, a former SEAL and an occupant onboard the second chopper. O'Neill and the remaining SEALs would have to force their way into the compound from outside its walls.[1549] Precious time slipped away as the second SEAL unit set explosive charges against the compound wall's exterior gate in an attempt to penetrate.[1550] The breaching charges decimated the gate, announcing the SEALs' presence. But to the SEALs' surprise, the gate was only a covering. It was a facade. Behind this false gate stood a solid brick wall. The bad news was that these SEALs still needed to get in. The good news was that fake entryways equated to a compound prepared to protect itself against just such a raid … it meant that UBL was most assuredly inside.[1551]

[1547] Bergen, "Architect of bin Laden Raid."

[1548] Robert O'Neill, a former SEAL attesting to the details of the raid, accounted the events that transpired on the ground. A condensed version of O'Neill's account, with incorporated edits by Vikas Singh Bhadouria and supplemented by the accounts recorded by Sean Naylor were used to construct this account. O'Neill, *The Operator,* 303–316, as quoted by Vikas Singh Bhadouria, "'I Pulled the Trigger Twice. Bin Laden's Head Split Open:' Soldier Describes Dramatic Night He Killed al-Qaeda Chief," *Indian Defense Hub* (blog), April 2017, https://indiandefencehub.blogspot.com/2017/04/i-pulled-trigger-twice-bin-ladens-head.html.

[1549] O'Neill, 305.

[1550] O'Neill, 305–306.

[1551] O'Neill, 303–316.

Using sledgehammers, explosive charges, and good old-fashioned opening of doors, the SEALs infiltrated the compound.[1552] Schmidle reported that the SEALs "formed three-man units for clearing the inner courtyard."[1553] Isolated firefights erupted as the SEALs cleared the compound's interior courtyard, taking out those who resisted their intrusion.

The building at the center of the compound was three stories tall. Intelligence estimated that bin Laden lived on the top floor, and that he would be protected by three men below, one of whom was one of his sons, Khalid.[1554]

Robert O'Neill accounted his version of the events that followed as the SEALs moved inside the building in his 2017 book, *The Operator,* with the following excerpt taken from the summary provided by Vikas Singh Bhadouria in his 2017 posting[1555]:

> I could hear gunfire.… I came around the corner to see one of our guys in the aftermath of a gunfight in front of the main house. He shot through a window, and a man and woman were down inside…. He looked concerned. "I just killed one of the women," he said. "She jumped in front of him right as I was shooting. Am I going to be in trouble?" "OK," I thought. The women are martyring themselves. This is definitely the right place. We entered the main building.
>
> The floor was a long hallway with rooms off to the sides and a barricaded door on the far end. In a spot like this, you clear the rooms, in order, and spend the least possible amount of time in the hallway. Bad guys will "spray and pray" down hallways … they do get lucky sometimes.
>
> On all sides, we could hear women and children crying – we later learned that living with Bin Laden in the compound were three of his four wives and 17 children…. I entered the last … room on the far right of the hallway. A little girl was in there, terrified and alone. Even in this tensest possible situation, we couldn't ignore her. One of the guys led her across the hall and into another room already filled with women and children.

[1552] O'Neill, 303–316; Naylor, 391–402.

[1553] Schmidle, "Getting bin Laden."

[1554] O'Neill, 303–316.

[1555] O'Neill, *The Operator,* 303–316, quoted Bhadouria, "'I Pulled the Trigger Twice. Bin Laden's Head Split Open:' Soldier Describes Dramatic Night He Killed al-Qaeda Chief."

> Two of our guys were breaching the barricaded door. After failing to make sufficient headway with a sledge, the breachers blew charges on the stairwell door and it split open. As we made our way up the stairs, I was five or six guys back. The woman intel analyst had told us we should expect Khalid bin Laden, Osama's 23-year-old son, to be there, armed and ready, his father's last line of defense. "If you find Khalid," she told us, "Osama's on the next floor."[1556]
>
> A figure popped out just above us on the half landing between the first and second floor. We saw him for just an instant before he darted back behind a banister. He was armed with an AK-47. The point man thought it through beautifully – Khalid knew somebody was nearby but he didn't know we were Americans for sure. In no more than a whisper, my guy uttered a phrase he had learned before the mission began, in both of the languages Bin Laden's son spoke, Arabic and Urdu – "Khalid, come here."
>
> Khalid, confused by hearing his name called, poked his head around the banister and said: "What?" That was his final word. The point man shot him … Khalid dropped. The train started moving up the stairs to the second floor, with me in the back.
>
> Everybody except the point man started clearing rooms on the second floor. The point man kept his gun trained on the top of the stairs to the third floor, which was right in front of him, with a curtain hanging over the entryway. I moved up behind him and put my hand on his shoulder.…[1557]

In all, three men, to include bin Laden's son Khalid, and one woman had been killed in the raid.[1558]

18 minutes after the assault force arrived at the objective site, "Geronimo" was reported: the primary target, Usama bin Laden, "had been captured or killed."[1559] McRaven, hearing the report from his command center in Jalalabad, had paused, uncertain as to whether the ground assault force had captured or killed the target. He

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[1556] O'Neill, 303–316, as quoted by Bhadouria, "'I Pulled the Trigger Twice. Bin Laden's Head Split Open:' Soldier Describes Dramatic Night He Killed al-Qaeda Chief."

[1557] O'Neill, *The Operator,* 303–316, as quoted by Bhadouria, "'I Pulled the Trigger Twice. Bin Laden's Head Split Open:' Soldier Describes Dramatic Night He Killed al-Qaeda Chief."

[1558] CNN, "Death of Osama bin Laden Fast Facts."

[1559] Bergen, "Architect of bin Laden Raid."

queried for clarification. The ground assault force confirmed that the objective was "EKIA,"—enemy killed in action.[1560] Usama bin Laden was dead.

With the primary objective achieved, the mission stood on the verge of success, but the area of vulnerability had not yet closed for the assault force. The mission objective may have been successfully accomplished, but the mission itself was not yet completed. The surrounding area had become alerted to the assault force's presence, and spectators were beginning to take interest. The risk of encountering resistance from Pakistani conventional forces loomed more real than ever.

The Americans outside the compound did what they could to mitigate the curious civilians who had taken interest. Schmidle describes the incident:

> Neighbors undoubtedly heard the low-flying helicopters, the sound of one crashing, and the sporadic explosions and gunfire that ensued…. One local took note of the tumult in a Twitter post, "Helicopter hovering above Abbottabad at 1 AM (is a rare event)." … Eventually, a few curious Pakistanis approached to inquire about the commotion on the other side of the wall. "Go back to your houses," [one American] said, in Pashto.… "There is a security operation under way." The locals went home.[1561]

But by this point, the conventional threat had begun to materialize. Pakistan's military had detected or been alerted to the intruding force. Unaware of the operation's originators or purpose, and warry to protect their sovereign space from invaders, Pakistanis were scrambling F-16 interceptor fighters to investigate the intruders.[1562] Time for McRaven's force was running out.

Shortly after "Geronimo" was reported, the ground assault force discovered an intelligence cache in one of the compound's rooms. The computer drives and documents they found represented valuable intelligence that could potentially avert future terrorist strikes.[1563] This information could be capable of illuminating the remnants of the Al

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[1560] Bergen, "Architect of bin Laden Raid;" O'Neill, *The Operator,* 312.

[1561] Schmidle, "Getting bin Laden."

[1562] Bergen, "Architect of bin Laden Raid."

[1563] Bergen.

Qaeda network, dissuading future attacks against innocent peoples. Innocent lives may yet hang in the balance.

McRaven wanted his team out, but with the primary objective accomplished and relative superiority still heavily in his favor, he allowed the assaulters just enough time to gather up what intelligence they could.[1564] McRaven knew they were in a race against time. He had to get his men out before Pakistan's military descended on them. Additional time on target for data collection posed an increased risk to the mission force, but in this moment the potential benefits to future terrorist victims outweighed the potential losses that could be incurred by these military operators. McRaven allowed the SEALs to press with the collection, convinced that the information could prove valuable enough to warrant the increased risk of possible exposure during extraction.[1565]

In the meantime, charges were set to detonate the mishap aircraft.[1566] See Figure 151.

[1564] Bergen, "Architect of bin Laden Raid."

[1565] The CIA reported in 2016 that "From the documents [obtained from the Abbottabad compound], analysts learned that Bin Laden had been planning to leave his Abbottabad abode.… The target date for the move and changeover was September 2011." CIA, "Minutes and Years."

[1566] Bergen, "Architect of bin Laden Raid."

Mick described the remains of the helicopter the assaulters had been forced to demolition: "Pieces of the crashed chopper used in the killing of terrorist leader Usama bin Laden feature a sophisticated design. (Source: Reuters via Newscom)."

Figure 151. Tail Section of Demolished HelicopterExfiltration:

The data collection took only minutes. Less than an hour after the first helicopter crashed into the compound, the last of the operators boarded extraction platforms to depart. Along with the remaining modified MH-60 Black Hawk, which exfiltrated the main assault force and the remains of UBL, the second contingent of SEALs were extracted aboard a standby MH-47 Chinook that was dispensed from the laager site.[1567] The actions-on-the-objective had taken only 40 minutes.[1568]

The assault airlift platforms departed from the compound and raced toward the border of Pakistan. The standby MH-47, already topped off with fuel from the laager site,

[1567] O'Neill, *The Operator,* 303–316.

[1568] CNN, "Death of Osama bin Laden Fast Facts."

was able to directly exfiltrate Pakistan. The other helicopter, containing the remains of UBL and the primary assault force, would still need to refuel on the way out.[1569]

Meanwhile, the Pakistani F-16s scoured the landscape for them. Fortunately for the departing helicopters, the Pakistani F-16s anticipated the intruders to be from India, and screamed out in the wrong direction. The interceptors raced toward their Eastern border, expecting to catch the retreating intruders. But they came up empty handed and were forced to turn back to find their prey.

McRaven had planned on having the assault helicopters ground refuel during exfiltration. This would be done using pre-positioned fuel at the intermediate laager site, reportedly just north of Abbottabad but well inside the Pakistani border.[1570] The incredibly risky decision placed the aircraft in a particularly vulnerable position while the Pakistani jet fighters hunted for them. Racing away but starved for fuel, the assault platform had no choice but to accept the risk at this point. It descended into the predetermined ground refueling site, landed, and commenced with the refueling procedure. It was as painful as stopping for gas in the middle of a life-or-death car chase. Time was of the essence.

The modified MH-60 helicopter took 19 minutes to refuel.[1571] During this time, the assault force was hidden, but they were also completely vulnerable if discovered. If the Pakistani F-16s found them, the assault force would be in no position to either defend itself or flee. They were completely vulnerable … sitting ducks, as it were. And the Pakistani F-16s were actively combing the area to discover their location. McRaven

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[1569] Helicopters, like all aircraft, must often sacrifice fuel for cargo payload in order to achieve acceptable operational power margins in austere environments. Many times, the "buffer zones" of performance normally used to keep aircraft safe become luxuries assault forces cannot afford. The ground assault force, their equipment, armaments, and fuel all compete. They add up to rob the aircraft of excess power, minimizing safety margins. Fuel is often removed or decreased in order to offset the weight differential and increase the available power margin. Such tradeoffs make the tactical portions of these missions feasible, but can leave the aircraft starved for fuel immediately thereafter. This often means assault aircraft must either refuel in the air or on the ground immediately following exfiltration from the objective site.

[1570] Bergen, "Architect of bin Laden Raid."

[1571] Bergen.

would later describe this as "the longest 19 minutes of my life."[1572] Finally, the refueling was complete and the helicopter departed the ground refueling site. Once aloft, their ability to conceal themselves and defend themselves if discovered again gave them the upper hand.

Only minutes from the border, the helicopter assault force was able to cross undetected from Pakistan's airspace back into the relative safety of coalition controlled Afghanistan. The hostility of the environment somewhat subsided. The assault airlift assets faithfully concluded their contribution to the mission by closing the window of vulnerability as they proceeded to safely landing at Jalalabad.[1573] The mission was complete.

4. Post-mission: Aftermath

In the aftermath of the mission, the identity of Usama bin Laden was officially verified. Before that could happen, McRaven tentatively confirmed his identity by comparing his height to that of a Marine, a stunt that would become a trademark point of humor between himself and the President.[1574] CNN relayed that the identity of "bin Laden's body" was also confirmed "by one of his wives," as well as through "facial recognition."[1575] His body was then "buried at sea," surrendered "off the deck of the USS Carl Vinson in the Arabian Sea, … within 24 hours" of his death, in accordance with his faith and Islamic traditions.[1576] But the killing of this one man was not the real story of the effect this mission had. It was merely an operational footnote (see Figure 152).

[1572] Bergen, "Architect of bin Laden Raid."

[1573] Bergen.

[1574] O'Neill, *The Operator,* 317–318.

[1575] CNN, "Death of Osama bin Laden Fast Facts."

[1576] Quoted excerpts are from CNN. Information about UBL's handling being in accordance with his faith and Islamic traditions is from Bergen. CNN, "Death of Osama bin Laden Fast Facts;" Bergen, "Architect of bin Laden Raid."

"In this May 6, 2011, file photo President Barack Obama talks with U.S. Navy Vice Admiral William H. McRaven … just days after McRaven led operational control of [the] successful mission to get Osama bin Laden. McRaven ordered military files about the raid on bin Laden's hideout to be purged from Defense Department computers and sent to the CIA, where they could be more easily shielded from ever being made public. (AP Photo/Charles Dharapak, File)."

Figure 152. President Barack Obama Shaking the Hand of Admiral William McRaven, Commander of Operation NEPTUNE'S SPEAR[1577]

The real strategic impact this mission had was on the morale of the American people and their allies. In the following days, when the operation was announced publicly, celebrations rang out across the states: from New York City and Washington, D.C., to Albuquerque, New Mexico and San Francisco, California.[1578] Hickok would say:

> The reaction in the United States was jubilant—not surprising for a nation that had witnessed the deaths of more than three thousand fellow Americans in the 9/11 attacks ten years earlier. As Hillary Clinton wrote, "The road to Abbottabad ran from the mountain passes of Afghanistan through the smoking ruins of our embassies in East Africa and the

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[1577] Adapted from Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

[1578] "Celebrating the Death of Osama bin Laden," *Time*, April 30, 2016, http://www.cnn.com/2016/04/30/politics/obama-osama-bin-laden-raid-situation-room/.

The author witnessed celebrations in Albuquerque, NM on the night the raid was publicized.

> shattered hull of the USS Cole, through the devastation of 9/11 and the dogged determination of a handful of U.S. intelligence officers who never gave up the hunt."[1579]

The specialized operators of America and her partner nation allies had been seeking to achieve this victory for more than a decade. The road had been long, and success had not been assured along the way. But despite the dark times and heavy costs of the road that had preceded this triumph, the UBL raid had punctuated this pursuit on a successful note, drawing a close to this chapter on America's war against terrorist networks.

C. ANALYSIS

1. Theory of Relative Superiority

The UBL raid not only validates the current relevance of McRaven's theory of special operations, but it also verifies the intrinsic relationship between special operations and the need for seamlessly integrated assault airlift. SOF assault airlift empowered the relatively smaller attacking force to insert deeply into an otherwise sovereign nation, prosecute the objective, and extract; all in a single period of darkness while enabling relative superiority throughout the engagement. McRaven understood this relationship between SOF assault airlift and relative superiority so well that he never lost relative superiority throughout the engagement. Even when unplanned frictions interfered with the original plan, like the modified MH-60 helicopter crash, relative superiority was so heavily weighted in the assault forces' favor that these detractions never took this decisive advantage away.

The largest rises and falls in relative superiority during Operation NEPTUNE'S SPEAR were all associated with mobility, with the singular exception of the achievement of the mission objective itself. The slow rise of relative superiority, despite the incrementally increasing area of vulnerability over time, was achieved through the use of assault airlift in the infiltration and exfiltration stages of mission execution. The resultant loss in relative superiority due to the delay incurred for data collection was mitigated by

[1579] Hickok's passage includes Clinton's quote and references to Klaidman. Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR;" Klaidman, *Kill or Capture*, 248. Clinton, *Hard Choices,* 171.

the immediate exfiltration of the assault force following its conclusion. And the largest single drop in relative superiority was directly tied to the resource constraints of the assault airlift assets during exfiltration, resulting in vulnerability during ground refueling (see Figure 153).

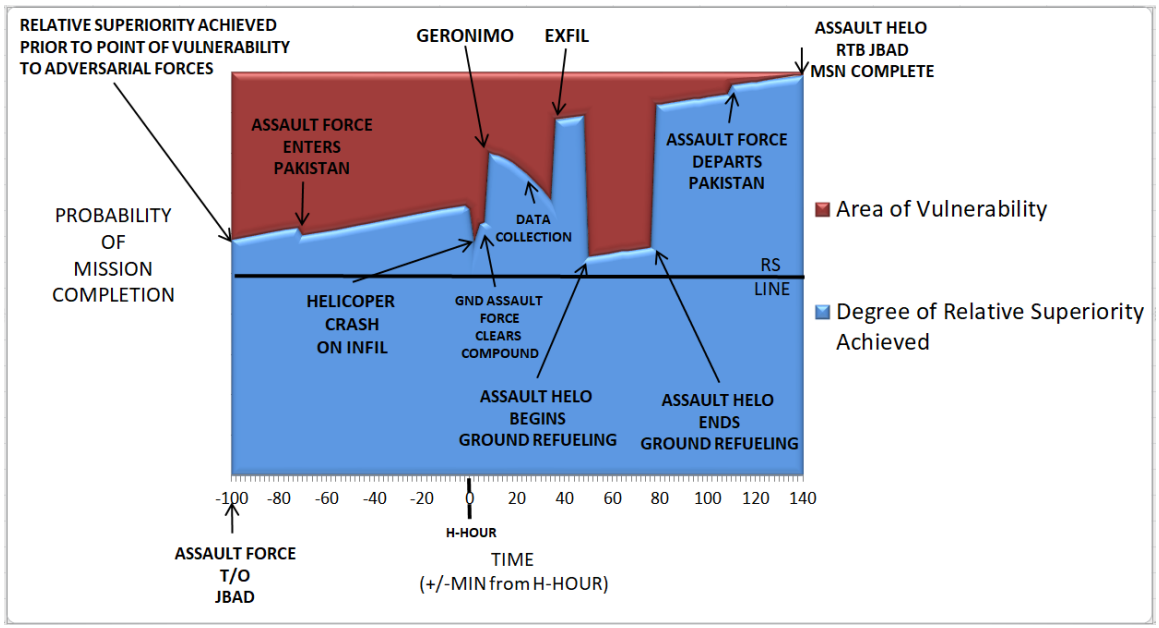


Figure 153. UBL Raid Relative Superiority Graph[1580]

a. Timeline

It is relevant to note that the timeline of this event is less tangible than those of the previously analyzed case studies due to the recency of the operation and the lack of declassified sources. However, the available references, to include those provided by the Central Intelligence Agency, and rudimentary calculations can extrapolate a basic timeline that is sufficient to demonstrate contributions to relative superiority throughout the operation. A more accurate timeline would be appreciated, but it is not necessary for analysis. All times referenced below have been converted to Greenwich Mean Time (GMT) plus five hours to reflect local Abbottabad time.

1580 Adapted from McRaven, *SPEC OPS*, 7.

10:51 PM, 01 May 2011, the helicopter assault force, consisting of two modified MH-60 Black Hawks loaded with the 25 assaulters, departed and began their infiltration toward Pakistani airspace.[1581] The assault force was now vulnerable to the environmental elements of the weather and terrain, to include the high pressure altitude and temperatures of the Hindu Kush region.

11:20 PM (estimated), the assault force crossed the border and entered Pakistani airspace. They were now vulnerable to potential detection by adversarial conventional forces.

Calculations: There are approximately 160 miles between Jalalabad and Abbottabad. Schmidle reported that the trip took approximately 90 minutes.[1582] Robert O'Neill described the ingress route from Jalalabad as "northeast, as if we were going to Asadabad," but instead of "turning left, which is the way into the Korengal Valley, we turned to the right."[1583] This routing indicates an initial jot to the northeast into the Hindu Kush mountain valleys, before crossing the Pakistani border. Given such a circuitous route which inevitably added distance to accommodate detection avoidance, the Pakistani border is approximately 50 miles en route from Jalalabad. It can therefore be deduced that roughly one-third of the ingress and egress routes were within Afghanistan airspace. These rough approximations are close enough to support analysis (see Figure 154).

[1581] CIA, "Minutes and Years;" CNN, "Death of Osama bin Laden Fast Facts."

[1582] Schmidle, "Getting bin Laden."

[1583] O'Neill, *The Operator,* 301.

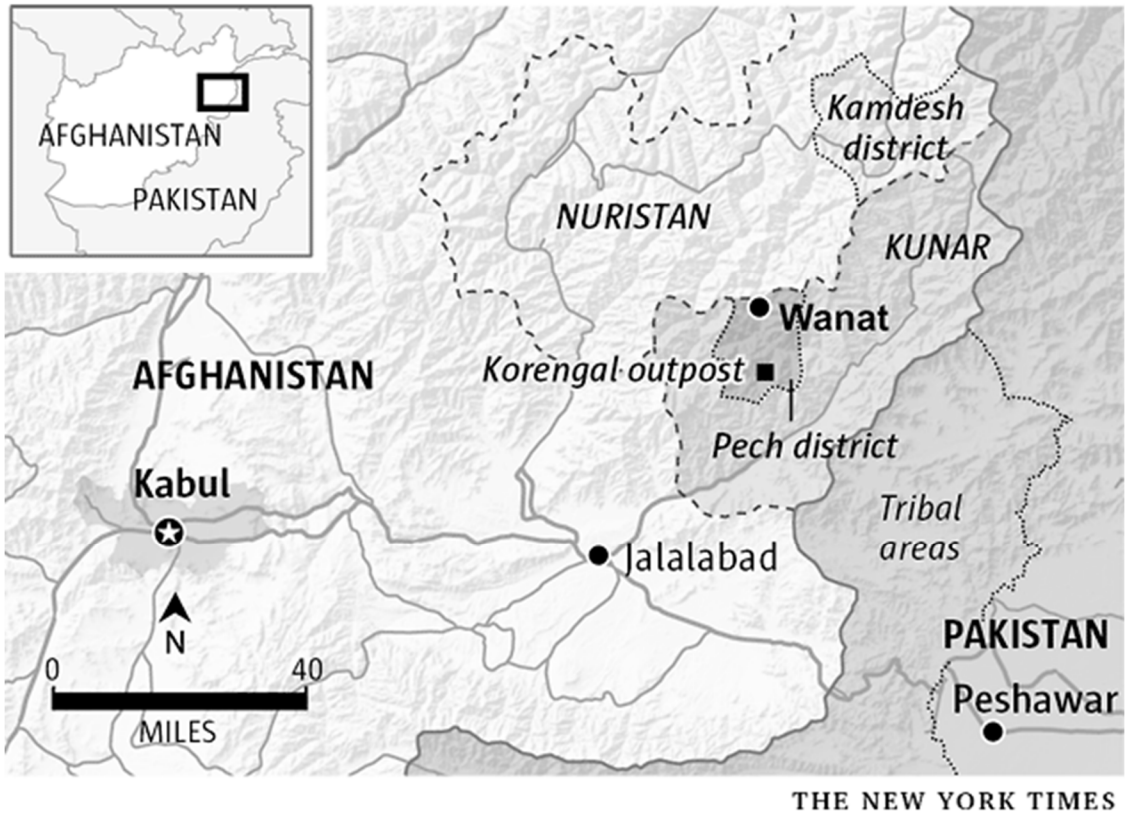


Figure 154. Map Depicting the Location of Jalalabad and the Korengal Valley in Relation to the Pakistan Border[1584]

11:36 PM, three MH-47 Chinooks carrying a QRF composed of approximately 40 SEALs departed Jalalabad for the FARP laager site in Pakistan.[1585]

12:05 AM (estimated), 02 May 2011, the MH-47 Chinooks carrying the QRF entered into Pakistan.

1584 Adapted from "Map of Korengal Outpost," *New York Times*, April 14, 2010, http://www.nytimes.com/imagepages/2010/04/14/world/asia/20100415-korengal-map.html?action=click&contentCollection=Asia%20Pacific&module=RelatedCoverage&region=EndOfArticle&pgtype=article; O'Neill, *The Operator,* 301.

1585 Nicholas Schmidle's 2011 article in the *New Yorker* articulates there were four MH-47 Chinooks utilized in the raid, and that only two of them crossed into Pakistan. He reported that the two that remained at the border contained the QRF, while the other two acted as escort gunships to clear the ingress route. Schmidle, "Getting bin Laden."

O'Neill, 294, 299.

12:30 AM, H-Hour.[1586] The assault force descended onto the Abbottabad compound. The lead helicopter lost lift and descended to its final touchdown. The pilot managed to get inside the compound's wall. The first group of SEALs recuperated and departed the downed chopper. The skillful execution of the crash landing by the pilot, the resiliency of the SEALs in the face of such a setback, and the redundant availability of assault airlift assets significantly diminished the detraction this incident had on overall relative superiority. This detrimental effect was also countered by the integrated communications that enabled reach-out to the superfluous MH-47 platforms that provided secondary assault airlift capacity. The second helicopter aborted a direct infiltration and opted for an offset infiltration via a position outside the compound's walls.

12:30 AM – 12:39 AM, the ground assault force breached the compound, secured the compound's exterior and interior yards, then proceeded to clear the main three-story building. UBL was believed to be in the upper level.[1587]

12:39 AM Geronimo.[1588] UBL was killed. The primary mission objective was ostensibly achieved, but the extraction of the evidence and survival of the assault force remained crucial to strategic mission success.[1589]

12:39 AM – 1:10 AM, the SEALs collected data for intelligence analysis.[1590] The area of vulnerability expanded, uncontested, during this timeframe. The local population began to become alerted to the intruders' presence, as did the Pakistani defense forces. McRaven, cognizant of this effect and the consequences of entrapment by now-alerted Pakistani defense forces, eventually ordered exfiltration (see Figure 155 and Figure 156).

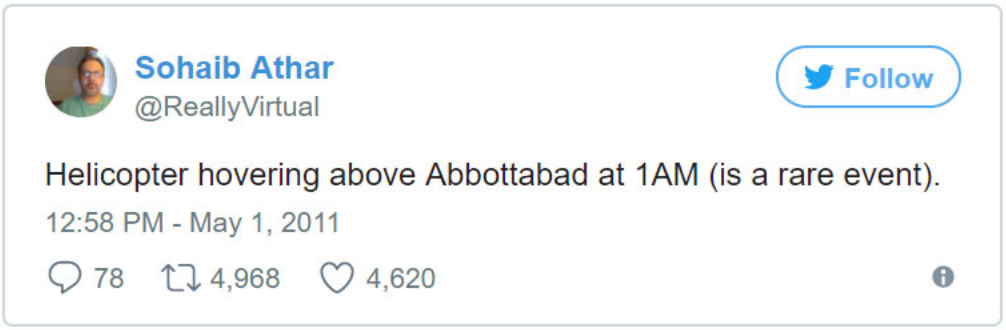
[1586] CIA, "Minutes and Years."

[1587] CIA, "Minutes and Years."

[1588] CIA, "Minutes and Years."

[1589] The CIA reported UBL was killed nine minutes into the raid while Bergen reported that Geronimo was reported 18 minutes into the raid. It seems unlikely that there was a nine minute delay between the objective accomplishment and its reporting, but it is possible. These three accounts could all be relatively accurate. Alternatively, any single one of them or all of them could be in error by a few minutes. Bergen, "Architect of bin Laden Raid;" CIA, "Minutes and Years."

[1590] CIA, "Minutes and Years."



Sohaib Athar, a Pakistani civilian who lived in the Abbottabad area on the night of the raid, Tweets following his discovery of one of the assault airlift platforms during the Abbottabad raid.

Figure 155. Sohaib Athar Tweet About UBL Raid (1 of 4)[1591]

Sohaib Athar Tweet about the helicopter exfiltrating the Abbottabad compound.

Figure 156. Sohaib Athar Tweet About UBL Raid (2 of 4)[1592]

1:05 AM, exfiltration of first helicopter.[1593] The fuel-starved MH-60 Black Hawk exfiltrated with the first SEAL group and the remains of UBL onboard. It departed the Abbottabad compound for the ground refueling site to refuel before departing Pakistan's borders.

[1591] Adapted from O'Dell, "One Twitter User Reports Live From Osama Bin Laden Raid."

[1592] Adapted from O'Dell, "One Twitter User Reports Live From Osama Bin Laden Raid."

[1593] CIA, "Minutes and Years."

1:08 AM, the crashed helicopter was destroyed.[1594] The tail section was sheared off and dropped outside the compound, to be discovered in the aftermath. The event was live-Tweeted moments later by Sohaib Athar (see Figure 157).[1595]

Sohaib Athar Tweet following intentional destruction of the crashed helicopter at Abbottabad compound.

Figure 157. Sohaib Athar Tweet About UBL Raid (3 of 4)[1596]

1:10 AM, exfiltration of the second SEAL group. This was accomplished by one of the standby MH-47 Chinooks, brought in from the laager site to compensate for the loss of the first helicopter. It departed the compound with the second SEAL group and the intelligence materials they had collected. The chopper departed from the Abbottabad compound and headed directly for Jalalabad.[1597] The actions-on-the-objective had taken "40 minutes [in] total."[1598]

1:20 AM (estimated), the remaining modified MH-60 Black Hawk landed to refuel at the FARP site while being hunted by Pakistani aerial defense fighters. The aircraft, its occupants, and its precious cargo were completely vulnerable to capture or prosecution by adversarial forces if discovered. The only combatant against the

1594 CIA, "Minutes and Years."

1595 O'Dell, "One Twitter User Reports Live From Osama Bin Laden Raid."

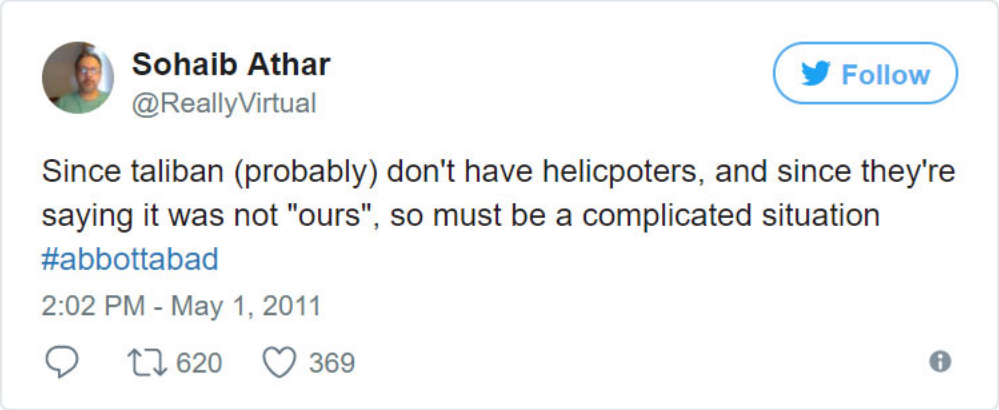
1596 Adapted from O'Dell, "One Twitter User Reports Live From Osama Bin Laden Raid."

1597 CIA, "Minutes and Years."

1598 CNN, "Death of Osama bin Laden Fast Facts."

increasing area of vulnerability was the increased readiness of the aircraft to exfiltrate as it refueled and prepared to continue extraction post departure.

1:39 AM (estimated), the ground refueling operation was completed and the modified Black Hawk departed the site after the 19 minute delay.[1599] Pakistani forces had not located it and the aircraft was able to reduce its likelihood of discovery using equipment and tactics (see Figure 158).



Sohaib Athar Tweet about the assault, depicting Pakistan's awareness after the actions-on-the-objective stage, but while the assault force was still potentially vulnerable during exfiltration.

Figure 158. Sohaib Athar Tweet About UBL Raid (4 of 4)[1600]

2:20 AM (estimated), the modified Black Hawk was able to depart Pakistan and return across the border to the relative sanctuary of Afghanistan airspace. Barring any unforeseen events, the environmental and adversarial threats apparently posed only a nominal threat to the survival of the mission force and the successful completion of the mission.

2:30 AM (estimated), the MH-47 containing the second SEAL group returned to base at Jalalabad, Afghanistan. These operators were out of harm's way.

[1599] Bergen, "Architect of bin Laden Raid."

[1600] Adapted from O'Dell, "One Twitter User Reports Live From Osama Bin Laden Raid."

2:53 AM, the MH-60 Black Hawk, containing the primary assault force SEAL group and the remains of UBL, landed safely at Jalalabad Air Base, Afghanistan.[1601] The mission objective had been achieved and the mission assault force had survived. The mission was a success.

Examination of the relative superiority graph for Operation NEPTUNE'S SPEAR reveals the capacity of assault airlift as one of the most relevant factors enabling relative superiority. It is associated with almost every dramatic increase or decrease in relative superiority, save the achievement of the primary mission objective itself. Relative superiority was established prior to the point of potential vulnerability to enemy forces utilizing assault airlift for infiltration by enabling a speedy and relatively safe means of ingress.

The first downturn in relative superiority was associated with the loss of the mishap aircraft. Credit is due to the strike team, as their professional reaction following the mishap directly increased relative superiority with the achievement of objective Geronimo. At this point, the mission's primary objective was ostensibly successful, but the survival of the evidence and mission force remain prerequisites to overall mission success.

Following Geronimo, relative superiority slowly decays as the mission is extended for the impromptu secondary objective of data collection. Taking the time to collect the intelligence data expanded the assault force's time on the ground and increased the area of vulnerability.[1602]

The assault force starts to regain their advantage as they depart the compound. The distinct advantage here is directly associated with SOF assault airlift, as any other extraction method would not allow an immediate and sharp increase in relative superiority. Rather, alternative methods would leave the assault force mired in or fleeing from the closing defensive forces and increasingly alerted population surrounding the objective area.

[1601] CIA, "Minutes and Years;" Schmidle, "Getting bin Laden."

[1602] Bergen, "Architect of bin Laden Raid;" McRaven, *SPEC OPS*, 7–8.

The assault force's position becomes slowly more secure until they reach the ground refueling point, at which time their level of vulnerability is dramatically increased until they are airborne.[1603] The mission is completed when the assault force crosses into coalition airspace in Afghanistan and lands at Jalalabad.

Throughout the engagement, McRaven and his assault force capitalized on relative superiority with such magnitude that they were able to lose or expend small quantities of superiority without falling below the critical relative superiority line. This mastery of the theory of special operations enabled not only the primary objective to be accomplished, but also enabled the impromptu secondary objective of data collection. A great deal of the excess in relative superiority attained can be attributed to the simplicity, speed, and surprise enabled by assault airlift.

2. Was Assault Airlift Being Adequately Achieved?

Operation NEPTUNE'S SPEAR epitomized the achievement of assault airlift as a conceptual construct advantaging the mission force through bolstering relative superiority. Assault airlift was able to decrease the mission's complexity, increase the speed of mission execution, and amplify the impact of surprise. It enabled accomplishment of the mission's objective as well as the safe extraction and survival of the mission force.

3. Simplicity: How Was Assault Airlift Operationalized to Support the Principle of Simplicity?

Clandestine Bypass of Enemy Defenses: Assault airlift allowed the Operation NEPTUNE'S SPEAR mission force to evade detection by Pakistan's conventional defenses and overland threats that could have otherwise impinged upon their chances for success. It also provided a means by which the mission force could extract from the objective area without confronting the amassing attention their operation had produced.

[1603] The timeline for when the ground refueling operation actually began is estimated based on the exfiltration from Abbottabad and the probable arrival time at Jalalabad.

McRaven canonizes: “Innovation simplifies a plan by helping to avoid or eliminate obstacles that would otherwise compromise surprise and/or complicate the rapid execution of the mission” usually via new technology or unconventional tactics.[1604] It is possible that classified innovations were utilized to increase the level the assault force was able to achieve, thus reducing the potential exposure of the force and greatly simplifying their path to and from the objective.

Largely because of the technology employed, along with the high level of operational security discipline, the assault force reached the pivotal moment before they ever crossed into Pakistani airspace. Security had concealed their timing and means of insertion, allowing them the advantage of relative superiority before they were ever vulnerable to adversarial engagement.[1605] They maintained this advantage as they penetrated denied airspace, prosecuted the mission objective, and the extracted back to safety. It only began to unravel in the slightest as their presence was slowly discovered during actions-on-the-objective and the delays for data collection and ground refueling.

This was not by accident, but was a key lesson McRaven had taken from his own thesis.[1606] The mission was designed to minimize and mitigate risk. The use of the MH-60 Black Hawk diminished their vulnerability to enemy detection. The tactics and infiltration route exploited terrain to mask the helicopters’ acoustic signature until only two minutes out, thus representing the point that the assaulting force became potentially vulnerable to the compound’s defenses.[1607] In this way, McRaven was able to minimize any risk to the assault force from conventional and numerically superior forces by pushing back the point at which these threats could be brought to bear against his assault force.

This method only directly pitted the assault force against the relative few individuals who were inside of the compound at the time of the assault force’s arrival.

[1604] McRaven, *SPEC OPS*, 13.

[1605] McRaven, *SPEC OPS*, 4–6.

[1606] McRaven, 4.

[1607] Bergen, “Architect of bin Laden Raid.”

Speed, significantly augmented by the use of assault airlift, ensured the assault force was both infiltrated and exfiltrated in a timely manner, minimizing the time the strike team was on the ground and in harm's way. This directly reduced the "area of vulnerability" and the amount of time "relative superiority" had to be maintained.[1608]

Environmental Reconnaissance: Environmental intelligence, to include that of the weather, geography, topography, and the capabilities and placement of adversarial threats simplifies a plan by enabling assault airlift assets to penetrate an environment, rather than to be mired within it.

McRaven states in his book that "good intelligence simplifies a plan by reducing the unknown factors and the number of variables that must be considered."[1609] Over a decade and a half later, in command of Operation NEPTUNE'S SPEAR, McRaven utilized all available intelligence to ensure the planning gave every advantage to his team. His initial actions were to engage with high level intelligence assets to determine the scope and feasibility of the operation. Though much of the intelligence focused on patterns of behavior and observable features (such as the presence of "the Pacer" and the Pakistani military training facility nearby), each of these pieces of information helped build a larger picture for the assault force to ensure they were able to mitigate as much risk as possible during execution.[1610]

Environmental Intelligence (Weather and Topography): McRaven expended the effort to synchronize his assault force with the supporting assets in the area that were already present and whose contributions were largely unrecognized yet critical to the success of the transportation of the mission force: meteorologists. This effort paid off when the operation was rolexed 24 hours due to the lack of suitable weather in the forecast models. The preexisting decade-long war in Afghanistan had ensured there was

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1608 McRaven, *SPEC OPS*, 8, 21.

1609 McRaven, 12.

1610 A recommended excellent source of easily digestible material regarding the UBL raid can be obtained from CNN's Chris Lawrence and his collection of works posted under, "Explain It to Me: OBL Raid." Chris Lawrence, "Explain It to Me: OBL Raid," CNN, May 03, 2011, http://www.cnn.com/videos/us/2011/05/03/explain.it.to.me.obl.raid.cnn/video/playlists/osama-bin-laden/.

Bergen, "Architect of bin Laden Raid."

already in-place a network of sensors and analysist available for military use in an otherwise austere environment. The information collected and the analysis performed by these assets was available to be harnessed by the SOF meteorological experts serving with McRaven. Had these assets not been available, it would have required much greater synchronization efforts on the part of the involved leadership to obtain the data and analysis expertise necessary to interpret the local weather phenomenon in the Afghanistan-Pakistan Hindu Kush region.

Special operations often require highly detailed weather analysis, to include knowing the temperature, wind, and moisture levels to accuracy levels hard earned and within slim error ranges. Such tight tolerances are critical to the tactical employment of the various weapon system capabilities that assault airlift platforms bring to the fight and rely upon for their own survival.

The weather patterns in topographically dynamic environments often sport unique behavioral characteristics that can take time and experience to understand, let alone predict. Computer modeling can be limited by the lack of historical or current data for the modeling process. Basic weather analysis has limits in these areas when complex topography causes multiple atmospheric conditions to interact in seemingly unpredictable ways. Yet, these limitations can be overcome by simple observational pattern analysis over time: experience. It is what Operation KINGPIN and NEPTUNE'S SPEAR had in common and what Operation EAGLE CLAW was lacking.

The assault force became vulnerable to the environmental factors as soon as they embarked on the mission departure from Jalalabad, but their intimate familiarity with operating conditions in Afghanistan and Pakistan, albeit with a different aerial platform, somewhat mitigated the risks associated with their environment. There were solid weather reporting mechanisms available for their use, and the environment had been monitored for almost a decade as prior, lending substantial opportunity to identify weather patterns and trends for analysis. However, the environmental factors did come into play during the insertion when the modified helicopter's handling characteristics, degraded beyond their limits by the higher-than-expected temperatures and aerodynamic

effects of the compound's exterior wall, combined to result in the aircraft's mishap incident.[1611]

Accurate, detailed, and experientially localized meteorological analysis is a must for special operations incorporating assault airlift. Assault airlift platforms often balance the ground assault force's needs (measured in cargo weight) against the air assault force needs (measured in fuel weight and aircraft performance – i.e., lift capacity as a function of engine output and airframe design). The margin for error remains slim while the consequences for exceedances can be fairly unforgiving.[1612] For these reasons, among others, it is vital that the environmental data gathered for employment be as accurate as possible. The crash at Abbottabad validates the resource expenditure to acquire these levels of accuracy. While the resultant effects were acceptable due to a high degree of skill and resiliency, and probably a small amount of luck, mission planners and senior leaders are unable and should be unwilling to knowingly accept such potentially catastrophic risks when they can be avoided.

4. Surprise: How Was Assault Airlift Operationalized to Support the Principle of Surprise?

Precise Direct or Offset Delivery and Extraction: During Operation NEPTUNE'S SPEAR, precise delivery of the ground assault force directly into the courtyard of the Abbottabad compound allowed the SEALs to fully capitalize on their ability to create and increase the amplitude of the impact associated with the element of surprise. Direct delivery decreased the amount of time the compound occupants had to prepare any counter-attack and allowed the SEALs enough surprise to impact and overwhelm the compound's defenses.

Surprise is a fleeting advantage, quickly lost. It is achieved by concealing "the timing, and to a lesser … [extent], the [insertion] means of" the attacking force.[1613] McRaven reminds that, "In a special operation," when the enemy already anticipates an

1611 Schmidle, "Getting bin Laden;" O'Neill, *The Operator,* 303–316.

1612 Colonel Matthew A. Powell, Vice Commander, 352d Special Operations Wing, RAF Mildenhall, 2016.

1613 McRaven, *SPEC OPS,* 14.

impending attack, "surprise is gained through deception, timing, and taking advantage of the enemy's vulnerabilities."[1614] Once an enemy learns of an attack, the surprised enemy quickly takes account of the changing environment and adapts to overcome it. In order to capitalize on surprise, speed during the moment of the enemy's confusion is critical. Delay can reduce the advantage of surprise entirely. Extended delays turn thwarted-surprise into an early warning to the enemy, allowing them to amass resources against the attacking force.

McRaven's use of security during planning and the choice of modified assault airlift for the insertion allowed the assault force to remain concealed until only two minutes out from the compound in Abbottabad.[1615] This tactic enabled the strike force to fully exploit the enemy's unawareness during the engagement. The individuals inside the compound itself were left essentially no time to call for outside assistance and muster additional forces. They were left with only moments to prepare themselves for battle in the middle of the night. The strike team fully exploited this advantage gained by surprise by moving with speed, even after the initial mishap aircraft crashed. Furthermore, the tactic ensured the Pakistani air defense forces were never successful in locating the assault force. This effectively neutralized their ability to interfere with the mission's success.

McRaven's plan utilized both deception, in the form of distraction, and in the form of momentarily providing culturally-relevant speech to dismiss the apparent presence of an intruding threat, to detract from the timeliness with which either an adversary or even the local population could respond the assault force's detected presence. The SEALs called out bin Laden's son's name, Khalid, in order to have him drop his guard for the moment it took to take his life.[1616] The SEALs guarding the compound's exterior used the local language of Pashto to instruct the growingly curious local population to go home, inferring that a sanctioned security event was taking place

[1614] McRaven, *SPEC OPS*, 17.

[1615] Bergen, "Architect of bin Laden Raid."

[1616] O'Neill, *The Operator,* 303–316.

that they need not worry about.[1617] Even the suggested possibility that there was an intentional interruption of the local power grid could be seen as a means of distraction, if the presence of an intentional act is to be believed.[1618]

5. Speed: How Was Assault Airlift Operationalized to Support the Principle of Speed?

The speed of the overall infiltration and exfiltration was directly linked to the ability of assault airlift to fly directly to the target compound and land SEALs inside the outer-perimeter wall. This avoided any time lost due to an offset landing site, a vehicle insertion, or otherwise. Even the loss of the mishap aircraft did little to detract from the speed at which the strike team prosecuted their target.

The crash of the modified helicopter did detract from relative superiority, but the way the aviators and ground assaulters handled the incident prevented it from being catastrophic and relegated it to a mere footnote in the story of the UBL raid. The pilot of the mishap aircraft understood the need to get his aircraft inside the compound walls. "Any delay will expand your area of vulnerability and decrease your opportunity to achieve relative superiority," McRaven warns.[1619] McRaven had stressed this point to the lead mission pilot: the insertion of the SEALs into the animal pen was crucial to the mission's success. It was the recognition of the importance of the precision of the delivery that eventually drove the pilot to force the all-but-inevitable outcome once the helicopter began to lose lift. His actions prevented a small decrease in relative superiority, associated with the delay during insertion and the momentary vulnerable exposure of the mission force to defensive actions, from becoming a much more substantially devastating incident.

Had the aircraft crashed outside the compound walls or in a more dramatic fashion, the SEALs could have been injured or left in a position without sufficient capacity (time, wellbeing, and surprise) to continue to carry the mission forward. They

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[1617] Schmidle, "Getting bin Laden."

[1618] O'Neill, *The Operator,* 304.

[1619] McRaven, *SPEC OPS*, 19.

could have been killed or injured and left at the wrath of the compound's occupants, an outcome that would have assuredly diminished the likelihood of their survivability. None of these outcomes would have allowed retention of relative superiority.

The ground assault force wasted no time once they were on the ground inside the compound. Despite the helicopter crash in the animal pen, the ground assault force wasted no time in recovering and continuing to prosecute their mission into the compound. Their initial goal was to be in and out in thirty minutes.[1620] Their performance trumped this goal and achieved objective Geronimo in less than 18 minutes.[1621] The speed at which they operated was commendable and represented one of the most influential factors relating to relative superiority while actioning the objective. The other influential factor during this stage was the extraction of the assault force from the compound, which enabled its survivability and proof of the actions to be obtained, both critical for strategic mission success in this case study.

Aerial Refueling: Aerial refueling can contribute to the speed of an operation by allowing aircraft to refuel while they are continuing en route to or from the objective area. Further, it has the capability of simplifying direct-action missions by removing the need for layover stops for refueling or logistical purposes.

It is possible that the ground refueling of the assault force was the best possible option, given the constraints McRaven found himself dealing with, but aerial refueling should be considered as an alternative method for future operations of this nature.[1622] Given McRaven's extraordinary level of experience and the high level of intelligence and classified programs he had access to, it is probable (and highly likely) that he chose the best possible plan of action based on the circumstances.

[1620] Bergen, "Architect of bin Laden Raid."

[1621] Bergen.

[1622] It is possible that the modifications to the MH-60 Black Hawk helicopters required the sacrifice of aerial refueling capabilities in order to incorporate other innovations. Such compromises are hard to justify in a holistic approach to assault airlift requirements, but may have been technologically necessitated given the possible mandate of such programs. If a clandestine development program is directed to develop modified helicopters, they would surely focus on that goal above seemingly peripheral goals such as maintaining tactical utility.

However, the ground refueling portion of the mission specifically represented the most dramatic loss of relative superiority associated with the operation. Although the assault force never dropped below the level of relative superiority required to sustain a decisive advantage, this advantage was tenuous during the ground refueling portion of the mission. While the assault force was refueling, it was extremely vulnerable. The possibility exists that the vulnerability experienced here could have been mitigated utilizing in-air-refueling, and operation regularly exercised by SOF assault airlift pilots. This option could have allowed the assault force to continue egressing while maintaining tactical concealment. The ground refueling option could have been retained as a contingency plan in case the air-refueling option was eliminated.

Again, this is a potential use of SOF assault airlift to mitigate risk to the assault force and sustain relative superiority. Even if this option were not tactically available for McRaven during the Abbottabad raid, it should not be overlooked as a means of mitigating risks in future engagements. It may also speak to the value of investing in a hardening of SOF assault airlift refueling platforms as a critical means of increasing an assault forces' range and penetration capability in a time-sensitive scenario.

Versatility, Flexibility, and Maneuver: Assault airlift's ability to simplify the dynamic environment through its inherent versatility, flexibility, and tactical maneuver, allowed the mission force to penetrate with ease and operate with speed.

The versatility of the MH-60 aircraft allowed this platform to receive modifications, while the modifications themselves limited the flexibility of the aircraft in a number of other regards. The modifications had usefulness at bypassing the adversarial defenses, but the cost came at the contributions the aircraft could provide to transporting weight for both the ground and air assault force elements. The decrease in overall aircraft performance was felt in the diminished armaments and fuel the aircraft were able to bring with them into the objective area. It was also displayed in the diminished handling characteristics of the aircraft during the delicate maneuver of hovering. Had the handling characteristics of the aircraft been more favorable, it is possible that the aerodynamic effects of the wall and the diminished performance of the aircraft due to the higher-than-expected temperatures would have not surmounted the aircraft's ability to remain stable.

However, these are the margins and risks of burgeoning technological advancements. Sometimes the tradeoffs in one area are only slightly more or less justified than hindsight would have them be.

The contributions of versatility, flexibility, and maneuver to mission success are actually best demonstrated when they are lacking: when their absence interrupts the successful completion of a mission. This can make their presence less observable in successful cases, such as Operation NEPTUNE'S SPEAR. Their presence during a successful mission can easily be misinterpreted as the mere presence of the technical capability they immediately culminate in the manifestation thereof. It is hard to say whether or not the flexibility of the assault airlift aircraft was critical when it was not overtly called into action during mission execution. The versatility of the airframes is harder to quantify when its presence does not interfere with the survival of the mission force or the achievement of mission objectives. Nonetheless, there are tell-tale signs that can be used to address this apparent gap.

The versatility, flexibility, and maneuver of the assault airlift assets operating in the Pakistan raid may be viewed through the lens of what they provided. These assets provided the ground assault force with a combined infiltration-and-exfiltration medium of transportation that did not necessitate the use of a secondary or tertiary medium. These assets provided the communications nets the mission force required to obtain accurate intelligence, report mission findings, and even to reorient towards the eventual secondary objective of intelligence gathering for the purpose of future exploitations. The versatility of the assault airlift assets allowed a single transportation package to infiltrate and exfiltrate with all of the available resources the assault force would need to execute the mission, save the fuel that they would acquire during exfiltration. It provided the armaments, protection, real-time awareness (both up and down the chain of command), as well as the redundant standby-assets the mission force eventually required to augment the loss of the lead helicopter. Assault airlift's versatility, flexibility, and maneuver brought with it the capabilities the mission force would need to execute the mission without being distracted by the noise that could have otherwise been involved in transporting or attaining these assets and capabilities at the objective site.

Suppressive Fire: Normally during SOF direct-action, it is demonstrably observable that assault airlift platforms necessitate the ability to provide enough adequate suppressive fire to counter direct enemy threats to the assault force. And despite the presence of this capability being manifest through an integration of air and ground forces during Operation NEPTUNE'S SPEAR, assault airlift's ability to produce suppressive fire was not called into action at Abbottabad.

From O'Neill's account of the Abbottabad raid, it is made clear that SEAL snipers would provide aerial suppressive fire from the insertion platforms to guard the SEALs inserting via fast-rope.[1623] This ability to provide adequate suppressive fire by integrating joint air and ground assets is reminiscent of Operation KINGPIN. In the Son Tay raid, the HH-3, call sign BANANA, was utilized as both a backup gunship and insertion platform. It utilized small-arms assault rifles, aimed by the ground assaulters during descent to land, to neutralize enemy positions that could be a threat to the assault force once the assaulters were on the ground.[1624] This level of performance requires a high level of proficiency for all operators involved. It requires a high level of integration between the air and ground assets to execute fires in a manner that provides seamless operationalization that ensures suppressive fires are delivered in an accurate, timely, and flexible enough manner to mitigate threats as they present themselves against the assault force.

Fortunately, due to the significantly-uncoordinated and light-level of armaments the defensive position maintained at the Abbottabad compound, coupled with their inability to adapt to the confusion created by the surprise and deception employed by the assault force, suppressive fire was not actively employed for during the UBL raid. Care should be taken to avoid drawing the conclusion that the presence of such abilities is not a required aspect of assault airlift assets. In this case study, the supporting principles of relative superiority were engineered into the mission plan so well, and they were executed with such violent speed, surprise, and purpose, that the heavy hand of

[1623] O'Neill, *The Operator,* 304.

[1624] Gargus, *The Son Tay Raid*, 269–288.

suppressive fire was never required to silence substantial threats to the mission force. There could easily have been developments that could have caused relative superiority achievement or contextual mission constraints to demand suppressive fire in defense of the mission force. Fortunately, such incidences did not occur, and the mission was successfully accomplished without the need to employ suppressive fire from assault force assets.

The lesson here is not that suppressive fire is therefore unnecessary, but that it becomes less necessary as a mission force more adequately wields the principles of relative superiority to conceal their presence, and thus their vulnerabilities, until the enemy does not have the chance to act against them. This case study represents action on the far side of the relative superiority strategy, distantly divorced from the principles of attrition warfare. Whereas other case studies, like Operation ANACONDA and the battle for Takur Ghar, represent conflicts nearer attrition warfare strategic employment, Operation NEPTUNE'S SPEAR represents an almost solely relative superiority-based conflict. There was less confrontation between the Abbottabad mission force and enemy forces than during the operations at Son Tay and Takur Ghar.[1625]

Securely Integrated Long-Range Communications: The integration of secure long-range communications allowing a flattening of the communications network, near-instantaneous sharing of critical information, and synchronized dynamic adaptation to changing battlefield conditions was clearly present during Operation NEPTUNE'S SPEAR. Although the details surrounding the technical mechanisms utilized to achieve these ends may be classified or prudently concealed, the evidence of their capabilities was easily demonstrated in the unfolding of the operation itself.

[1625] There was also a substantial lack of confrontation with enemy forces during Operation EAGLE CLAW. However, Operation EAGLE CLAW suffered from lack of environmental threat mitigation due to inadequate force synchronization and integration. The combined stifling effects of these oversights mitigated the ability to confront the enemy. Had Operation EAGLE CLAW continued forward from the Desert One site, it was planned to incorporate significant violent interactions with enemy forces. Suppressive fire was planned for (as reported by Ribicoff and Waugh) and would have played a critical role in mission success had the Operation EAGLE CLAW mission continued forward. Ribicoff, "*Lessons and Conclusions,*" 382–395; Waugh, Jr, "The Structure of Decision-Making in the Iranian Hostage Rescue Attempt."

Integrated communications may normally be associated with simplifying a mission's planning and execution. But, it just so happens that this simplification transpired at a critical moment during the Abbottabad raid so that it's most prevalent effect was to maintain the element of surprise. Surprise was maintained, despite the crash of the lead MH-60 during the most critical moment of its employment, due to the ability of the mission assault force communicate and move as a cohesively integrated entity.

When the first helicopter crashed at the pivotal moment during infiltration, the second was able to react appropriately and avoid the same hazard. Admittedly, O'Neill reported that this communication was visual, "nonverbal," from where he was located, at the second chopper.[1626] But its visibility at higher levels in the chain of command as well as the subsequent actions taken to mitigate the effects of the crash was only possible through integrated and secure long-range communications networks. It was these networks that brought the waiting MH-47 into the fight. Following the crash of the helicopter, the extraction of the full assault force was no longer available with the assault airlift assets at the objective site. The one remaining helicopter would not be big enough. But McRaven had planned for this eventuality and had the redundant MH-47s on standby alert at the laager site. The use of integrated communications up and down the chain of command, to include the integration of communications between the air and ground assault force components, allowed this eventuality to be executed without undue delay or interruption to the mission plan.

During the exfiltration stage of Operation NEPTUNE'S SPEAR, the securely integrated long-range communications structure was adept enough not only to allow McRaven the ability to command and control all various mission assault force elements, but it allowed these elements to seamlessly share critical information in a timely enough manner to allow them to remain concealed while speedily executing the mission itself. The assault airlift assets retained the ability to communicate their needs internally within the assault force as well as externally to McRaven's command and control center in Jalalabad, ensuring the standby MH-47 as brought in for extraction and the MH-60

[1626] O'Neill, *The Operator,* 303–316.

excursion for ground refueling was monitored. It allowed current threat intelligence to be relayed to the mission assault force throughout this vulnerable period. This ground refueling delay represented a significant increase in the vulnerability of the assault force, but the threat of discovery was partially mitigated by the sharing of real-time intelligence. This method only mitigated the threat to the degree that the acquired and shared intelligence was both relevant and accurate. It did little to provide a counter-solution to a conventional confrontation if the mission force were discovered, but it did allow a monitoring of the battlespace to allow exploitation of every possible advantage in an otherwise hapless state. This level of intelligence sharing could not have been made possible without assault airlift having been so seamlessly integrated into the mission assault force package. Securely integrated long-range communications were crucial to this aspect of the mission's execution.

Furthermore, the long-range communications network utilized in Operation NEPTUNE'S SPEAR was apparently robust enough to allow the most senior levels of the executive branch to observe the operation in real-time (see Figure 159).

Figure 159. The White House Situation Room during Operation NEPTUNE'S SPEAR[1627]

[1627] Adapted from Hickok, "The Decision in Favor of Operation NEPTUNE SPEAR."

Schmidle reported:

> A video link connected [the White House Situation Room] to … C.I.A. headquarters, and McRaven, in Afghanistan. (There were at least two other command centers, one inside the Pentagon and one inside the American Embassy in Islamabad.)[1628]
>
> Brigadier General Marshall Webb, assistant commander [to McRaven], took a seat at the end of a lacquered table in a small adjoining office and turned on his laptop. He opened multiple chat windows that kept him, and the White House, connected with the other command teams. The office where Webb sat had the only video feed in the White House showing real-time footage of the target, which was being shot by an unarmed RQ 170 drone flying more than fifteen thousand feet above Abbottabad. The … planners, determined to keep the operation as secret as possible, had decided against using additional fighters or bombers. "It just wasn't worth it."[1629]

Securely integrated long-range communications managed to provide the visual and audio linkage to the real-time mission's execution that senior leaders craved during this strategically impactful special operation. This solution strikes the delicate balance between allowing senior leaders to stay immediately informed on operations that could have a significant strategic impact while also allowing delegation of command and control authority down to the appropriate level, with the mission commander (in this case, Admiral McRaven in Jalalabad). This level of real-time awareness of battlespace conditions is becoming increasingly relevant in a world full of battlespace voyeurism, where senior leaders race against social and mass media to stay ahead of the information power curve. Operation NEPTUNE'S SPEAR represents a technically-vague but operationally sufficient demonstration of securely integrated long-range communications to maximize the ability of a SOF mission force to seamlessly integrate and exploit weaknesses associated with an enemy's expectations.

[1628] Schmidle, "Getting bin Laden."

[1629] Schmidle, "Getting bin Laden."

6. Synchronization: What Factors Were Critical to Operationalizing the Joint Mission Force?

Admittedly, the details of the assault force synchronization and integration for Operation NEPTUNE'S SPEAR remain shrouded in the classification that is inevitable with any operation less than two and a half decades in passing. However, the overarching effects of synchronization exist, and they bear witness to its presence. The ground assault force and air assault force operated seamlessly throughout the operation. They shared the same objective and sense of purpose. Their integration was evidenced from their joint full-dress rehearsals to their cooperation in ensuring all declared aspects of their individual concerns were addressed during mission planning. When events went wrong during execution, they had developed the trust and credibility with each other to overcome adversity. They worked together to overcome the obstacles in their way and continued to prosecute the mission objectives while ensuring their own survival.

Leadership: Admiral McRaven typifies the level of technical expertise and strong, humble, relationship-focused leadership required to successfully integrate a joint mission force for operational employment. His technical expertise was honed through his years as an operator, learning exactly how SOF mission succeeded through studying history and living the experiences himself. But his relationship-focused leadership is what makes McRaven stand out as a leader who was able to excel in SOF direct-action by integrating and synchronizing assets stemming from conventionally eclectic backgrounds. Instead of focusing on the differences these forces brought with them, he focused on serving their needs and developing them as a single, cohesive SOF direct-action force.

Throughout McRaven's career, he worked to ensure the forces and individuals he was charged with leading were taken care of to the best of his ability. He did everything he could to give them the resources and empowerment necessary for them to build success. His attitude and relationship-focused leadership are exceedingly displayed in his own actions and words, at the highest levels of his service career.

In 2014, Admiral McRaven was called upon to deliver United States Special Operations Command's posture statement to the Senate Armed Services Committee. During his address to Congress, McRaven made clear that his focus was on preserving

the SOF operators and the stability of their families, as the special operations community had been "frayed" at the edges from years of constant overextended use across multiple wars and areas of responsibility. McRaven's own words lay out his relationship-focused leadership for the nation to judge him by:[1630]

> **People—Our Most Important Resource:** We will never be able to organize for success if we don't take great care to preserve our force. Perhaps our most enduring and important SOF truth is that "humans are more important than hardware." While the high-tech gear is critical to our success, we are also masters of the low-tech — the operator who can be cold, wet, miserable, and in harm's way, but persevere to accomplish the mission. Everything we do as a command is entirely dependent on those highly skilled people that make up the Special Operations community, and those highly-skilled people rely on strong family support in order to operate forward in complex environments.
>
> Preservation of the force and families … is therefore our number one priority here at home! The welfare of these brave service members and their families is critical to our command's readiness and our ability to accomplish the mission. It is also a moral imperative. We demand the best from our people and in return have an obligation to provide the best care, education, equipment, and training to them. We are grateful to Congress for passing into law Section 554 of the FY 2014 Defense Authorization Act, which authorizes us to support family programs by finding innovative solutions to meet their unique needs.
>
> Over the past year, USSOCOM has made tremendous strides in developing an integrated series of capabilities to build and preserve the fighting strength of the SOF warrior and assure the wellbeing of their families. We are approaching this endeavor via multiple lanes, combining mental, physical, social, and spiritual aspects into a holistic approach. Building and preserving the resilience of our warriors and their families ensures SOF mission readiness and functional capability.[1631]

McRaven understood that the wellbeing of his people was a necessary component for mission success. He realized that a reasonable expectation of force survival was a necessary component for mission success under the conditions surrounding Operation

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[1630] United States Congress, Senate, *Posture Statement of Admiral William H. McRaven, USN, Commander, United States Special Operations Command, Before the 113th Congress Senate Armed Services Committee*, 113th Congress, 1st session, (2014), https://www.armed-services.senate.gov/imo/media/doc/McRaven_03-11-14.pdf.

[1631] United States Congress, Senate, *Posture Statement of Admiral William H. McRaven, USN, Commander, United States Special Operations Command.*

NEPTUNE'S SPEAR. McRaven was a warrior. He was a SOF operator. He was a commander, and a mission focused leader. But what made McRaven especially effective was his relationship-focused leadership. He managed to prosecute missions of national-strategic importance without letting them detract from his balanced approach that valued the health of his organization and the survival of his mission forces. He made the hard choices in drawing the lines of acceptable and unacceptable risks, but he did so while always remaining cognizant of the peripheral effects such decisions would have on the organizations and individuals they rippled through. He did not overly focus on simply achieving mission objectives. He did not overly focus on perpetuating personal careerism. Instead, he passed on the praise and absorbed the workload of responsibility that was required to synchronize and integrate the assets available to operationalize a specialized mission force to accomplish his task. McRaven's example is a textbook case of successful SOF relationship-focused leadership that can be used as a benchmark for those who follow.

Organization and Operationalization: Operation NEPTUNE'S SPEAR benefited from the culminating legislation and experiences that had led to an integrated and synchronized USSOCOM command and organizational structure. The *ad hoc* construct used for Operation EAGLE CLAW had become a memory of the past. USSOCOM had a standing infrastructure that could be used to obtain the assets for SOF direct-action when the need arose. The decade-long wars preceding the operation, coupled with a relentless pursuit of preparedness through joint operational exercises, ensured that the participating organizations and operators were already familiar with each other. This allowed a higher level of initial credibility and trust that mitigated their conventional ancestry differences and allowed a cohesive integration of their functional differences for successful operationalization. USSOCOM was no longer a fledgling little brother in the DOD by the time of the UBL raid. It had matured enough to know what it had, what it did not have, and what it needed to make a mission work. It had built the disparate network that it needed to synchronize assets and support. It also benefitted from having a voice at the highest executive levels in order to obtain the authorities and resources necessary to manifest mission success.

McRaven had the highest level of executive support for Operation NEPTUNE'S SPEAR; a trademark associated with successful strategically impactful special operations direct-action missions. McRaven was given access to the President himself to personally discuss, even one-on-one in some instances, the details and breadth of the mission at hand. Few other commanders are ever privileged with this level of support, and when they are it is rare that they understand the dissonant needs of their various functional components well enough to know what to ask for.

Like Operations KINGPIN and EAGLE CLAW, Operation NEPTUNE'S SPEAR had access and authority to utilize all necessary national resources. And like Operation KINGPIN, the operation's commander was humble enough to learn from and obtain the technical expertise of others in the areas where his own technical expertise was initially lacking. The similarities between these two examples and their contrasting differences with the failure associated with Operation EAGLE CLAW substantiates that access to national-level assets with the authority to use them may be a prerequisite to mission success, but it is not enough to ensure a mission's success.

McRaven nods to the high-levels of synchronized support, and thus executive priority, which are required to gain the levels of intelligence necessary to conduct such operations, to say nothing of the logistics and classified program accesses. McRaven said of his own theory:

> The theory validates the need for a standing special operations force that is … supported at the best possible levels…. What allows special operations forces to succeed is their ability to effectively use the principles in concert with each other…. simplifying a plan requires good intelligence and innovation. The harder the target, the more detailed the intelligence needed. This means ready access, through an established conduit, to national-level intelligence assets. In all but one operation, the raid on Cabanatuan, the special forces received critical intelligence that was available only because of the priority of their mission.[1632]

National-level support at the highest executive levels may well be a prerequisite to success given the high levels of synchronization between disparate organizations that is

[1632] McRaven, *SPEC OPS*, 387–388.

required to be successfully accomplished in the predominant number of special operations successes. But access must be tempered with leadership that is willing to put in the diligent and hard work to learn the functional requirements of the entire mission force without overly focusing on a single operational component.

Integration: The mission assault force for Operation NEPTUNE'S SPEAR typified many of the symptoms of a highly integrated mission force ready for successful operationalization, but none stronger than its combined and cohesive sense of purpose. McRaven identified purpose as an integrating mechanism for a mission force that has two specific aspects: clarity and personal commitment. The purpose of a mission "must be clearly defined by the mission statement," he said.[1633] In the buildup to his capstone raid, McRaven ensured that a strong sense of purpose was instilled into all assault force components to bring them together toward a singular mission objective. Then, he operationalized this integration to ensure the accomplishment of the objective alongside the survival of the mission force itself despite the fog and frictions of war.[1634]

McRaven made Operation NEPTUNE'S SPEAR as simple as possible. This aided in making his expectations crystal clear for all functional components. He limited "the number of tactical objectives to only those that [were] vital."[1635] By identifying only one primary target (the capture or kill of bin Laden) McRaven enabled the mission assault force to focus their efforts on a single point rather than having to disperse their efforts across multiple objectives. This greatly simplified the operational concept and

[1633] McRaven, 21.

[1634] McRaven, *SPEC OPS*, 5, 21–23.

[1635] McRaven, 12.

synchronized assault force efforts, minimizing potential distractions and contributing to overall mission success.[1636]

McRaven's own sense of purpose may have been augmented by the fact that he was personally selected to plan this operation by his commander-in-chief, President Obama. While embodying the sense of purpose this appointment instilled, McRaven avoided rushing to conclusions, overreaching, or overpromising on his ability to deliver what the President was asking for. Instead, McRaven humbly asked for the resources he needed to do his own job: he asked for three weeks to determine even the feasibility of the mission plan, time that the President granted him.[1637]

McRaven went on to instill this sense of cohesively integrated purpose into each of the functional components of his mission force by distributing the mission objective and his expectations regarding their role in supporting it. He distributed his expectations to both air and ground components, and then addressed their individual and collective concerns and needs. McRaven expressed to the lead helicopter pilot how crucial his insertion was to the surprise and speed of the operation, a sense of purpose successfully relayed and operationalized when the pilot safely forced his faltering aircraft into the compound's walls.[1638] This extreme dedication to the mission's objective despite personal risk was achieved through credibility and trust between a SEAL commander and a SOF aviator. Their relationship typifies the very integration a mission assault force needs to acquire in order to be successfully operationalized for SOF direct-action.

[1636] The subsequent objective of intelligence data collection, though anticipated, was only sought after the primary objective was already accomplished. It was not until after the primary objective had already been achieved, and when relative superiority was still well on their side, that the assault force took the time to expend resources on the secondary objective of collecting time-sensitive intelligence data discovered at the site. Pursuit of this secondary objective could not have curtailed achievement of the primary mission objective, given that the primary mission objective had already been achieved. However, pursuit of the secondary objective, though warranted due to the limited opportunity to gather potentially valuable intelligence, did represent an increased risk to the assault force. The delay increased the chances that the assault force would be left facing conventional air or ground Pakistani defensive forces that would try to intercept them during exfiltration. This could have potentially led to a strategic narrative failure had the "proof" of tactical mission success been compromised or lost. Had the mission force's survival been compromised in this manner, it could have led to a strategic loss despite the tactical success of the mission. Inclusive of this risk, the data collection was determined to be warranted given the potential value of the intelligence for follow-on operations against the terrorist network.

[1637] Bergen, "Architect of bin Laden Raid."

[1638] Bergen, "Architect of bin Laden Raid."

The sense of purpose and moral factors one must possess to keep pressing forward, with a focused mind, following a crash in an aircraft behind enemy lines, while pursuing the most wanted man of the 21st century, should not be overlooked, either.[1639] The ground assault force members displayed incredible resilience and focus and capitalized on this resilience to execute the mission in an extremely timely fashion. Every man knew his job. Every man knew the objective. Capture or kill UBL. Objective Geronimo was all they had to worry about. They trusted their integrated structure and the relationship-focused leader at the helm to make the decisions and synchronizing efforts necessary to prosecute their own survival in the aftermath. This sense of security stemmed from trust and credibility that had been earned through service, not entitled by appointment. McRaven and his assault force had a clearly defined sense of purpose.

Further integration was achieved through full-dress rehearsals by the joint mission assault force. McRaven believed repetition was "indispensable in eliminating the barriers to success," barriers that included integration issues.[1640] With only three weeks to rehearse the mission, McRaven focused heavily on repetition to identify and eliminate barriers to success. He started by planning to utilize tactics that were seemingly common practice for the ground operators involved. Then, he ensured the force was able to train in realistic environments that catered to the testing of the innovative air assets while also increasing the familiarity of the ground force with all possible informational advantages.

McRaven ensured the tactical operations and full-dress rehearsals were accomplished repeatedly, "on many occasions" during this limited window.[1641] McRaven said in a post raid interview of direct-action missions, that any "aspect of the mission that you didn't rehearse invariably failed on the actual mission and the one thing that we could not rehearse … was the fact that there was an 18 foot concrete wall."[1642]

[1639] McRaven, *SPEC OPS*, 5.

[1640] McRaven, 15.

[1641] Bergen, "Architect of bin Laden Raid."

[1642] Bergen, "Architect of bin Laden Raid."

The wall used in dress rehearsal was actually a chain-link fence, not a concrete wall, which had a different effect on the aerodynamics of the helicopter's ability to produce lift during the infiltration landing. The differences in aerodynamics caused a loss of lift to be experienced during the mission execution that had not been foreseen in the dress rehearsals. This loss of lift caused the helicopter to crash into the landing zone, the animal pen.[1643] McRaven contends and self-critiques that had he had the time to construct an 18 foot concrete wall for the rehearsals, this problem could have been identified and mitigated in advance. "We suffered for that in the real mission," McRaven relayed afterwards.[1644]

Nonetheless, it was the high level of integration between the air and ground force components that allowed them to come together to overcome this setback. It was the pilot's strong sense of purpose, unyielding skill, and the undeterred resilience of the ground operators that ensured the mission continued forward despite this inconvenient infraction.

7. Survivability: How Was Assault Airlift Operationalized to Increase Mission Force Survivability?

Assault airlift directly contributed to the survivability of the NEPTUNE'S SPEAR assault force by increasing their degree of relative superiority to a point where their survival was relatively assured. There were no mission assault force casualties on the UBL raid. No assault force personnel were seriously injured or killed. This extraordinary accolade was accomplished by minimizing their exposure to the defensive threats of adversarial forces as well as minimizing their interaction with unknown and uncontrollable environmental variables.

[1643] Helicopters can lose lift when decelerating for a number of reasons, but the primary effects are known as effective translational lift and vortex ring state. Simply stated, effective translational lift allows a helicopter to produce more lift when it is traveling at a faster speed than when it is sitting still in a hover. When it slows down to a certain point, the helicopter will require more power to hover, or else it will descend. Additionally, vortex ring state is when the aircraft's rotor system descends at a rate that does not allow clean air to enter it, but instead the rotor system ingests its own turbulent dirty air. Both of these phenomena can cause a loss of lift. Other factors may also have come into play, but these are two potential contributing factors based on McRaven's description of events in his 2016 interview with Bergen. Bergen, "Architect of bin Laden Raid."

[1644] Bergen, "Architect of bin Laden Raid."

All of the following contributions to mission force survival were resultant from the presence of assault airlift, a conceptual ability that increased relative superiority to a degree that mission force survival was a likely outcome. The use of assault airlift to bypass Pakistan's defenses ensured these forces were not able to focus their attention on the assault force in a timely enough manner to make act against it. Assault airlift allowed the assault force to directly infiltrate the compound and fully exploit the impact of the element of surprise. Assault airlift, as a combined effect of the integration of air and ground assets, provided the suppressive airborne sniper fire that would have protected the ground assault force were they to have come under attack during their insertion. Assault airlift provided the securely integrated long-range communications that allowed additional standby assets to be brought in when the crash of the lead helicopter diminished the resources immediately on hand for exfiltration. And it was the cumulatively high level of relative superiority achieved by the total mission force that allowed relative superiority to be achieved in large enough quantities to allow for intentional delays for data collection in the aftermath of achieving the primary mission objective without seriously diminishing the probability of mission force survival. Lastly, the impromptu evacuation of the latter half of the mission ground force, made possible by having redundant air assets in waiting, undoubtedly saved the assault force from encountering Pakistani defense force resistance that was closing on their location.

Medical Support: Could the assault airlift assets employed at Abbottabad have been used to successfully mount an aerial medical evacuation during the raid's execution? Undoubtedly, yes. The excess amount of relative superiority expended to collect intelligence data could have just as easily been expended to save the life of any injured assault force members. The same could be said of the time and resources used to mitigate the crash of the lead helicopter, or of the standby assets at the laager site. The standby assets that composed the QRF served to increase the survivability of the mission assault force by providing a readily available surplus of both ground and air SOF, resources too bulky and numerous to be infiltrated into the objective area via the two MH-60 Black Hawks. However, the ready availability of these resources coupled with their inherent versatility, flexibility, and maneuver (all enabled by assault airlift) meant

that they could have seamlessly been integrated to extract a portion of the primary assault force, had the need arisen. This is, in fact, how the MH-47 was able to extract the second SEAL group. The same surplus of additional assets could have been used to CASEVAC any single member of the assault force had a significant casualty been experienced mid-mission. This display of assault airlift at its maximum effectiveness displays a level of relative superiority unexperienced in any of the preceding case studies.

Two-Way Mission: Despite the dramatization portrayed in some of the writings of operators who participated in the raid that might suggest otherwise, the UBL raid always required a two-way mission to achieve success. This was inherent in the reasoning President Obama used when he selected the raid over a bombing or strike option. First of all, the President knew the raid would only be worth the risk if UBL was captured or killed and the assault force could be extracted safely. Beyond that, the strategic nature of the raid, aimed at bolstering domestic morale while diminishing the perception of bin Laden as a violent extremist icon, required overt circulation. Evidence of achieving the mission objective had to be available for distribution and it had to be irrefutable. Videos could be claimed as falsified. The authenticity of ashes and pulverized rubble could be disputed. But physically obtaining UBL himself allowed for an irrefutable way to overtly prove the mission objective had been successfully achieved. In this case study, as with many strategically imperative special operations, a two-way mission was mandated. It was specifically for this reason that McRaven insisted on assault airlift as the means of insertion and extraction: it was the most viable option for ensuring mission force and evidentiary extraction and survival.

D. CONCLUSION

In conclusion, Operation NEPTUNE'S SPEAR serves as a successful modern illustration of McRaven's theory of special operations being operationalized through a jointly-composed and functionally-diverse mission force for a successful special operations direct-action mission. It demonstrates adherence to McRaven's model and his six controlling principles, with those of speed, surprise, and simplicity being specifically bolstered by adequately integrated assault airlift to increase mission force survival and

enable a strategically successful mission outcome. It personifies McRaven's exemplary relationship-focused leadership as the driving force behind adequate levels of force component integration and the operationalization of assault airlift by the mission force. Even the tactical missteps of the mission serve to demonstrate the validity of the relationship between adequate assault airlift and the attainment and sustainment of relative superiority.

This case study demonstrates the crucial role between assault airlift and relative superiority by proving how SOF assault airlift can be used to achieve the underlying principles of simplicity, surprise, and speed. It shows assault airlift being wielded to bypass enemy defenses, precisely deliver assault force members, and compensating for unintended operational dynamics without losing speed or the impact of surprise. It illustrates the tenets of assault airlift as contributors to the accomplishment of mission objectives and the survival and safe return of a direct-action mission force.

This case study also illustrates how discounting tenets of assault airlift can potentially lead to unintended losses of relative superiority. The first instance of this loss is the crash of the lead modified helicopter, brought on by inaccurate environmental intelligence and imperfect rehearsals. Despite their best efforts, the mission planners and preparing assault force were not able to adequately synthesize the operational environment. Fortunately for McRaven and the operators involved, the mission assault force was able to recover from the setback of the ensuing crash. They prevailed through their high level of collective integration, surplus relative superiority obtained through the application of assault airlift, and the moral factors of perseverance and dedication on the part of the pilot and operators onboard the mishap aircraft.

The second instance is demonstrated by the vulnerability of the mission force during the ground refueling at the laager site while being pursued by Pakistani F-16s. These adversarial assets could have destroyed the mission force had they found it and chosen to do so. This would have resulted in overall mission failure. Fortuitously, the plan and execution surmounted this threat through the luck of having the Pakistani forces divert in the wrong direction, but the admitted vulnerability of the mission force during

this stage of the operation by McRaven makes it a situation warranting avoidance in future direct-action missions.

Operation NEPTUNE'S SPEAR demonstrates how crucial the role of relationship-focused leadership is to the integration of an assault force, and how vital that integration is to the operationalization of the mission force. McRaven typifies the relationship-focused leader whose qualities are required to synchronize and integrate a mission force for the achievement of adequate assault airlift. He also benefited from the culminating legislation and experiences that had led to a standing USSOCOM organizational structure. This organizational structure ensured stronger pre-existing ties between the organizations that would be drawn upon to form the specialized mission force. These stronger ties meant that McRaven faced less dramatic synchronization challenges than those who had come before him.

McRaven's relationship-focused leadership example proves an effective means of integrating disparate functional assault force components through a refined sense of purpose, internal trust, and credibility. Assault airlift, like all functional assault force components, is subject to the frictions of war; frictions which can be countered and overcome by strong moral factors instilled in the individual operators. Instilment of purpose is a byproduct of integration, and this level of integration is best achieved through the use of relationship-focused leadership. Relationship-focused leadership is fundamentally necessary to adequately integrated members of various backgrounds into becoming dedicated members of a direct-action mission assault force.

In closing, this case study verifies the extent to which assault airlift enables simplicity, surprise, and speed, all of which are critical to obtaining relative superiority and executing McRaven's theory of special operations. Each of his defined principles of speed, surprise, and simplicity are enabled by and epitomized in the use of SOF assault airlift. McRaven clearly understood this relationship between assault airlift and relative superiority, and wielded it effectively. This understanding was a crucial element to his ability to rise through the ranks of special operations and become the leader America needed, and that this mission's success demanded. His leadership in the Abbottabad raid demonstrates the intrinsic relationship between assault airlift and the principles required

to successfully achieve relative superiority for direct-action special operations missions. Proper use of assault airlift in SOF allows an assault force to arrive exactly where it needs to be at exactly the time it needs to be there, providing a surplus of relative superiority during the initial phases of an engagement that continue to benefit the mission throughout its execution.

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VI. CONCLUSION

A. KEY TAKEAWAYS

In closing, each of the reviewed case studies has helped to illuminate how adequate mobility has proven at least as important as achievement of mission objectives to overall mission success. Adequate two-way mobility is a necessary condition for overall mission success in all must the most *in extremis* cases, as the four case studies of this work have demonstrated.[1645] Adequate mobility can be the largest contributor to relative superiority in two of the three stages of mission execution. Adequate mobility can be a primary contributor to mission force survival and overall mission success, as demonstrated in the case studies of Operations KINGPIN and NEPTUNE'S SPEAR. Conversely, inadequate mobility has been shown as detrimental to mission success and the effects have been observed in Operations ANACONDA and EAGLE CLAW. Without adequate mobility, survival of the mission force and even achievement of the mission's objectives can both be severely compromised, as was established in all four of these case studies.

Archival case study analysis has demonstrated that mobility, and more specifically assault airlift, enables a SOF direct-action mission force to achieve relative superiority by bolstering McRaven's supporting principles of simplicity, surprise, and speed. It has also established that these contributions are only possible through the synchronized and functionally integrated role of assault airlift assets into a direct-action mission force.

Exfiltration has been demonstrated as the most difficult, complex, and resource intensive phase of mission execution. This is accounted for by a number of identified factors: the impact of surprise has usually been exhausted by the time an assault force is ready for extraction; resources have been expended and depleted, limiting mission force

[1645] The models of this work can also be applied to McRaven's eight case studies to conclude that six of his eight case studies were *in extremis* cases countering existential threats. Of these six, five were essentially one-way missions. McRaven, *SPEC OPS*, 29–72, 46, 73–114, 75–77, 125, 115–162, 163–200, 178–181, 187, 201–244, 231, 245–286, 276, 287–331, 333–380.

options; the enemy may have been given the opportunity to mount a counter-assault; and contingency plans may have also been necessarily employed to mitigate changing circumstances. Mobility during exfiltration must be versatile and flexible enough to compensate for the contingencies and problems encountered in all previous phases of execution, and it must be prepared to do so without the otherwise powerful effects of the element of surprise. This must be accomplished despite the expanded area of vulnerability, which has reached its greatest magnitude by this point in an engagement. Exfiltration must be achieved when risks to the assault force are manifest at their highest potential amplitudes.

Assault airlift has the latency to be the most significant functional assault force component augmenting relative superiority during the exfiltration stage of mission execution. This makes it a powerful contributor to mission force survivability. This is because of airlift's inherent latent potential to contribute to relative superiority during this stage, which is dominated by transportation. Adequate assault airlift, if properly synchronized and integrated with a mission force, can surmount the ever-expanding area of vulnerability that encroaches upon mission force survival as a function of time.

Assault airlift's contributions to relative superiority occur through bolstering the principles of simplicity, surprise, and speed. This increases mission force survival and the likelihood that the mission force will return home safely. The increased probability of overall mission success through the use of assault airlift is contingent upon the institution of the tenets of assault airlift: *clandestine bypass of enemy defenses*; *precise direct-or-offset delivery and extraction*; *suppressive fire*; *versatility, flexibility, and maneuver*; *securely integrated long-range communications*; *environmental and adversarial threat intelligence*; and *aerial refueling*.

The validity of these tenets of assault airlift have been verified through historical archival case study analysis. The breadth of case studies has encompassed three direct-action special operations that have proven the necessity to incorporate the tenets of assault airlift in order to achieve higher levels of relative superiority. The ability to achieve assault airlift capabilities has been tied to the ability of leadership to synchronize and integrate air assault force assets into the total mission force. The breadth of case

studies has also included a conventional attempt to utilize assault airlift and SOF assets without prescribing to the principles of relative superiority or the tenets of assault airlift, with disastrous effects.

1. Operation KINGPIN

Operation KINGPIN helped contrast McRaven's theory of special operations and relative superiority with the augmented version utilized herein that incorporates a comprehensive inclusion of all assault force elements. The contributions of these elements were comparatively measured across the infiltration, actions-on-the-objective, and exfiltration stages of mission execution. This case study allows the admittedly more complex comprehensive model to be selected by leadership, planners, or academics when their analysis or operational needs dictate a more holistic approach to a given situation or case study. It verifies the ability to achieve overall strategic and tactical mission successes through the successful employment of assault airlift independently of the achievement of operational mission objectives.

2. Operation EAGLE CLAW

Operation EAGLE CLAW demonstrated how distant organizational structures are not conducive to operationalizing joint SOF mission forces. The distances between these disparate organizations are seemingly too great to be bridged by traditional leadership methods. This case study taught that adding air assets to an operation without taking into account the tenets of assault airlift does not necessarily increase the likelihood of achieving mission success or the survival of the mission force. It also established that functionally organized mission force structures are more operationally effective than those organized based on conventional ancestral roots.

3. Operation ANACONDA

Operation ANACONDA illustrated how the strategic inconsistencies between a mission force's prepared capabilities and its utilized strategic methods can result in tactical and operational mission failures. Forces designed to operate via relative superiority can suffer from significantly reduced survivability in cases where the

principles of relative superiority and the tenets of assault airlift are ignored. Such ignorance can result in a reversion to attrition warfare and the consequences can be tactically disastrous for the operators involved.

Leadership should therefore resist utilizing mission forces designed for employing relative superiority with attrition warfare strategies. Doing so is a misalignment of force design and strategy employment. SOF may be utilized in attrition warfare scenarios, but it should be done using the principles of relative superiority and a special operations strategy to gain a decisive advantage over the larger force. Direct confrontation is ill advised.

The high attrition rate SOF direct-action operators generally wield make them an enticing panacea for conventional use. It is tempting to risk a few instead of many. But it is exactly this numerical disadvantage, coupled with the light armament SOF operators necessarily employ, that make this an untenable option. Conventional threats should instead be countered by conventional forces when attrition warfare strategies are utilized. Direct-action forces are not ideally built for confronting larger forces in a direct "head-on" manner.

4. Operation NEPTUNE'S SPEAR

Operation NEPTUNE'S SPEAR represents the culminating capstone of McRaven's theory of special operations as it applies to direct-action missions, proving the theory relevant and operational in the modern era. It also illustrates the necessity to augment the accomplishment of mission objectives with the survival of the mission force in all but the most *in extremis* cases to ensure overall mission success.

Operation NEPTUNE'S SPEAR exemplified a nearly-ideal integration of air and ground assault force elements. The close working relationship between the two, developed through the establishment of USSOCOM, years of coordinated efforts in Afghanistan, and the manhunt for Usama bin Laden. This resulted in organizational structures, relationships, credibility, and mutual trust that were already closely aligned prior to the raid's inception.

McRaven's relationship-focused leadership was able to effortlessly bridge the short gap between these organizations and ensure that the appropriate balances were achieved between their functional needs, limitations, and capabilities. All of the functional components were able to provide relevant inputs and McRaven's leadership retained the trust, credibility, and humility to listen to all involved functional elements, to learn their perspectives, and determine the best appropriate course of action to ensure mission force survivability and accomplishment of the mission's objectives.

Assault airlift was able to heavily bolster the mission force's relative superiority through the tenets of assault airlift, with the minor exception of the absence of aerial refueling, an option that may not have been available due to undisclosed technological constraints. The exercise of these tenets simplified the overall mission plan by decreasing the variables the mission force would be forced to contend with. It increased the speed of the assault force's infiltration and exfiltration, and enabled the fastest possible actioning of the objective. Assault airlift enabled the largest possible impact of the element of surprise by allowing the assault force to pick the means, time, and place of engagement with the enemy. The ground assault force was able to directly infiltrate the compound in a manner that allowed them to overcome the occupants in an aggressive and overwhelming manner.

Through these observations and analyses, the theory of special operations can be successfully augmented with the theory of assault airlift. Assault airlift can increase the likelihood of overall SOF direct-action mission success through McRaven's principles of simplicity, speed, and surprise. This can be accomplished by integrating and synchronizing assault airlift assets with the other functional elements of the mission force. It requires the key tenets of assault airlift be taken into consideration for the operationalization of this total mission force. All of these surmises lend themselves to a number of follow-on recommendations.

B. RECOMMENDATIONS

Based on a review of these case studies and their comprehensive analyses, recommendations can be made regarding the conduct of SOF direct-action missions; the

effectiveness of jointly comprised SOF endeavors to train and equip the force; the most easily networked joint organizational structures; and efforts for promotion of precepts associated with the observable successes of relationship-focused leadership in the joint SOF enterprise.

1. Operations

SOF direct-action operations desiring to achieve maximized relative superiority and extraction of the mission force should be planned, prepared, and conducted with the inclusion of the tenets of assault airlift whenever air is the preferred means of transportation. Inclusion of these tenets will increase the relative superiority of the attacking force and specifically bolster their ability to survive and return home safely. This acknowledges and incorporates the requirement for mission force survival as a prerequisite to overall mission success in all but the most *in extremis* cases.

The most successful direct-action operations studied displayed relationship-focused leadership from the operational commander. Operation KINGPIN reinforced this relationship-focused leadership by utilizing functionally specific component commanders. This reinforcement may have been necessitated by a need to provide further bridging mechanisms between the disparate organizations the assault force components were developed from. But in both successful cases, strong and balanced relationship-focused leadership, with loyalty flowing up the chain of command and service flowing down the chain of command, was present. This was the case with General Manor in Operation KINGPIN and with Admiral McRaven in Operation NEPTUNE'S SPEAR. When relationship-focused leadership was not present at the operational commander's level, the consequences of a dis-integrated and unsynchronized mission force led to tactical, operational, and (in at least one case) even strategic mission failure. This was observed in Operation EAGLE CLAW when the force was not adequately integrated for operationalization and in Operation ANACONDA when the operational commander was not able to integrate the forces employed or align them with the strategy utilized.

For jointly composed SOF direct-action operations, the leadership selected should consist of relationship-focused leaders potentially augmented by functionally specific

component commanders. Operational commanders should be both credible and prepared to expand their understanding of functional assault force components by humbly addressing the needs of various functional specialties they may, themselves, be less familiar with. This may require "rolling up one's sleeves" and taking a lesson in an area of relative significance. Relationship-focused leadership acknowledges that a lack of familiarity or understanding does not equate to a lack of overall importance. Strong functional commanders can help bridge the synchronization gaps between diverse organizations when operations require inclusion of more disparate functional components. They can help provide competent technical expertise in areas that operational commanders may need to be educated in.

Operations aimed at utilizing SOF designed for success through relative superiority should avoid misalignment of mission force capabilities with the strategic method of employment, as was the case in Operation ANACONDA. Mission forces that are built in size, scope, and capability to achieve relative superiority are less successfully when directly pitted against numerically superior conventional forces in attrition warfare. Such instances represent a misalignment between the designed mission force structure and the strategic employment of these assets. The consequences can result in mission force capture or elimination, which equates to overall mission failure in the preponderance of cases.

2. Equipment and Training

SOF command leadership and elected officials should focus on obtaining and developing platforms, technology, research, and acquisitions that meet the requirements of the tenets of assault airlift. This largely means addressing the apparent shortfalls, particularly suppressive fire, securely integrated long-range communications, and joint training that incorporates long-distance penetration missions utilizing hardened aerial refueling assets and tactics. Assault airlift assets should be armed with suppressive fire capabilities that do not directly sacrifice their required flexibility and maneuver. Assault airlift assets should be modified and/or developed with the antennas, connectivity, and access to provide integrated situational awareness for all assault force components. These

assets should be used to train regularly in joint and possibly even combined environments, using highly integrated mission profiles. These training exercises should demand synchronization of mission force assets, and they should include scenarios build around the utilization of the aforementioned technologies and tactics. They should exercise the realistic operation of the kinds of joint communications, aerial refueling, and long-distance penetration tactics that will be required in real-world scenarios.

Suppressive fire and C4ISR capabilities become ever increasingly possible with the advent and employment of disposable defensive, offensive, and surveillance escort drone technologies. These types of technologies could be developed in directions that allow smaller, cheaper, and faster drone aircraft to provide the defensive, offensive, and situational awareness augmentations required by assault airlift assets without sacrificing the fuel or personnel inherently required onboard assault platforms. To move in this direction, developers and leadership can focus on the use of expendable drones: increasing quantity and decreasing costs. This will provide a high-low mix of high-value low-quantity human assets (manned platforms and teams) augmented with a low-value high-quantity fleet of drone offensive, defensive, and situational awareness weaponry (networked autonomous and semi-autonomous swarms possibly governed by artificial intelligence).

C4ISR can also benefit from the planned inclusion of relevant new technologies, such as clouds, artificial intelligence, and merely acknowledging the need for aircraft to be equipped with the capabilities to support networked communications. Cloud storage and information sharing can allow increased magnitudes of data to be made available to air and ground operators as well as command cells. Artificial intelligence could be used to ensure the appropriate information is provided in a relevant manner to functional components without diminishing the pipeline of total information available. Artificial intelligence could also be used to essentially highlight the information to an operator that is most likely to be pertinent to his or her specific functional task. Lastly, it could be used to determine the most effective swarm tactics independently of the observations of human developers.

One of the easiest and most immediately achievable recommendations is for SOF to plan for the speed and bandwidth future conflicts demand. The demand for a combined and common operating picture has always been present since the advent of aerial combat delivery of ground forces, but the technology is only just now reaching the point where it can be realistically implemented.

Aircraft should be armed with the multi-spectrum antennas, charging stations (power outlets), onboard routers, wireless-fidelity connectivity (Wi-Fi), and Ethernet access ports to connect operators to both inter- and intra-nets. Military aircraft are constantly receiving upgrades to be outfitted with additional antennas and radios because advancing warfare technologies demand connectivity. It is time for SOF to recognize the combined needs of their total mission force and incorporate situational awareness access through assault airlift platforms. These platforms lend themselves as hosts for these services as they are already designed to penetrate to the objective area as part of the mission force construct. Antennas should be installed that allow multispectral use so that whatever long-range communication means are available, these platforms will be versatile enough to take advantage of them. These antennas should be added in addition to the antennas pilots already need to operate their aircraft, as the requirement is, itself, in addition to the basic operation of the aircraft.

Assault airlift platforms should be equipped with the basic power and connectivity means that will allow a ground assault force to remain engaged during transportation, able to adjust to the most current battlefield assessments through the use of smart technology. Individual operator smart devices can be used to keep operators interconnected and fully aware of operational mission changes. Interconnectedness could easily be provided by airborne mobile-cellular networks attached to assault airlift assets that are already hardened for clandestine penetration to the objective area. The use of radio frequency and cellular networks in this capacity may be limited by battlefield environments, but the capabilities they will provide more than outweigh any argument against their development. Secure long-range communications must continue to be integrated to ensure mission force adaptability in the most unhospitable of environments.

Highly integrated mission profiles, to include scenarios build around the utilization of these technologies and exercising the realistic utilization of the kinds of aerial refueling and long-distance penetration tactics that will be require in real-world scenarios (against either permissive environments or those of a near-peers) should be increasingly developed. All of the technological advancements and situational awareness modification investments will fail to pay off if operators are not given the opportunity to use them in a fully integrated manner. Mission training scenarios should be realistically designed to exercise these systems, to enhance the interoperability of the mission force components.

3. Closer-Knit Joint Organizations

Organizational structures in SOF have advanced considerably since the advent of MACV-SOG and USSOCOM, but the community's formalization is still relatively new in comparison to the entrenched bureaucracies and influences of the traditional conventional service departments. Interconnectedness between SOF organizations should continue to grow, and leaders should continue to focus on actions that will facilitate this maturation of the SOF enterprise at large. Organizational structures should become inclusive of air, ground, sea, and potentially someday even space assault force elements. No longer should transportation mediums define how joint SOF communities are arranged. No longer should conventional backgrounds serve as a means of defining the roles or identities of SOF operators. Joint-bases and collocated functional components should be integrated down to a single level above that of a functional difference. Operators should be able to walk down the hall or across the street to interact with what are now interservice functional counterparts. This interaction should not require long-distance communication or a trip to another base, state, or country. Leadership should focus on the development and implementation of more fully integrated training curriculum and organizational structures that will facilitate the maturation of the SOF enterprise.

Inherent in the integrated organizational structure aforementioned is the issue of collocated and integrated SOF stations: joint-basing. Working relationships between air

and ground units should not require operators to regularly be challenged to overcome the distances that currently separate them from developing higher levels of mutual trust and credibility. These functional components should be collocated onto the same facility. Facilities should be carefully selected to ensure both the air and ground assets' limitations and capabilities are taken into account for both training and operational employment. In addition to joint-bases, sea-basing could prove to be an adequate means of overcoming at least some of the logistical constraints associated with mobilizing an expeditionary mission force to multiple environments to ensure continually realistic and integrated training scenarios are achieved. These organizational structure and force collocation changes will almost inevitably lead to a more fully integrated SOF mission force. It will lead to more highly integrated training curriculums, and more refined organizational structures.

However, organizational constructs, joint curriculums, and collocated forces are not sufficient to engender the adaptations necessary to further synchronize and integrate these joint mission forces without the proper leadership at the helm. It is possible that without the proper leadership at the helm, these changes could lead to a cross-culture competition between functional components. It could lead to a competition wherein the winner subjugates other functional components into a subordinate relationship. This type of misalignment could lead to consequences akin to those experienced during Operation EAGLE CLAW or ANACONDA. Avoidance of such pitfalls can be achieved through allowing USSOCOM a higher degree of latitude in owning the selection criteria of the leaders it chooses to develop.

4. Relationship-Focused Leadership

Increased USSOCOM influence in selection criteria for USSOCOM operators and leaders will directly increase the effectiveness of force employment through a decrease of cross-functional conflicts. Currently, USSOCOM operators and leaders are selected, in part, based on meeting the requirements of their ancestral parent conventional service. The Air Force advances its SOF aviators based on its own conventional criteria. The Army does the same with its Special Force operators based on its own criteria, as does

the Navy with its SEALs. This process results in SOF leaders having been advanced into competitive positions for SOF leadership based not on their interoperability or qualities that increase their benefit to the SOF enterprise, but on their ability to compete within their parent conventional DOD department. Having worked in SOF is seen as a box to be checked along the path to a successful conventional career. USSOCOM is left managing personnel, and currently retains few options when it comes to managing talent within its various departmental branches that supply it with personnel.

Unfortunately, the same qualities that conventional services warrant as promotable internally do not necessarily translate into the same qualities necessary to synchronize and integrate a joint mission force organization.

If USSOCOM is to continue in its role of refining and maturing the capabilities of its SOF enterprise, it must have its powers of influence over the advancement, training, and education of its officers increased. USSOCOM should be empowered to determine the precepts it finds best suited to succeed in operationalizing a functionally diverse mission force. This will allow the organization to not only foster the leaders it needs today, but it will empower it to develop the leaders that it will need to face the changing dynamics of tomorrow.

Perhaps the research of the likes of Leo Blanken, an Associate Professor at the Naval Postgraduate School, Monterey, CA, which addresses the incentive structures of organizations, can provide insights. In his 2015 book, *Assessing War: The Challenge of Measuring Success and Failure*, edited by Hy Rothstein, and Jason J. Lepore, Blanken addresses how conventionally driven goals and incentives affect the decision makers inside irregular warfare military organizations.[1646] He discovered that quantitative metrics are perceived to be required by conventional leadership mechanisms for determining selection and advancement criteria. Leaders are selected based on metrics that function best to measure conventional strategic merits. This approach has been

[1646] Blanken, *Assessing War*.

retained as a legacy system by irregular warfare structures as they have developed, often to the detriment of mission effectiveness and even mission success.[1647]

If the most important aspects of successful leaders are not being measured, then perhaps the metrics used for personnel and talent management should be reexamined Adjusting metrics of performance, from conventional to less-conventional metrics, may help identify the most effective leadership precepts in joint SOF environments. Perhaps research akin to that provided by Paul R. Andrews, Jr, and Brett A. Stitt in their 2017 NPS master's thesis, "Human Capital Management of Air Force SOF: Leadership Identification, Selection, & Cultivation," could be expanded to help better identify the leadership precepts that will be most effective in SOF organizations.[1648] Perhaps there are ways to measure character qualities such as a lack of arrogance and ego; the ability to actively listen, and the ability to build bridging relationship. Perhaps gathering information from the subordinates and internal to the SOF institutions would serve as a better source for determining effective joint SOF leaders than the current conventional metrics. Perhaps including survival of the mission force in the strategic model will increase identification of appropriate incentive and selection processes for measuring success-and-failure in SOF organizations. These or other steps might help lead to new metrics by which future SOF leaders are identified. The results of such research could lead to a more effectual way of selecting effective future leaders in the overall joint SOF enterprise than the conventional metrics currently employed.

Blanken stated in a 2017 Naval Postgraduate lecture that "risk aversion largely stems from measures of performance."[1649] Such a concept implies that adjusting the overall mission concept of what constitutes success can significantly affect the level of risk mission assault force operators and their leaders are willing to accept. Such decision making metrics could have significant impacts and may warrant additional research.

[1647] Blanken, *Assessing War*.

[1648] Major Paul R. Andrews, Jr., and Major Brett A. Stitt, "Human Capital Management of Air Force SOF: Leadership Identification, Selection, & Cultivation," (master's thesis presentation, Naval Postgraduate School, Monterey, CA, November 10, 2017).

[1649] Leo J. Blanken, "Future Security Environment and effects on Airpower," (Guest Lecturer, Naval Postgraduate School, Monterey, CA, November 07, 2017).

Only rudimentary observations have been made here regarding the precepts of the most successful relationship-focused leaders. The willingness of followers to bring their issues to leadership, especially when they know leaders may be unfamiliar with the technical aspects of an issue, may be a direct reflection upon the quality of a leader, in a relationship-focused leadership capacity. Finding ways identify and measure such characteristics remains a challenge to be addressed. Moral character, professional credibility, and the ability to foster relationships and mutual trust are foundational to successful SOF leadership. Further research to determine the precepts associated with successful relationship-focused leaders in the joint environment warrants additional attention. Operational commanders, leadership teams, and planners should be positioned and advanced based on their ability to integrate and synchronize joint, yet functionally heterogeneous, assault force components.

C. EPILOGUE

In conclusion, special operators will increasingly be called upon to fight against the difficulties exuded from weak and failing states, from dark networks of violent extremists, and the ever increasingly complex battlespace domains. Their success or failure, as well as the success or failure of the nations they represent, will be largely contingent upon understanding the strategic methods and tactical tools they employ.

Assault airlift can contribute to a higher degree of success in SOF direct-action missions, independent of mission objective achievement, by bolstering the likelihood that SOF assault forces can return home safely.[1650] In today's casualty-sensitive political

[1650] ***Assault Airlift:***

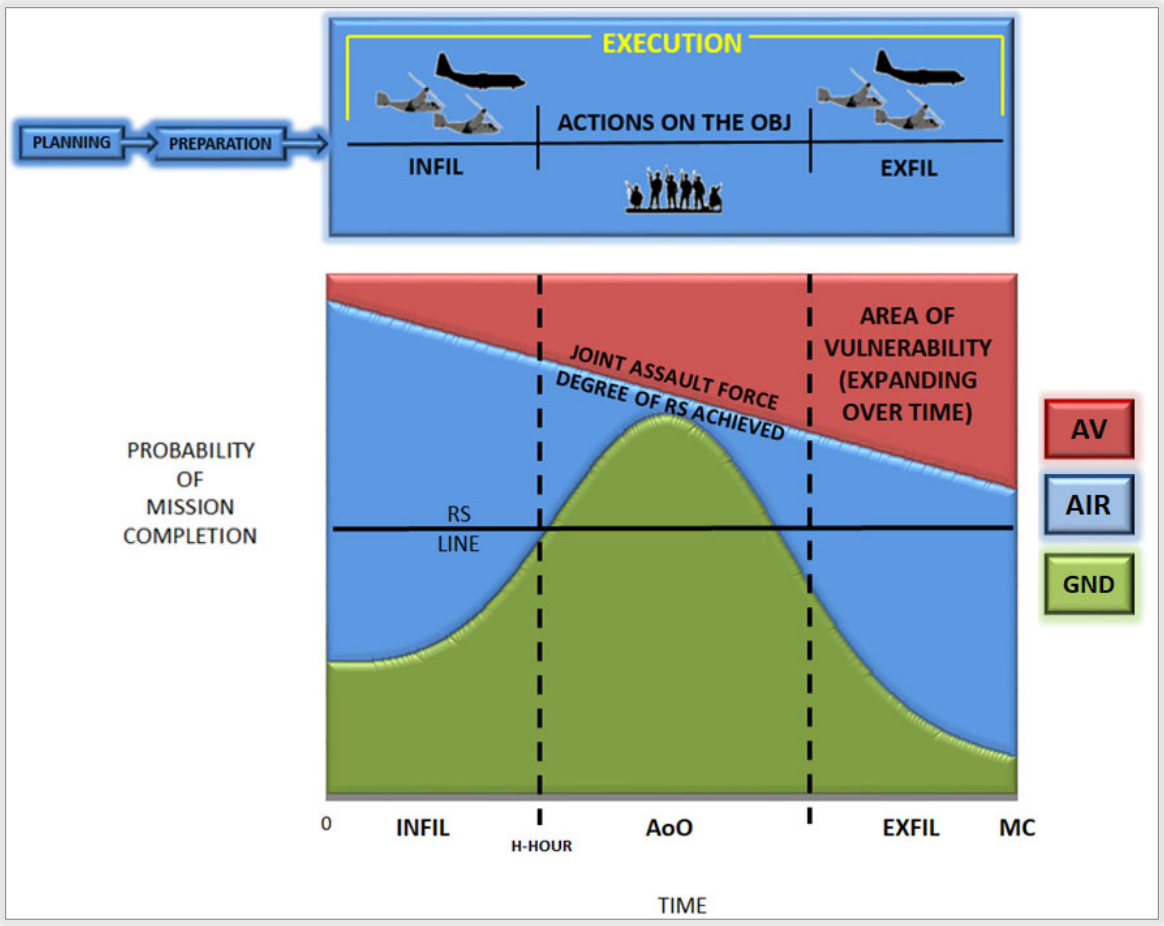
> *The synchronized and integrated employment of air assets into a direct-action mission assault force in pursuit of relative superiority to achieve operational mission success through the ability to clandestinely penetrate denied or politically sensitive airspace for rapid and precise infiltration and exfiltration of a special operations mission assault force.*

environment, success cannot be achieved in SOF direct-action unless one can get their forces in and back out safely. This concept of force survival as a prerequisite to mission success, in all but the most *in extremis* cases. It is evidenced in the news regarding the Yemen raid of 2017 and validated through historical case studies, such as the Son Tay prisoner of war rescue mission of 1970 and the Usama bin Laden Abbottabad strike of 2011.[1651] President Barack Obama acknowledged that the ability to safely extract the assault force was a primary consideration in the "go-ahead" for Operation NEPTUNE'S SPEAR, the bin Laden raid.[1652] Other case studies, such as Operation EAGLE CLAW and Operation ANACONDA, bear this same characteristic (see Figure 160).

This definition was constructed, in part, from the mission statements of the operational units who are most closely associated with assault airlift: Those of the 160th Special Operations Aviation Regiment (160th SOAR) and Air Force Special Operations Command (to include the 1st Special Operations Wing (1st SOW), the 27th SOW, the 352d SOW, and their subordinate units). "U.S. Army Special Operations Command, 160th Special Operations Aviation Regiment (Airborne);" "8th Special Operations Squadron;" "15th Special Operations Squadron;" "20 SOS Green Hornets;" "9th Special Operations Squadron;" "352d Special Operations Wing;" 7th Special Operations Wing, 352d Special Operations Wing, RAF Mildenhall, 2016.

1651 Vanden Brook and Korte, "Three Probes Opened into SEAL's Death in Controversial Yemen Raid;" Gargus, *The Son Tay Raid*; Bergen, "Architect of bin Laden Raid."

1652 Gaouette, "5 Years Ago the U.S. Killed Osama bin Laden."



Ability to contribute to relative superiority is through the use of McRaven's principles of simplicity, speed, and surprise.

Latent Potential of functional assault force components is displayed throughout the stages of mission execution: infiltration, actions-on-the-objective, and exfiltration.

Figure 160. Latent Potential of Assault Force Elements to Contribute to Relative Superiority[1653]

The current "theory of special operations" focuses narrowly on attaining relative superiority, a decisive advantage of a smaller force over a larger and intrinsically advantaged defensive force, during the infiltration and actions-on-the-objective stages of

1653 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

mission execution.[1654] It falls short of identifying a critical component nominally necessary for overall mission success in the majority of contemporary cases - adequate mobility for the extraction and survivability of the mission assault force.[1655]

[1654] Relative superiority exists when a smaller attacking force has the ability to execute a simple plan decisively, with violent speed and precision, to achieve a single objective against a surprised but larger defensive force. McRaven posits that relative superiority exists as an abstract concept that can be used as "a powerful tool to explain victory and defeat." He defines is as follows:

> ***Relative Superiority:***
>
> *"Relative superiority is a condition that exists when an attacking force, generally smaller, gains a decisive advantage over a larger or well-defended enemy."* McRaven, *SPEC OPS*, 4.

Five of the eight case studies Admiral William H. McRaven presents in his foundational book, *SPEC OPS,* arguably represent planned "one-way missions," where the final stage of execution, exfiltration, was either infeasible or ignored all together, resulting in a high probability of mission force elimination or capture. The German glider assault on Eben Emael was arguably a "one-way mission" (29–72). Their survival was contingent upon both mission success and reinforcements from conventional forces. They did not otherwise have a viable extraction plan (46). Alexandria (73–114) was planned as a "one-way mission" (75–77), as was Saint-Nazaire (125) (115–162). The Mussolini rescue (163–200) was planned and authorized with a perceived 80% loss rate (178–181), and the final exfiltration plan for Mussolini left the majority of the remaining German assault force behind (187). The escape plan for the midget submarines that attacked the Tirpitz was not feasible (201–244), as there was inadequate time for their extraction before their explosives detonated (231). The Ranger raid on Cabanatuan, a prisoner of war (POW) rescue mission, was necessarily a "two-way mission" (245–286), though their most vulnerable moment was during the extraction phase (276). Operation KINGPIN was also planned as a POW rescue mission for the prisoners perceived to be at Son Tay, thus representing a "two-way mission" (287–331). Lastly, the Israeli Raid on Entebbe was a hostage rescue attempt that was planned as a "two-way mission" (333–380). Collectively, these examples arguably represent five "one-way missions" and three "two-way missions." Of note, all of the "two-way missions" required extraction of objective personnel. McRaven, *SPEC OPS*, 29–72, 46, 73–114, 75–77, 125, 115–162, 163–200, 178–181, 187, 201–244, 231, 245–286, 276, 287–331, 333–380.

[1655] Adapted from McRaven's Model in *SPEC OPS,* the modeling concepts of the economist Milton Friedman, and the observations of Dr. Kalev I. "Gunner" Sepp, Dr. Jesse R. Hammond, and Dean Gordon H. McCormick, faculty of Defense Analysis at the Naval Postgraduate School (NPS), Monterey, CA.

Dr. Hammond is an assistant professor in the Department of Defense Analysis at the Naval Postgraduate School. He assisted in the identification of survival of the mission force as a prerequisite to overall mission success. He also assisted in the refinement of the graphical representations, modeling, and methodology utilized to perform this research, generate these models, and reach these conclusions.

Dr. Sepp is a retired Special Forces (Green Beret) Army Colonel, former Deputy Assistant Secretary of Defense for Special Operations Capabilities, and a Senior Lecturer in the Department of Defense Analysis at NPS. He contributed the idea that each assault element retains the "latent potential" to contribute to relative superiority at differing levels during the various stages of mission execution.

Dean McCormick, as a member of the RAND Corporation, developed the foundational "Diamond" counterinsurgency model still used to simplify the complexities of insurgent conflicts in military and academic forums. Dean McCormick made the observation that mission execution is subdivided into a three-part sequential process, the final portion of which, exfiltration, is required in all but the most *in extremis* cases in order to achieve mission success.

Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS*, 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.,

Case study analysis has illuminated how the demand for a "two-way mission" can be satisfied by using SOF assault airlift to capitalize on McRaven's theory of relative superiority via the principles of *simplicity*, *speed*, and *surprise*. Operations KINGPIN, EAGLE CLAW, ANACONDA, and NEPTUNE'S SPEAR each express this same result by illuminating the key aspects of assault airlift that define its presence and contributions to mission force survival. These key tenets of assault airlift are: *clandestine bypass of enemy defenses*; *precise direct-or-offset delivery and extraction*; *suppressive fire*; *versatility, flexibility, and maneuver*; *securely integrated long-range communications*; *environmental and adversarial threat intelligence*; and *aerial refueling*. Each of these characteristics individually and cumulatively represent higher grades of relative superiority achievement through assault airlift and the maximized functional use of airlift assets as contributing mechanisms toward the probable survival of the mission assault force. The resultant effect is a preference for assault airlift when simplicity, speed, and surprise need to be maximized for mission accomplishment in a time-sensitive environment (see Figure 161 and Figure 162).

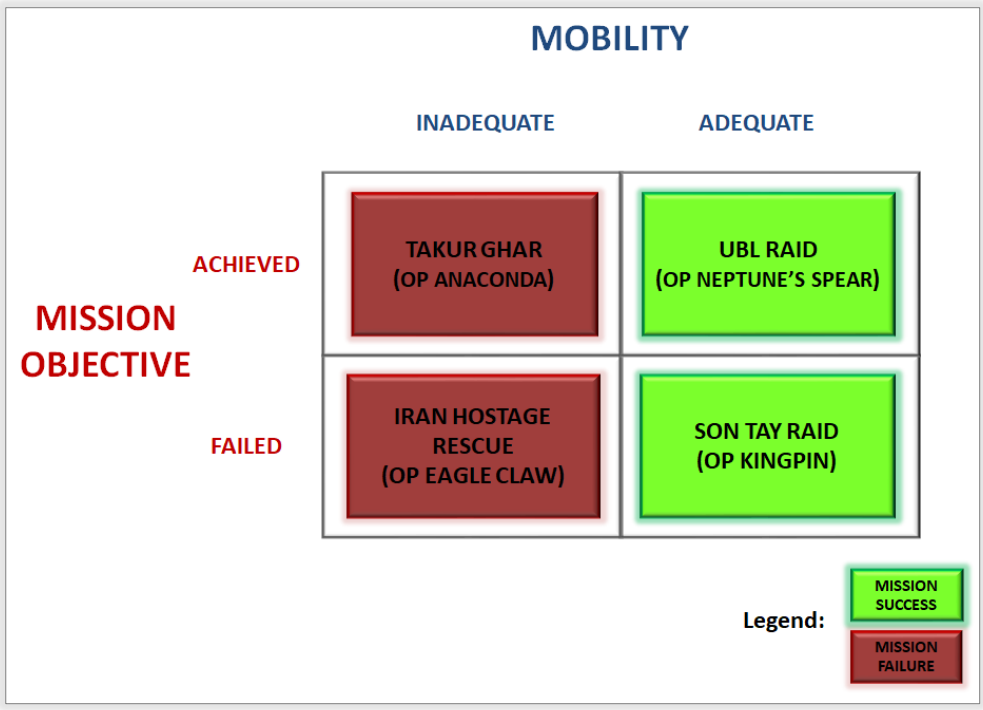
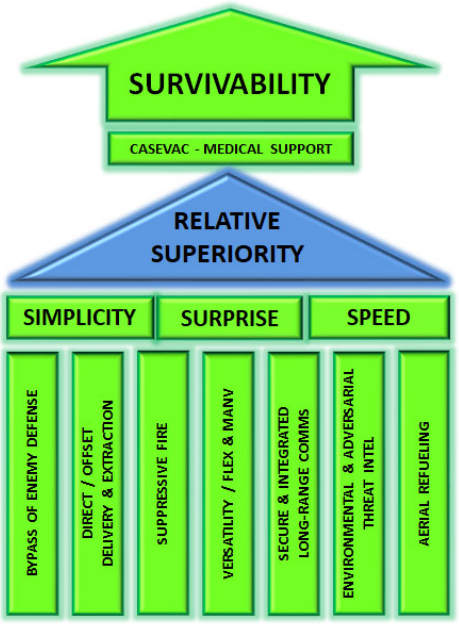


Figure 161. Adequate Mobility: A Prerequisite to Overall Mission Success, Independent of Mission Objective Achievement[1656]

1656 Adapted from Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.



The tenets of assault airlift bolster relative superiority via the principles of simplicity, surprise, and speed, increasing likelihood of mission force survival and overall mission success.

The principles of simplicity, speed, and surprise, as well as the concept of relative superiority are adapted from McRaven.

Figure 162. Tenets of Assault Airlift Can Increase Mission Force Survivability[1657]

Assault airlift is not achievable without high levels of mission force integration. These levels of achievement are only made possible thorough synchronization of heterogeneous individuals hailing from the various organizational backgrounds of the conventional service branches. Yet, the leadership selection processes and organizational structures currently employed remain heavily influenced by these ancestoral roots designed to implement attrition warfare strategies. This design is inefficient at providing the level of integration necessary to achieve a joint SOF mission force capable of operating with relative superiority as its strategic means. It produces leaders overly focuses on stove-piped processes and skillsets aimed toward a singular end and underestimates the value of developing leaders focused on synergizing the diverse individuals that make these operations happen.

1657 Adapted from McRaven, *SPEC OPS,* 1–23.

Relationship-focused leadership, with its balanced prioritization between a mission focus and empowering subordinates, affords the innovative environment necessary to ensure the heterogeneous concerns of all mission assault force elements are identified and addressed. Traditional technical leadership styles, though ostensible capable of achieving comparable success in conventional command structures, are less able to achieve this required level of synergy in SOF due to a focus on parent service priorities and identity roles that magnify inter-service tensions. Traditional technical leadership struggles to identify and address the disparate needs of functionally heterogeneous assault force elements. Without the exceptional strength and humility of relationship-focused leaders stepping forward to fill the gap between disonate organizational structures, inadequate integration occurs to achieve assault airlift, as evidenced in Operations EAGLE CLAW and ANACONDA (see Figure 163).[1658]

[1658] Lu Fong and Chua, "Operation EAGLE CLAW, 1980;" Andres and Hukill, "ANACODA;" Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, September 11, 2017.

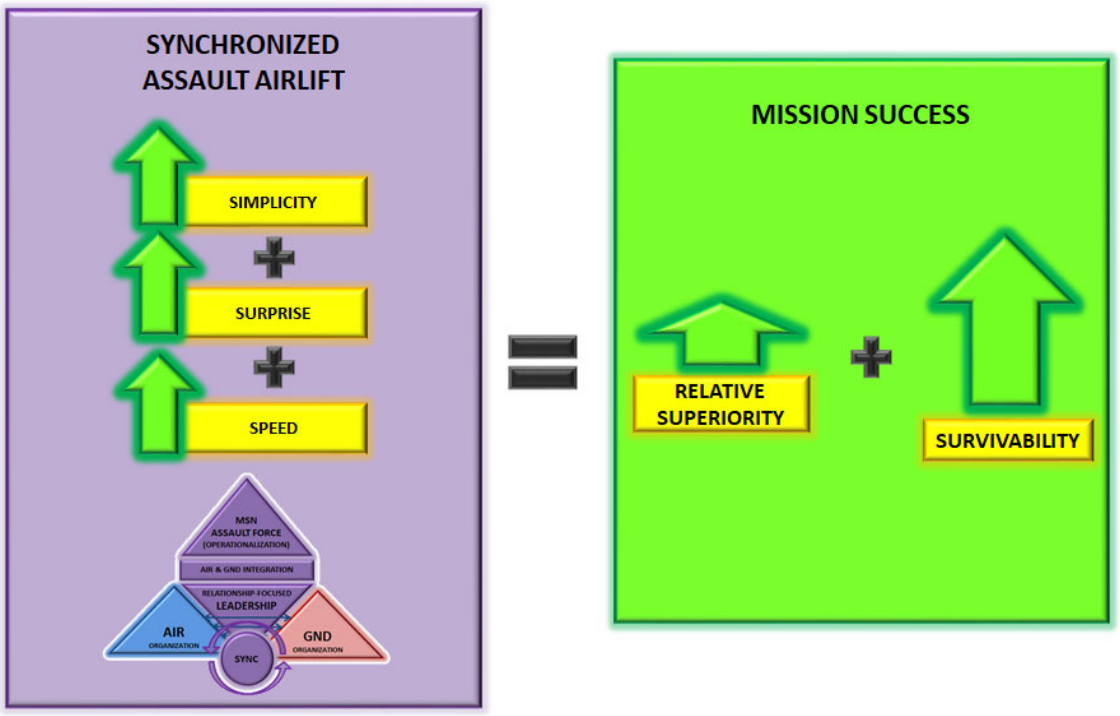


Figure 163. Relationship-Focused Leadership Synchronizes a Mission Force, Increasing Probability of Mission Success[1659]

In order to provide maximized benefits to SOF direct-action mission forces, air elements should be even more integrated and synchronized with their ground counterparts, an effect historically proven best achieved through close-knit joint organizations and the empowering of relationship-focused leadership. By investing in the leaders and joint organizational structures proven best able to achieve direct-action mission success, senior leaders and elected officials can increase the probability of mission success through added resiliency and survivability in the mission force construct.

1659 Adapted from Friedman, *Capitalism and Freedom*; Dr. Jesse R. Hammond, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017; Dr. Gordon McCormick, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2016; McRaven, *SPEC OPS,* 1–23, 384; Dr. Kalev I. Sepp, Thesis Advisor Meeting, Naval Postgraduate School, Monterey, CA, 2017.

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