

INDIA'S GOLDWATER-NICHOLS MOMENT: DOCTRINAL
AND ORGANIZATIONAL APPROACH TO JOINTNESS
IN THE INDIAN ARMED FORCES

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RAJA GNANAPRAKASAM, MAJOR, INDIAN ARMY
B.S., Jawaharlal Nehru University, National Defence Academy, Pune, India, 2007

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Name of Candidate: Major Gnanaprakasam Raja

Thesis Title: India's Goldwater-Nichols Moment: Doctrinal and Organizational
Approach to Jointness in the Indian Armed Forces

Approved by:

_____, Thesis Committee Chair
Lieutenant Colonel James D. Ballard, M.A.

_____, Member
David W. Holden, Ph.D.

_____, Member
David B. Batchelor, M.A.

Accepted this 12th day of June 2020 by:

_____, Acting Director, Office of Degree Programs
Prisco R. Hernandez, Ph.D.

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ABSTRACT

INDIA'S GOLDWATER-NICHOLS MOMENT: DOCTRINAL AND ORGANIZATIONAL APPROACH TO JOINTNESS IN THE INDIAN ARMED FORCES, by Major Raja Gnanaprakasam, 166 pages.

On 1 January 2020, General Bipin Rawat became the first Chief of Defense Staff (CDS) of India after retiring as the Chief of Army Staff. Similarly, seven decades earlier in 1949, the U.S. created the post of Chairman of Joint Chiefs of Staff (CJCS) as part of post-World War II defense reforms. Nonetheless, it took the U.S. almost another four decades to enact the landmark Goldwater-Nichols Act in 1986 to foster Jointness in their armed forces. The author draws suitable lessons for the Indian Armed Forces from the U.S. experience by comparing the evolution of Jointness in the U.S. and Indian Armed Forces.

The thesis, based on this comparison, recommends doctrinal and organizational measures to ensure that the appointment of CDS becomes India's Goldwater-Nichols moment and not the CJCS moment. The author utilizes the operational design framework to develop a doctrinal and organizational approach to Jointness in the Indian Armed Forces. The doctrinal approach recommends three lines of effort: issuing comprehensive doctrine primer, establishing doctrine centers, and improving Jointness in the doctrinal process. Likewise, the organizational approach comprises three lines of effort: updating current joint doctrines, clarifying policies on joint forces, and establishing a specific role for the CDS.

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ACRONYMS

ADCON	Administrative Control
ADP	Army Doctrine Publication
ANC	Andaman and Nicobar Command
ATP	Army Techniques Publications
BCT	Brigade Combat Team
C-in-C	Commander-in-Chief
CADD	Combined Arms Doctrine Directorate
CCDR	Combatant Commander
CCJO	Capstone Concept for Joint Operations
CCMD	Combatant Command
CCS	Cabinet Committee on Security
CDS	Chief of Defense Staff
CENJOWS	Centre for Joint Warfare Studies
CINCAN	Commander-in-Chief of the Andaman and Nicobar Command
CJCS	Chairman of Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
CNO	Chief of Naval Operations
COCOM	Combatant Command (Command Authority)
COSC	Chiefs of Staff Committee
DCA	Defense Cyber Agency
DMA	Department of Military Affairs
DOD	Department of Defense

DOTMLPF-P	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, and Policy
DSA	Defense Space Agency
DSSC	Defense Services Staff College
FM	Field Manuals
GCC	Geographic Combatant Command
GFM	Global Force Management
GOM	Group of Ministers
GNA	Goldwater Nichols Act
GS	General Staff
HQ	Headquarters
IDS	Integrated Defense Staff
IPKF	Indian Peacekeeping Force
JALD	Joint Air-Land Doctrine
JCIDS	Joint Capabilities Integration and Development System
JCS	Joint Chiefs of Staff
JDIAF	Joint Doctrine for Indian Armed Forces
JFC	Joint Force Commander
JP	Joint Publication
JTD	Joint Training Doctrine
JTF	Joint Task Force
KRC	Kargil Review Committee
LWD	Land Warfare Doctrine
MOD	Ministry of Defense
NDA	National Defense Academy

NDU	National Defense University
OFC	Overall Force Commander
OPCON	Operational Control
PE	Peace Establishment
PM	Prime Minister
SD	Staff Duties
SFC	Strategic Forces Command
SHQ	Service Headquarter
SOD	Special Operations Division
TACON	Tactical control
TDA	Table of Distribution and Allowances
TOE	Table of Organization and Equipment
UCP	Unified Command Plan
U.S.	United States
USCYBERCOM	United States Cyber Command
USINDOPACOM	United States Indo-Pacific Command
USSOCOM	United States Special Operations Command
WE	War Establishment

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CHAPTER 1

INTRODUCTION

The effective and efficient organization of the armed forces of a nation facilitates its use as a potent instrument of statecraft. More so for India with two nuclear-armed neighbors—Pakistan and China—along unsettled borders. The armed forces guarantee territorial integrity and ensure the security and stability of a nation. Also, when called upon, they impose the will of the state by various means, including the use of force, to secure the nation's objectives. This unique capability of the military instrument to use force gives credibility to other instruments of national power. Hence, the primary concern for a nation should be the effectiveness and efficiency of its armed forces. Effectiveness refers to the accomplishment of assigned objectives and achievement of desired results; whereas, efficiency relates to the optimum use of available resources. Adopting Jointness as the fundamental organizing construct aids a nation's armed forces to manage, organize, and employ its capabilities with better efficiency and effectiveness.¹

Jointness is the synergistic employment of capabilities of various services of a nation's armed forces for the achievement of a common objective.² It is also a continuum ranging from total Jointness among the services to autonomous operations of individual

¹ Anit Mukherjee, "Fighting Separately: Jointness and Civil-Military Relations in India," *Journal of Strategic Studies* 40, no. 1-2 (July 2016): 11, <https://doi.org/10.1080/01402390.2016.1196357>.

² Joint Chiefs of Staff (JCS), Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States*, including change 1 (Washington, DC: Government Printing Office, 12 July 2017), I-1, accessed 28 September 2019, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_ch1.pdf.

services. In most situations, the level of synergy achieved is a delicate balance between these two extremes. Despite the apparent benefits, the main obstacle for embracing Jointness in the armed forces is the tension that emanates from both internal and external forces. The internal concern arises due to the control of assets of one service by another service in a joint force. Whereas, in a democracy, the external concern involves civilian control over a strong, unified military. Consequently, in most of the armed forces, Jointness remains an enduring subject of professional discourse to ascertain the right level of Jointness suited to the circumstances.

Based on the lessons learned from World War II, major western countries, including the United States (U.S.), adopted Jointness as the basic organizing construct for their armed forces to be effective and efficient.³ Nonetheless, the dual concerns about civilian oversight of the military and internal autonomy of the services undermined the reorganization efforts. The U.S. had a tentative start towards Jointness by establishing the Joint Army-Navy Board in 1903.⁴ The next major step towards Jointness was the enactment of the National Security Act of 1947, which established a new unifying defense organization—the National Military Establishment—headed by the Secretary of Defense. Subsequently, the dual concerns restricted the ambit of the legislation leading to a severe flaw in the unified structure—the absence of unity of command. This weakness persisted despite legislative interventions in 1949, 1953, and 1958 and allowed parochial

³ Mukherjee, “Fighting Separately,” 7.

⁴ James R. Locher, *Victory on the Potomac: The Goldwater-Nichols Act Unifies the Pentagon* (College Station: Texas A and M University Press, 2002), 17.

service interests to dominate the national discourse on defense issues.⁵ Finally, in the early 1980s, three precipitating events in Iran, Lebanon, and Grenada highlighted the lack of Jointness and built legislative momentum to address the problems.⁶

The resulting Goldwater-Nichols Department of Defense Reorganization Act of 1986, also known as the Goldwater Nichols Act (GNA), became landmark legislation in defense reorganization for the U.S. The GNA directly addressed the root cause of the problem and firmly implemented the principle of unity of command.⁷ Since the enactment, the U.S. Armed Forces have taken immense strides towards achieving Jointness with its latest iteration termed as Multi-Domain Operations. A study of the events surrounding the enactment of GNA and the present state of Jointness in the U.S. Armed Forces has many lessons for Indian Armed Forces in its path towards Jointness.

The requirement for effectiveness and efficiency drives India's quest for Jointness. The unique circumstance of having two active unsettled borders with two nuclear-armed neighbors—Pakistan and China—dictates the Indian Armed Forces to be effective in guaranteeing territorial integrity. Moreover, India is a developing nation with

⁵ Locher, *Victory on the Potomac*, 25-27.

⁶ Congressional Research Service (CRS), CRS Report R44474, *Goldwater Nichols at 30: Defense Reform and Issues for Congress*, by Kathleen J. McInnis (Washington, DC: Library of Congress, 2 June 2016), 6, accessed 25 January 2020, <https://fas.org/sgp/crs/natsec/R44474.pdf>.

⁷ Unity of command is one of the twelve principles of joint operations, and it means that all forces operate under a single commander with the requisite authority to direct all forces employed in pursuit of a common purpose. See Joint Chiefs of Staff (JCS), Joint Publication (JP) 3-0, *Joint Operations*, incorporating change 1 (Washington, DC: Government Printing Office, 22 October 2018), A-2, accessed 29 January 2020, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf?ver=2018-11-27-160457-910; CRS, *Goldwater Nichols at 30*, 8.

varied requirements over finite resources available for nation-building. Hence, the efficient use of limited resources allotted to the defense of the nation becomes overriding consideration. In addition, India's status as an emerging global power with increasing regional responsibilities in the Indian Ocean region needs backing by a robust military capability. As a result, of late, Jointness has been at the heart of the defense reorganization debate in India.

Since India's independence in 1947, the requirement to maintain civilian control over the military prevented any meaningful progress towards Jointness.⁸ Nonetheless, the Kargil War with Pakistan in 1999, made the political hierarchy realize the importance of Jointness for Indian Armed Forces.⁹ Consequently, the government of India took several steps to improve Jointness by creating the Integrated Defense Staff and setting up tri-service commands. Nevertheless, these measures fell short of the mark in not appointing a Chief of Defense Staff (CDS) and not establishing fully integrated theatre commands. The government cited a lack of political consensus and opposition by the Indian Air Force as the reason for not appointing a CDS.¹⁰ Nonetheless, it perhaps took a military standoff with China in Doklam and three precipitating events, like the U.S., between 2015 and 2019 in the form of a cross-border raid in Myanmar, Uri surgical strikes, and Balakot airstrikes to once again trigger the political hierarchy to intervene and impose

⁸ Steven Wilkinson, *Army and Nation: The Military and Indian Democracy since Independence* (Cambridge, MA: Harvard University Press, 2015), 20-22.

⁹ Anit Mukherjee, *The Absent Dialogue: Politicians, Bureaucrats, and the Military in India* (New York: Oxford University Press, 2020), 167.

¹⁰ Mukherjee, "Fighting Separately," 23.

Jointness in Indian Armed Forces. The Indian Prime Minister (PM) Mr. Narendra Modi, possibly based on this realization, in his 73rd Independence Day speech on 15 August 2019, announced the creation of the post of CDS for the Indian Armed Forces citing two prominent reasons: the changing strategic environment and the necessity for uniform modernization across the three services.¹¹ The changing strategic environment entails that the Indian Armed Forces need to be effective, and the requirement for financial efficiency in India's pursuit for modernization. Subsequently, on 24 December 2019, the Union Cabinet headed by the PM approved the creation of the post of CDS with the primary task of promoting and bringing about Jointness within three years of the first CDS assuming office.¹² On 1 January 2020, General Bipin Rawat became the first CDS after retiring as the Chief of Army Staff.¹³

Purpose of Study

The thesis seeks to establish that India's quest for Jointness does not end but begins with appointing a CDS. Also, the quest requires changes across the DOTMLPF-P

¹¹ Government of India, Prime Minister's Office, "English rendering of Prime Minister Shri Narendra Modi's address to the Nation from the ramparts of the Red Fort on the 73rd Independence Day- August, 15, 2019," Press Information Bureau, last updated 15 August 2019, accessed 31 March 2020, <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1582107>.

¹² Government of India, Cabinet, "Cabinet approves creation of the post of Chief of Defence Staff in the rank of four star General," Press Information Bureau, last updated 24 December 2019, accessed 6 March 2020, <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1597425>.

¹³ Government of India, "General Bipin Rawat assumes charge of first Chief of Defence Staff; Vows to create more synergy between the Armed Forces," Press Information Bureau, last updated 1 January 2020, accessed 6 March 2020, <https://pib.gov.in/PressReleasePage.aspx?PRID=1598155>.

(doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy) construct. First, the thesis will focus on understanding the concept of Jointness and study its evolution in the United States and the Indian Armed Forces. Then based on the comparative study between the two armed forces, it will attempt to determine the effect of various elements contributing to Jointness. Finally, it will then suggest a suitable approach, as applicable to Indian circumstances, to achieve and sustain Jointness in the Indian Armed Forces.

Scope

Western countries such as Australia, Canada, the United Kingdom, and the United States have carried out significant defense reforms to achieve Jointness within their armed forces. The reforms carried out have valuable lessons for Indian Armed Forces in its quest for Jointness. Nonetheless, to narrow the scope, this thesis restricts itself to the study of defense reforms in the United States. Second, the appointment of CDS in India on 01 January 2020 is likely to have an external and internal impact on Jointness in Indian Armed Forces. The CDS as a principal military advisor will act as a primary external interface for Indian Armed Forces with the political leadership. In addition, the CDS will also establish suitable internal mechanisms to improve Jointness within the Indian Armed Forces. Of the internal and external impacts, this study will focus mainly on the internal dimension of Jointness through the lens of doctrinal and organizational reform for the Indian Army.

Primary Research Question

The primary research question is, how can the Indian Armed Forces achieve, sustain, and build upon the concept of Jointness in an India specific resource-constrained environment?

Secondary Research Questions

The thesis needs to answer several secondary questions to elucidate the primary question. They are, what is the current state of Jointness in the Indian Armed Forces as compared to the U.S. Armed Forces? What is the desired level of Jointness which the Indian Armed Forces should seek to achieve considering its unique circumstances? What are the various impediments in achieving this desired level? What approach should India adopt to overcome the impediments?

Definitions

There are specific definitions, which the readers should comprehend to understand the discussion to follow. Unless otherwise specified all definitions are quoted from U.S. Department of Defense (DOD) Joint Publication (JP) 1-02, Dictionary of Military and Associated Terms: -

Armed Forces. For the United States, it denotes the Army, Marine Corps, Navy, Air Force, and Coast Guard collectively.¹⁴ For India, it denotes the Army, Navy, and Air Force collectively.

¹⁴ Joint Chiefs of Staff (JCS), Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, as amended through 15 February 2016 (Washington, DC: Government Printing Office, 8 November 2010), 256, accessed 29 January 2020, https://fas.org/irp/doddir/dod/jp1_02.pdf.

Command. The authority that a commander in the armed forces lawfully exercises over subordinates by virtue of rank or assignment.¹⁵

Control. Control is also an authority that may be less than full command. A commander exercises it only over part of the activities of subordinate or other organizations placed under him.¹⁶

DOTMLPF-P. DOTMLPF-P is a problem-solving construct for assessing current and future capabilities, while managing change.¹⁷ The full form is doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy.¹⁸

Generating Forces. The Generating Force consists of those Army organizations whose primary mission is to generate and sustain the operational Army's capabilities for employment by joint force commanders (JFC).¹⁹

Jointness. In an armed force, synergistic employment of different services' capabilities and competencies based on trust and understanding among the services.
(Explained subsequently in the thesis)

¹⁵ JCS, JP 1-02, (2016), 40.

¹⁶ Ibid., 49.

¹⁷ Joint Chiefs of Staff (JCS) J-8, *JCIDS Manual* (Washington, DC: Government Printing Office, 31 August 2018), B-G-F-1, accessed 26 February 2020, <https://www.dau.edu/cop/rqmt/DAU%20Sponsored%20Documents/Manual%20-%20JCIDS,%2031%20Aug%202018.pdf>.

¹⁸ JCS, JP 1-02, (2016), A-52.

¹⁹ Headquarters, Department of the Army (HQDA), *Field Manual (FM) 3-0, Operations* (Washington, DC: Government Printing Office, February 2008), B-8, accessed 29 January 2020, <https://people.uwplatt.edu/~hood/FM3-0.pdf>.

Operating Forces. Those forces whose primary missions are to participate in combat and the integral supporting elements thereof.²⁰

Services. A branch of the Armed Forces of the United States, established by an act of Congress, which are: the Army, Marine Corps, Navy, Air Force, and Coast Guard.²¹ For India, they are the Army, Navy, and Air Force.

Unity of Command. The operation of all forces under a single responsible commander who has the requisite authority to direct and employ those forces in pursuit of a common purpose.²²

Assumptions

The thesis assumes that the recently created post of CDS and the institutional mechanism supporting the post will take some time to evolve because of the current operational commitment along the western and eastern borders, and resource crunch in the Indian Armed Forces. The thesis also assumes that the defense budget will remain below two percent of India's Gross Domestic Product in the near term. It also assumes that there will be no near-term sweeping developments in the Indian subcontinent, such as a war between India and Pakistan or China.

²⁰ Joint Chiefs of Staff (JCS), Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, as amended through 17 October 2007. (Washington, DC: Government Printing Office, 12 April 2001), 392, accessed 29 January 2020, <https://marineparents.com/downloads/dod-terms.pdf>.

²¹ JCS, JP 1-02, (2016), 215.

²² Ibid., 252.

Limitations

A significant limitation of this study is the emergent nature of Jointness in Indian Armed Forces because of the recent appointment of the CDS in India. The organizational structure, roles, and responsibilities of the CDS are still in a nascent stage. Hence, it may be challenging to suggest a model for Jointness based on the analysis of these initial structures. Therefore, the study limits itself to material published on the subject up to 5 February 2020. The other limitation is the restricted access to some government of India documents related to Jointness because of the classified nature of the government of India studies and reports about implementing Jointness in the Indian Armed Forces. Hence, the research limited itself to the study of data available in the open domain and drawing suitable inferences from an in-depth study of the evolution of Jointness in the United States Armed Forces.

Delimitations

This thesis has enormous potential for research, studies, and interpretation. The body of literature regarding the concept of Jointness and its necessity for the Indian Armed Forces is enormous. The qualitative analysis of all the facets of Jointness exceeds the scope and time available for this thesis. Hence, the study only uses authors having published materials about Jointness, and limiting the scope of the thesis to an objective analysis of Jointness in the U.S. and Indian Armed Forces. The second delimitation is to explore only those features of Jointness that have a doctrinal and organizational impact on Jointness. Thus, the thesis restricts the focus to a comparative analysis of the evolution of Jointness in the United States and Indian Armed Forces to draw doctrinal and organizational lessons for the Indian Armed Forces.

CHAPTER 2

LITERATURE REVIEW

Introduction

The literature review adopts the framework of History, Theory, Doctrine, and Reality to understand the concept of Jointness and its evolution in the U.S. and Indian Armed Forces. The chapter begins with a discussion about the history and evolution of the concept of Jointness. After that, the review glances at some theories which underpin the concept of Jointness. Then the review examines various doctrinal terms and definitions to understand the concept of Jointness. Finally, the chapter ends with a survey of the evolution of Jointness in the U.S. and the Indian Armed Forces.

History

Most of the literary discussion about Jointness commences around the period of World War II. Nevertheless, Roger A. Beaumont, in his book *Joint Military Operations: A Short History*, traces it to a much earlier time.²³ Beaumont identifies the interrelationship between the army and the navy by stating that, “Almost all naval battles until the air age were fought close to shore, linked to the progress and clash of armies, and frequently decided by fights between ship-borne infantry at sea.” Beaumont explains this further with classic examples of joint warfare from the Peloponnesian War of the fifth century B.C. between Athens and Sparta. As per Beaumont, “In the early and middle phases of the conflict, Athens was dominant at sea and Sparta on land . . . the war also

²³ Roger A. Beaumont, *Joint Military Operations: A Short History* (Westport, CT: Greenwood Press, 1993), 1.

saw the zenith and nadir of Athenian grand plans hinging on Jointness, as an undertaking that yielded great success led to greater failure later.” The success came at Pylos, where “a small-scale amphibious double envelopment” by Athenian forces captured a battalion of Spartan elite troops.²⁴ Consequently, enticed by the success at Pylos, Athens launched an ambitious but poorly conceived amphibious operation to conquer Syracuse on Sicily, resulting in the loss of 50,000 Athenians and 200 ships.²⁵ This example from the Peloponnesian War amply illustrates the concept of Jointness even in the ancient age.

Even Napoleon in the early nineteenth century understood the significance of joint operations when he remarked that Britain's amphibious potential of 30,000 troops in ships had tied down 300,000 of his army to defending the entire Atlantic coast of Europe.²⁶ The evolution of the concept of Jointness can also be linked to the organization of corps by Napoleon in 1800. The Napoleonic corps comprised of all arms such as multiple infantry divisions with their organic artillery, cavalry division, corps artillery, and support units. The corps organization brought together for the first time the three principal arms of the era the infantry, the artillery, and the cavalry under one single independent commander other than the commander in chief of the army. The new organization, by its flexible employment and self-contained nature, gave a decisive

²⁴ Beaumont, *Joint Military Operations: A Short History*, 3.

²⁵ Ibid., 4.

²⁶ Ibid., 12.

advantage to Grande Armée in its maneuvers.²⁷ The integration of the three principal arms into a Corps organization during the Napoleonic era can be compared to the integration of the three principal services, namely the army, the navy, and the air force under a Joint Task Force for Joint Operations.

Even though Napoleon integrated the three principal arms at the Corps level, it was not until the two World Wars that their integration at lower levels up to brigade and battalion levels began. A Combat Studies Institute monograph, “Toward Combined Arms Warfare: A Survey of 20th-Century Tactics, Doctrine, and Organization,” traces this evolution. It states that by the end of World War I, the cavalry had lost its relevance, and the newly formed tank corps started replacing the cavalry as the principal arm. Also, the integration of the principal arms at lower levels gave birth to the concept of combined arms warfare—close cooperation between the principal combat arms: the infantry, the artillery, and the tanks. Between 1914 to 1945, the concept evolved from independent actions of the principal arms to close cooperation between the infantry and artillery during World War I, to close cooperation between the infantry, tanks, and artillery during World War II, to close cooperation between the army and the air force by the end of World War II.²⁸ Hence, in a relatively short span of 30 years, the face of warfare changed and gave birth to the concept of Jointness as we know it today in three physical domains.

²⁷ James Wasson, “The Development of The Corps D’Armée And Its Impact on Napoleonic Warfare,” The Napoleon Series, accessed 26 January 2020, https://www.napoleon-series.org/military/organization/c_armycorps.html.

²⁸ Jonathan M. House, “Toward Combined Arms Warfare: A Survey of 20th-Century Tactics, Doctrine, and Organization” (Combat Studies Institute monograph, U.S. Army Command and General Staff College, Fort Leavenworth, KS, August 1984), 1-6, accessed 26 January 2020, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a528264.pdf>.

Warfare up to the early twentieth century was two-dimensional surface-based either at land or at sea. The army and the navy fought independently of each other with little requirement for coordination except for some specialized operations such as riverine operations and amphibious warfare. Nevertheless, in the early twentieth century, with the advent of airplanes, warfare consisted of three dimensions: land, maritime, and aerial domains.²⁹ Many leading powers tried to achieve Jointness in the period between the two World Wars. However, they were not fruitful because of the independent nature of the land and naval warfare. The air force as a service and aerial warfare was still in a nascent state.

In the interwar period, the various services directed most of the energy inwards rather than outwards. The leading powers concentrated efforts on developing and perfecting the concepts and doctrines within the various services, and little effort made to coordinate among the various services. In various countries, first, the armies were trying to understand the integrated use of infantry, tanks, and artillery as a combined arms team. Next, the navies were coming to grips with the integration of surface operations with the subsurface forces and the newly formed naval aviation. Finally, the air forces were either vying to be an independent service or advocating bombers as a strategic tool rather than looking at close air support for the ground forces.³⁰ Nevertheless, when the various independent service theories and doctrine met reality during the conduct of World War II,

²⁹ Gordon N. Lederman, *Reorganizing the Joint Chiefs of Staff: The Goldwater-Nichols Act of 1986* (Westport, CT: Greenwood Press, 1999), 7.

³⁰ Williamson Murray and Allan R. Millett, "Introduction," in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (New York: Cambridge University Press, 1996), 1-5.

it highlighted the importance of Jointness among the various services. The U.S. and other leading powers carried out reforms to its armed forces in a tentative and phased manner towards Jointness. The U.S. efforts culminated in the landmark legislation called the GNA of 1986. The literature review, in a subsequent section, only discusses the efforts of the U.S. for brevity.

The evolution of the concept of Jointness did not stop with the enactment and implementation of the GNA. The concept is still evolving, and its latest variant is the Multi-Domain Operations. The U.S. Army concept paper on Multi-Domain Operations adds a further two dimensions, namely space and cyber to the conventional domains of land, air, and sea. The idea is still in the conceptual stage and not formalized as doctrine. The concept is an evolution over the Joint Operations doctrine. It envisages both organizing and integrating the U.S. Army as part of the Joint Force to fight and win future wars by defeating the layered standoff of the adversaries. The core tenets of the concept are Calibrated force posture, Multi-domain formations, and Convergence.³¹ Two of the core tenets: Multi-domain formations and convergence are synonymous with the Joint Task Force and integration of the Joint Operations.

The common thread connecting the concepts of the Corps organization of Napoleonic era, the Combined Arms warfare of World War I and World War II, Joint Operations of World War II and post-World War II era, and the Multi-Domain

³¹ U.S. Army Training and Doctrine Command (TRADOC), TRADOC Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Fort Eustis, VA: TRADOC, 6 December 2018), vi-xii, accessed 26 January 2020, https://www.tradoc.army.mil/Portals/14/Documents/MDO/TP525-3-1_30Nov2018.pdf.

Operations of the present day are the synergistic employment of various components to produce an effect greater than the sum of its individual parts.

Theory

Theory is essential to make meaning out of historical events. In addition, theory provides context for the formulation of doctrine. Hence, to understand and conceptualize Jointness, it is essential to review some defense organization theories about service-specific viewpoints and military organizational tensions.

Geocentric Viewpoints: Effect on Jointness

John M. Collins, a retired U.S. Army colonel and a distinguished visiting research fellow at the National Defense University, argues that geographical domains play a profound role in shaping the military perspective. As per Collins, based on the geographic domains—land, sea, and air—in which each service operates, they are entitled to their own warfighting viewpoints: terracentric, marecentric, and aerocentric views relating to the army, the navy, and the air force respectively. In addition, Collins draws generic conclusions based on the various viewpoints about the likely attitudes of each service towards Jointness. First, as per Collins, senior U.S. Army officers are more predisposed to command relationships that assure interservice support because of their dependence on the other services to reach the objective area. Next, global reach characterizes the U.S. Navy; hence its leadership prefers naval freedom of action across a boundaryless maritime domain. Finally, the U.S. Air force with the capability to operate in three dimensions advocates the greatest possible autonomy and flexibility in its

operations.³² The differing geocentric viewpoints create divergent stress on each service's approach to the concept of Jointness.

There exists a requirement for integrated and updated inputs from the services for the civilian decision-makers. Collins states that each service is better suited to operate in specific environments compared to other services; however, the optimal integration of various services capabilities in all environments requires a Joint mechanism. Nonetheless, Collins warns that the integration should not be at the cost of service-oriented inputs to civilian decision-makers. Moreover, the services should not be dogmatic in the formulation of their opinions, and the inputs should be regularly updated to keep up with the dynamic nature of the strategic and operational environment.³³ The divergent stress on approach to Jointness and requirement for integrated inputs for civilian decisionmakers creates unique organizational tensions.

Theory of Defense Organization: Three Basic Military Organizational Tensions

Gordon N. Lederman, in his book, *Reorganizing the Joint Chiefs of Staff: The Goldwater-Nichols Act of 1986*, provides a theory of defense organization. The theory proposes three military organizational tensions: centralization versus decentralization, functional versus geographic responsibility, and specialization versus generalist perspective.³⁴ The three organizational tensions provide a framework to understand the

³² John M. Collins, *Military Geography: For Professionals and the Public* (Washington, DC: National Defense University Press, 1998), 277-282.

³³ Ibid., 283.

³⁴ Lederman, *Reorganizing the Joint Chiefs of Staff*, x.

conflicting service perspectives and facilitate comprehending the transformation of the U.S. and the Indian Armed Forces towards Jointness.

First, Lederman discusses the tension between centralization and decentralization as a basic tendency in command and control of a military organization. Centralized organizations, with the power concentrated at the apex, are ponderous in decision making and unable to exploit rapid opportunities. Nonetheless, such organizations execute complicated operations better. On the other hand, decentralized organizations, by empowering lower-level decision making, are better suited to exploit fleeting opportunities in operations.³⁵ To illustrate, at the tactical level, the centralized system of command and control is better suited for operations such as wet-gap crossing and the decentralized system for operations such as pursuit.

Next, as per Lederman, “military organization faces the choice between geographic and functional delineations of responsibilities.” Geographic responsibility involves physical delineation of areas, whereas functional responsibility involves division based on the original purpose. Geographic delineation has a single unified commander with responsibility for a particular area and has control over all resources within the area. On the other hand, in functional delineation, the commander has control over similar resources over multiple geographic areas of responsibilities. The geographic division has the advantage of better command, control, and understanding of local conditions for an operation, but has the disadvantage of the requirement for duplicative assets for each geographic area. In contrast, the functional division has the advantage of economies of

³⁵ Lederman, *Reorganizing the Joint Chiefs of Staff*, 2.

scale, but adversely affects the effective integration of various assets in a geographic area.³⁶ For example, United States Indo-Pacific Command (USINDOPACOM) is a geographic delineation, and United States Special Operations Command (USSOCOM) is a functional delineation.

Third, Lederman discusses the tension between specialist and generalist perspectives. The various physical domains and the complexity of the modern battlefield demand “mastery of one specific skill” by soldiers, but this proficiency may predispose them to a narrow-minded view of the problem. In contrast, the generalist capable of having a holistic view may not have adequate expertise in every domain.³⁷ To illustrate, during planning, the army staff will have a specialist perspective of the land domain, whereas the joint staff will have an overall generalist perspective of all the domains.

In summary, Lederman argues that all three organizational tensions: centralization versus decentralization, functional versus geographic responsibility, and specialization versus the generalist perspective give rise to a “pluralistic model” for the U.S. Armed Forces. The pluralistic model requires that all perspectives are represented in the decision-making apparatus, thus facilitating comprehensive advice to the civilian decision-makers based on the viewpoint of all the services. Nevertheless, the onus of balancing the three different poles lies with the senior decision-makers.³⁸ The three

³⁶ Lederman, *Reorganizing the Joint Chiefs of Staff*, 3.

³⁷ Ibid.

³⁸ Ibid., 4.

organization tensions provide a frame of reference to interpret all the interservice friction emanating while moving towards Jointness.

Doctrine

The comprehension of geocentric viewpoints and organizational tensions facilitates crystallizing the concept of Jointness from abstract theory to concrete doctrine. As per Army Doctrine Publication (ADP) 1-01, “Doctrine is a body of professional knowledge that guides a profession . . . establishes the language of the profession.”³⁹ More specifically, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 5120.02D defines joint doctrine as, “fundamental principles that guide the employment of . . . military forces in coordinated action towards a common objective and may include tactics, techniques, and procedures.”⁴⁰ Thus, the doctrine is as a body of knowledge of a profession consisting of fundamental principles that by providing a common language helps guide and coordinate actions of the profession. The literary review of the U.S. Armed Forces and the Indian Armed Forces doctrine and journals examines the concept of Jointness, the characteristics of a Joint Force, the chain of command, and the command relationships.

³⁹ Headquarters, Department of the Army (HQDA), Army Doctrine Publication (ADP) 1-01, *Doctrine Primer* (Washington, DC: Government Printing Office, July 2019), 1-1, accessed 26 January 2020, https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN18138_ADAP%201-01%20FINAL%20WEB.pdf.

⁴⁰ Joint Chiefs of Staff (JCS), Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 5120.02D, *Joint Doctrine Development System* (Washington, DC: Government Printing Office, 5 January 2015), A-1, accessed 26 January 2020, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/cjcsi5120_02d.pdf.

Concept of Jointness

The capstone publication of the U.S. joint doctrine JP 1, explains the terms Joint and Jointness. The explanations, set within the broader context, considers the military as one of the instruments of national power. JP 1 declares that, “As a nation, the US wages war by employing all instruments of national power--diplomatic, informational, military, and economic.” This description implies a “whole of government” effort to fight wars. First, as per JP 1, “Joint implies activities in which elements of two or more Military Departments participate.”⁴¹ The U.S. DOD comprises three military departments: the Department of the Army, the Department of the Navy, and the Department of the Air Force. Title 10 of the United States Code subdivides the U.S. Armed Forces into six military service branches: the Army, the Navy, the Air Force, the Marine Corps, the Space Force, and the Coast Guard. The Air Force and the Space Force are under the Department of the Air Force. Similarly, the Navy, the Marine Corps, and the Coast Guard fall under the ambit of the Department of Navy.⁴² Hence, technically an operation carried out together by the Navy, the Marine Corps, or the Coast Guard is not a joint operation. Next, JP 1 explains jointness as, “cross-service combination wherein the capability of the joint force is understood to be synergistic, with the sum greater than its parts.” Also, U.S. Armed Forces embrace Jointness as the “fundamental organizing construct” for all

⁴¹ JCS, JP 1, I-1.

⁴² Congressional Research Service (CRS), CRS Report, *Defense Primer: The Department of Defense*, by Kathleen J. McInnis (Washington, DC: Library of Congress, 24 January 2020), 1-2, accessed 27 January 2020, <https://fas.org/sgp/crs/natsec/IF10543.pdf>.

military operations.⁴³ The concept of Jointness nests within the concept of whole of government effort involving all instruments of national power. To elucidate, Jointness is to armed forces what whole of government effort is to the instruments of national power.

In contrast, Lawrence B. Wilkerson, a retired U.S. Army Colonel and former chief of staff to US Secretary of State Colin Powell, argues that Jointness is “at best the sum of its parts” and is not greater than the sum of its parts as stated in JP 1. He states that understanding and trust are the basis of Jointness. As per Lawrence, Jointness requires a broad understanding among services of each other's capabilities, which they bring to battle and then trusting each other to do their part right. He paradoxically states that Jointness is both facilitated and constricted by the human element. As per his argument, armed forces forge true jointness on the battlefield and not by declaring itself as joint. For this bonding to happen, each service must be proficient in its service competency, which forms the basis of trust and understanding required for jointness. He emphatically states that service competency is the bedrock for genuine Jointness. He offers one final argument that service competence depends on the quality of service staff and the growth of Joint Staff—by implication, Jointness—should not be at the expense of the services. He offers an analogy by stating that concentrating the brains of an organization at just one institution will endanger the overall health of the organization.⁴⁴ In summary, Wilkerson claims that Jointness results from human endeavor based on trust, understanding, service competency, and equitable distribution of talent.

⁴³ JCS, JP 1, I-2.

⁴⁴ Wilkerson, “What Exactly Is Jointness?,” 66-68.

The capstone publication of Indian joint doctrine, *Joint Doctrine for Indian Armed Forces* (JDIAF)- 2017, captures the Indian perspective of Jointness. JDIAF considers Jointness as a concept encompassing both single-service and joint operations, which enables a high level of cross-domain synergy by concentrating an appropriate mix of forces at the right time and place.⁴⁵ It further lists six types of joint operations: Air-Land operations, Air Transport operations, Airborne operations, Maritime Air operations, Amphibious operations, and Battle Space awareness.⁴⁶ Even though JDIAF does not define the term joint, from the list of six joint operations, it can be inferred that similar to U.S. definition, joint in Indian context involves activities by at least two of the three services in the Indian Armed Forces.

Anit Mukherjee, a retired Major of Indian Army and an associate professor in the South Asia Program at the S. Rajaratnam School of International Studies, Singapore, defines Jointness as, “the ability of the Army, Air Force, and the Navy, to plan and operate in a mutually reinforcing manner.” He also contends that despite the common usage of the term, “there is no commonly accepted definition of Jointness.” Mukherjee conceptualizes Jointness as either a “coordination” or an “integration” model. The coordination model, where “services enjoy maximum autonomy,” falls in the lower end of the Jointness continuum. In contrast, the integration model, located in the upper end of

⁴⁵ India Ministry of Defense (MOD), Joint Publication (JP) - 01, *Joint Doctrine of the Indian Armed Forces-2017*, 2nd ed. (New Delhi: Directorate of Doctrine, Headquarters Integrated Defence Staff, April 2017), 39, accessed 31 March 2020. https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/JointDoctrineIndianArmedForces2017.pdf.

⁴⁶ Ibid., 27-28.

the continuum, “has a single commander responsible for all three services.” The Indian Armed Forces presently favors a coordination model of Jointness.⁴⁷

Based on the literary review, it is amply clear that diverse interpretations of Jointness exist. Nevertheless, for this thesis, Jointness is defined as synergistic employment of the different service capabilities and competencies based on trust and understanding among the services. In some of the literature, terms such as Jointmanship, combined, and integrated are used synonymously with Jointness. Nonetheless, in the context of this thesis, the term Jointmanship equates to Jointness, combined denotes activities involving two or more nations, and the term integrated stands for activities of two or more agencies or departments or ministries of a government.

Characteristics of Jointness

The Capstone Concept for Joint Operations (CCJO), Version 2.0, lists eleven key characteristics that a joint force must possess (see Figure 1). Of the eleven characteristics, four of them: knowledge-empowered, networked, interoperable, and tailorable, are relevant to the discussion of this thesis because these characteristics find a universal application and are unique to joint forces. First, as per CCJO, the central element of “knowledge empowerment” is empowered decision-makers with adequate experience guided by an understanding of the operational environment and supported by a collaborative decision-making process. Nonetheless, for the Joint Force to trust these decision-makers, they also need to have adequate knowledge of the functioning and capabilities of the different services placed under the command of the Joint Force. This

⁴⁷ Mukherjee, “Fighting Separately,” 6, 9.

knowledge would help the decision-maker to acquire a joint perspective of the operational environment. For collaborative decision-making, the JFC should incorporate elements of all services in his HQ staff.⁴⁸ All these factors combined would help the JFC in earning the “trust,” which, as per Wilkerson, is fundamental to Jointness.

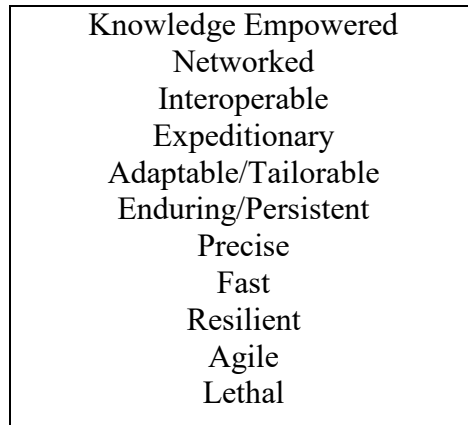


Figure 1. Key Characteristics of Joint Force

Source: U.S. Department of Defense, *Capstone Concept for Joint Operations*, version 2.0 (Washington, DC: Government Printing Office, August 2005), 20, accessed 28 September 2019, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a476464.pdf>.

Next, CCJO states that a, “networked joint force” helps manage the organizational tension between centralization and decentralization. The networking between different elements of the Joint Force helps it to synchronize their actions in time, space, and purpose. The network extension to interagency and multinational partners helps support unified action. Networking can be considered as part of the command and control system

⁴⁸ U.S. Department of Defense (DOD), *Capstone Concept for Joint Operations*, version 2.0 (Washington, DC: Government Printing Office, August 2005), 20-21, accessed 28 September 2019, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a476464.pdf>

and comprises the communication infrastructure. Third, a Joint Force having knowledge-empowered decision-makers are ineffective if the various systems are incompatible. Hence, CCJO considers “Interoperability” as the sine qua non of a Joint Force. In addition to interoperable systems and equipment, CCJO advocates its extension across the DOTMLPF construct. This level of interoperability will result in an integrated and interdependent joint force capable of “sharing and exchanging knowledge and services” at all levels of command. A joint acquisition strategy can achieve this level of interoperability in systems and equipment..⁴⁹

Finally, the organization of the joint force should be “adaptable/ tailorable” to the various situations encountered in the operational environment. This characteristic results from having an appropriate mix of force structures and establishing command and support relationships between those forces. A versatile joint force with modular capabilities and intellectually empowered decision-makers can make the sum greater than its parts while executing diverse mission sets..⁵⁰ In summary, for a joint force, commanders and staff officers should be knowledge-empowered, possessing necessary command and control systems networked both horizontally and vertically. The different elements of the joint force should have interoperable systems with one another. This interoperability, in turn, provides the capability to tailor the joint force as per emerging requirements making them adaptable.

⁴⁹ DOD, *Capstone Concept for Joint Operations*, 22.

⁵⁰ Ibid.

Chain of Command

For a clear understanding of the creation of a Joint Force and its functioning, it is essential to understand the two distinct chains of command: operational and administrative. As per JP 1, the operational chain of command, over operating forces, focuses on mission execution expected of a military force. On the other hand, the administrative chain of command, over generating forces, provides the necessary resources in terms of trained manpower and material to fulfill the requirements of the operating forces. Also, another important distinction is that the operational chain of command may flow through another service headquarters; however, the administrative chain of command can only be within the same service.⁵¹ Furthermore, JP 1 states that, for the U.S. Armed Forces, the operational chain of command flows from the President to the Secretary of Defense, to the various combatant commanders (CCDRs), and then to the various operational commanders for the forces assigned to the geographic combatant command (GCC). Conversely, the administrative chain of command flows from the President to the Secretary of Defense, to the various secretaries of military departments, to the service chiefs, to the service component command under the GCC, and then to the same service forces/ capabilities assigned to the GCC.⁵² In summary, operating forces of the U.S. Armed Forces have two chains of command: operational and administrative.

Conversely, for the Indian Armed Forces, no distinction between operational and administrative chains of command exists. The Joint Doctrine for the Indian Armed Forces

⁵¹ JCS, JP 1, II-9-10.

⁵² Ibid.

discusses the command and control structure at the strategic and operational levels. It states that, at the strategic level, the decision to use force vests with the Cabinet Committee on Security (CCS) and it specifies to the Chief of Staff Committee (COSC) the terms and conditions to use force. Then based on the directive from the CCS or the Defense Minister, at the operational level, the COSC or the Service Headquarters (SHQ) formulates the outline plan and allocates necessary resources. The SHQ then hand the plan and resources to the affected Service Command HQs for the conduct of joint operations.⁵³ Hence, the chain of command can be traced from the CCS to the Defense Minister to the COSC (for Joint Operations) or the SHQ (for single service operations), then to SHQ, and finally to the Service Command HQs. The absence of clear demarcation between operational and administrative chains of command may cause difficulties while forming a Joint Force and lead to an ambiguous division of responsibility for its operations and administration.

Command Relationships

Having understood the characteristics and chains of command for a joint force, it is now necessary to comprehend the various command relationships utilized to compose a joint force. The various command relationships are organic, assigned, attached, appropriated, COCOM (Combatant Command), OPCON (Operational Control), TACON (Tactical Control), and support relationship. First, as per JP 1, “Organic forces are those assigned to and forming an essential part of a military organization as listed in its table of

⁵³ India MOD, JP - 1, 36.

organization.”⁵⁴ This means that each subordinate component forms part of the organizational structure of the organization by an authorization document. For the U.S. Army, the authorization document is the table of organization and equipment (TOE) for operating forces and table of distribution and allowances (TDA) for generation forces. For the Indian Army, it is war establishment (WE) and peace establishment (PE) for field forces and static establishments, respectively. To illustrate, for an infantry battalion, the infantry companies are organic to it. The organizational structure of units is a service responsibility; hence organic is not a joint command relationship.

Next, JP 3-0 defines assigned as, “Placing units or personnel in an organization where such placement is relatively permanent, and/or where such organization controls and administers the units or personnel for the primary function, or greater portion of the functions.” It further states that administrative control (ADCON) is part of the relationship unless stated otherwise.⁵⁵ Force assignment also forms part of the Global Force Management (GFM) process. As per JP 3-35, the U.S. Secretary of Defense “strategically manages the employment of forces” among the combatant commands using the GFM process. The GFM “aligns force assignment, allocation, and apportionment in support of the national defense strategy and joint force availability requirements.” The Military Departments—Army, Navy, and Airforce— assign forces to the various U.S. combatant commands (CCMDs) as per directions of the Secretary of Defense. The U.S. combatant commanders (CCDRs) then exercise COCOM (explained subsequently) over

⁵⁴ JCS, JP 1, GL-10.

⁵⁵ JCS, JP 3-0, GL-6.

the assigned forces.⁵⁶ In the Indian Army, the Staff Duties (SD) directorate in Army HQ assigns Infantry battalions to the Infantry brigades for a duration of two to three years. After the completion of the assigned duration, the SD directorate reassigns the battalions to another brigade. In contrast, for the U.S. Army Brigade Combat Teams (BCTs), the entire brigade is organic.

Third, as per JP 1, “Combatant Command (Command Authority) or COCOM is the command authority over assigned forces vested only in the commanders of CCMDs by Title 10, United States Code, Section 164 (or as otherwise directed by the President or the Secretary of Defense) and cannot be delegated or transferred.” COCOM is a command authority vested with CCDRs by law and exercised only by CCDRs. Inherent to COCOM are OPCON, TACON, Support relationship, and specific aspects of ADCON exercised through the service component commanders.⁵⁷ The term COCOM is unique to theatre commanders with command authority over all service forces assigned to the theatre. Even though the concept of theater command exists in Indian Armed Forces, its doctrine does not have any terminology paralleling COCOM.

Fourth, apportionment though not a command relationship, is discussed to provide clarity to the terms assigned and COCOM. As per JP 3-35, the GFM process provides the integrating mechanism between force apportionment, allocation, and assignment. First, Force assignment, as discussed earlier, is the process of assigning forces to CCDRs by

⁵⁶ Joint Chiefs of Staff (JCS), Joint Publication (JP) 3-35, *Deployment and Redeployment Operations* (Washington, DC: Government Printing Office, 10 January 2018), I-4, accessed 29 January 2020, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_35.pdf.

⁵⁷ JCS, JP 1, V-2.

the Military Departments based on the directions of the Secretary of Defense to perform missions assigned to those commands. Next, force allocation is the process by which the Secretary of Defense, based on the requirements of “current operations and campaign plans temporarily adjusts the distribution of forces among the CCDRs.” It further states that “CCDRs usually exercise OPCON (explained subsequently) over allocated forces.” Finally, “force apportionment is an estimate of the Military Departments' capacity to generate capabilities that can reasonably be expected to be made available along general timelines.” Inadequate resources preclude initially assigning all forces and capabilities that a CCMD requires for its various plans. Nevertheless, based on the CCDRs validated plans, the JCS apportions additional forces to the CCMD. These apportioned forces are for “resource-informed planning” purposes only. The JCS earmarks these forces and capabilities as generic units and not any specific units.⁵⁸ For example, the JCS may apportion four fighter squadrons to USINDOPACOM for a specific contingency plan. Once that contingency plan is activated, then the U.S. Department of the Air Force will make available to the CCDR four specific fighter squadrons from the global pool. The term assignment and allocation are not part of the Indian Armed Forces doctrine, but the concept is utilized in the distribution of forces by the service HQ among its various commands. Nonetheless, the concept of apportionment exists neither in doctrine nor in usage in the Indian Armed Forces.

Fifth, attached as per JP 3-0 is, “Placing units or personnel in an organization where such placement is relatively temporary.” In this case, too, the ADCON is part of

⁵⁸ JCS, JP 3-35, IV-4-5.

the relationship unless stated otherwise.⁵⁹ To illustrate, a U.S. Army Maneuver Enhancement Brigade may have an additional Military Police Battalion attached to it for the duration of an operation. For the Indian Army, it could be an additional infantry battalion temporarily attached to an infantry brigade for Counter Infiltration operations during the peak infiltration season for a period of three to six months. The critical difference between attached and OPCON is ADCON.

Next, JP 1 defines Operational Control (OPCON) as, “The authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission.” OPCON gives the gaining commander enough authority to command the OPCON forces to accomplish the mission designated to the gaining commander. The parent unit retains the ADCON of OPCON forces. This command relationship in U.S. Armed Forces is generally exercised over its own service forces by a functional component commander in a Joint Task Force (JTF).⁶⁰ For example, in a JTF, a Joint Force Air Component commander will exercise OPCON over all Air Force assets made available under him. For the Indian Army, there is no OPCON term in its doctrine; however, the concept exists in practice. Indian Army in mechanized combined arms battles organizes its armor and mechanized infantry into task forces. A superior Headquarters (HQ) temporarily groups elements of both armor and mechanized infantry under either an armor HQ or mechanized infantry HQ. To illustrate, in a

⁵⁹ JCS, JP 3-0, GL-7.

⁶⁰ JCS, JP 1, V-6.

hypothetical case of an armor combat group—a battalion level task force—grouped with two armor squadrons and one mechanized infantry company, the Combat Group HQ exercises OPCON over the mechanized infantry company.

In comparison to OPCON, Tactical control (TACON) means lesser control and JP 1 defines it as, “The authority over forces that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned.” TACON “provides sufficient authority” for mission accomplishment but inhibits the gaining commander from task organizing the forces made available under him and is generally exercised over other forces—service or multinational—by a functional component commander in a JTF.⁶¹ For example, in a JTF a Joint Force Land Component commander will exercise TACON over Marine or multinational forces made available under him. The terminology TACON does not exist in the Indian Army doctrine. Nonetheless, recently in November 2018, the United Nations peacekeeping mission in Lebanon placed a Kazakhstan Army Infantry company under the command of an Indian Army Infantry battalion.⁶² In this case, the Indian battalion technically exercises the TACON command relationship over the Kazak company.

Finally, Support relationship is a command authority in joint doctrine, but army doctrine does not consider it command authority and assigns it a more specific meaning.

⁶¹ JCS, JP 1, V-7-8.

⁶² Huma Siddiqui, “For the first time ever Kazakh troops join Indian peacekeepers under UN Flag for operations in Lebanon,” *Financial Express*, last updated 6 December 2018, accessed 24 March 2020, <https://www.financialexpress.com/defence/for-the-first-time-ever-kazakh-troops-join-indian-peacekeepers-under-un-flag-for-operations-in-lebanon/1405319/>.

JP 1 defines Support as, “The action of a force that aids, protects, complements, or sustains another force in accordance with a directive requiring such action.” The joint doctrine divides support into general, mutual, direct, and close support.⁶³ On the other hand, army doctrine specifies three conditions for the establishment of the support relationship. First, the supporting capability is better utilized if the supporting commander with the “technical and tactical expertise controls the supporting unit rather than the supported commander.” Second, “the echelon of the supporting unit is the same or higher than that of the supported unit.” Third, “the supporting unit supports several units simultaneously.” The army doctrine specifies four types of support relationships: direct support, reinforcing, general support-reinforcing, and general support.⁶⁴ From the discussion about joint and army support relationships, it is clear that the higher commander establishes a support relationship between two units when he does not want the supporting unit under the control of the supported unit. For example, a field artillery brigade is placed in a “direct support” role to an infantry battalion for an operation. The field artillery brigade is a higher echelon than the infantry battalion and as well as capable of supporting several other infantry battalions. Hence, the supported unit—Infantry battalion—does not control the supporting unit—field artillery brigade, it only controls the fires of the field artillery brigade for the duration of the operation.

⁶³ JCS, JP 1, V-8, V-10.

⁶⁴ Headquarters, Department of the Army (HQDA), Field Manual (FM) 6-0, *Commander and Staff Organization and Operations*, including change 1 and 2 (Washington, DC: Government Printing Office, 22 April 2016), B-5, B-6, accessed 29 January 2020, https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN14843_FM_6-0_Incl_C2_FINAL_WEB.pdf.

Reality

Evolution of Jointness in U.S. Armed Forces

Pre-World War II Indifference

In the early eighteenth and nineteenth century, the two services—the Army and the Navy—of the U.S. Military operated independently of each other in their own domains. Both the services reported to two different civilian authorities: the Secretary of War and the Secretary of the Navy responsible for the army and the navy, respectively. The responsibility for coordinating the War and the Navy department rested with the President. Despite their independent nature, the two services carried out joint operations with varying degrees of success at Vera Cruz in Mexico, the American Civil War, and the Spanish-American War in Cuba. The high point of joint operations being the amphibious landing of 8,000 American troops in Vera Cruz in 1847, culminating in the successful capture of San Juan de Ulloa fortress.⁶⁵ In contrast, the Santiago campaign of the Spanish-American War in 1898 turned out to be the low point of jointness where the army commander refused to allow a navy representative to sign the surrender document.⁶⁶

In 1903, Root reforms established the Joint Army-Navy Board to overcome the problems related to jointness identified during the Spanish-American War. The board dealt with interservice cooperation and eventually evolved into the Joint Chiefs of Staff

⁶⁵ Beaumont, *Joint Military Operations: A Short History*, 17.

⁶⁶ U.S. Congress, Senate, S.Rept. 99-86, *Defense Organization: The Need for Change*, Staff Report to the Committee on Armed Services (Washington, DC: Government Printing Office, 1985), 355.

during World War II. In reality, the two services reduced the working of the joint board to deconfliction rather than integration exercise.⁶⁷ The advent of airpower in the early twentieth century changed the equation and demanded greater collaboration and coordination between the services. The services forgot the hard lessons learned during World War I about the unity of command and the impracticality of single service operations. The services settled on mutual cooperation as the preferred method of interservice interaction.⁶⁸ The disjointedness of the two services soon came to limelight in December 1941.

World War II Wakeup Call

The U.S. entered World War II following the Japanese surprise attack at Pearl Harbor on 7 December 1941. The Japanese attacked the U.S. Naval base with fighter bombers launched from aircraft carriers. Within a short period, the attack damaged or destroyed nearly 20 naval vessels, including eight battleships and around 300 airplanes. Also, 2,400 Americans, including civilians, died and around 1000 wounded during the attack. The Japanese achieved both strategic and operational surprise. There existed no unifying mechanism for the departments of the Navy and War below the Presidential level. This discord resulted in a lack of analysis to discern from various indicators the strategic intelligence about a probable attack. In addition, the lack of unity of command in Hawaii also led to intelligence failure at the operational level. The two service commanders—Lt. Gen. Short, Commanding General, Hawaiian Department and Admiral

⁶⁷ Locher, *Victory on the Potomac*, 17.

⁶⁸ Ibid., 18.

Kimmel, Commander in Chief, U.S. Fleet and Pacific Fleet—in Hawaii operated by mutual cooperation and failed to consult each other on their operational plans to defend Hawaii. At the tactical level, the navy presumed that the army radars were fully operational and failed to carry out long-range aerial reconnaissance. Likewise, the army presumed that the navy had its long-range aerial reconnaissance out and did not fully operationalize its coastal radars.⁶⁹ The faulty assumption on both sides led to total surprise when the Japanese aircrafts hit the U.S. naval base.

The headlong plunge into World War II, without a unified organization to coordinate the war effort, and the requirement for mirroring the British Chiefs of Staff Committee led to the birth of Joint Chiefs of Staff (JCS). The JCS consisting of the U.S. service chiefs acted as an advisory committee to provide unified direction for the war effort. In addition, several joint planning committees were set up under the JCS as the need arose. President Roosevelt appointed theatre commanders such as Eisenhower, MacArthur, and Nimitz to establish unity of command. Interservice cooperation during World War II ranged between the high point of the European Theater and the low point of the Pacific Theatre. In Europe, General Dwight Eisenhower led the entire allied effort. In contrast, in the Pacific, the command was split between Admiral Chester Nimitz commanding the Pacific Ocean Area, and General Douglas MacArthur commanded the Southwest Pacific Area.⁷⁰ The natural tension between the unity of command and mutual

⁶⁹ U.S. Congress, Senate, *Defense Organization: The Need for Change*, 355-356.

⁷⁰ Lederman, *Reorganizing the Joint Chiefs of Staff*, 10-12.

cooperation as the basis for interservice interaction persisted until the end of World War II.

Post-World War II Developments

The U.S. soon lost the hard-learned lessons about joint operations during World War II to the euphoria of victory. In addition, the requirement for rapid demobilization to reap peace dividends, the hope for permanent peace with the establishment of the United Nations, and the expectation that the atomic weapons would prevent future ground wars contributed to the elation. Nevertheless, this did not prevent intense debates over the unification of the U.S. armed forces immediately following the conclusion of World War II. The primary driver for such calls for unification was the need to reduce defense budget and to prevent another Pearl Harbor from happening.

In 1945, just before taking over as Army Chief of Staff, Eisenhower expressed strong views supporting unification. He stated that warfare had become joint for all practical purposes, and suggested unification to reduce the superfluous higher echelon of the services. President Truman also supported the need for unification based on his experience as a senator and as Chairman of Senate's Special Committee Investigating the National Defense Program. During the war, he had observed from close quarters the services' parochialism leading to unnecessary duplication of time, material, and manpower. In 1944, Truman wrote an article proposing the creation of a joint general staff and a single department to deal with all military matters.⁷¹ In December 1945, President Truman proposed to Congress the creation of a single Department of National

⁷¹ Beaumont, *Joint Military Operations: A Short History*, 129-30.

Defense headed by a secretary and a single chief of staff for all services. The proposal met with massive resistance from the Department of the Navy and the Congress. The fear of loss of control over land-based aerial assets and the downsizing of the Marine corps formed the basis for the Navy's resistance. Congress's main concern was that the creation of a centralized military structure would prop up the executive branch at the cost of the legislature.⁷² The proposal of President Truman and the Army reflected the centralization effort, whereas the Navy and Congress wanted decentralized control. The difference of opinion, however, did not prevent the JCS from establishing post World War II unified command of U.S. military forces.

In 1946, based on the suggestion from the Chief of Naval Operations (CNO), the JCS came up with a plan to establish unified commands for peacetime based on World War II theatre commands. The unified command envisioned, "a single commander, responsible to the JCS, assisted by a joint staff, and exercising command over all the units of assigned force, regardless of service." The JCS plan resulted in an organizational directive approved by President Truman on 14 December 1946. The directive "Outline Command Plan" in effect became the first Unified Command Plan (UCP). The UCP formed the basis for high-level command arrangements for operational forces on a global basis. The plan eventually envisioned the establishment of seven unified commands: Far

⁷² Locher, *Victory on the Potomac*, 25.

East Command, Pacific Command, Alaskan Command, Northeast Command, Atlantic Fleet, Caribbean Command, and European Command.⁷³

Despite the promulgation of UCP, the tension between centralization and decentralization persisted, and efforts to resolve it resulted in a compromise. The National Security Act of 1947 created a unified structure—the National Military Establishment—headed by the Secretary of Defense with three subordinate departments: Army, Navy, and an independent air force. The act failed to diminish the power of the three service departments, and the service chiefs resulting in a service dominated system with a weak unifying structure. This major flaw enabled the service secretaries and the service chiefs to bypass and transgress the authority of the Secretary of Defense and unified commanders, respectively. The inability of the Secretary of Defense to exercise effective control over the influential service departments prompted the amendment of the National Security Act. With the 1949 amendment, Congress expanded the defense secretary's power and staff. The National Military Establishment became a full-fledged department and re-designated as Department of Defense (DOD). The amendment also created a new post of Chairman of Joint Chiefs of Staff (CJCS). Nonetheless, the amendment fell short of the mark by not designating the CJCS as the principal military advisor, thereby preserving the interests of the services.⁷⁴

⁷³ Edward J. Drea, ed., *The History of the Unified Command Plan, 1946-2012* (Washington, DC: Joint History Office, Office of the Chairman of the Joint Chiefs of Staff, 2013), 9-10.

⁷⁴ Locher, *Victory on the Potomac*, 25-27.

In 1953, the Eisenhower administration carried out a further reorganization of the DOD. The reorganization increased the number of assistant secretaries of defense from three to nine and increased the powers of the defense secretary. Additionally, the reorganization empowered the CJCS to manage the Joint Staff and approve its members. The reorganization also placed the services secretaries in the operational chain of command to strengthen civilian control over the JCS. The Eisenhower administration continued its efforts to improve control over the services and force the JCS to provide a more unified perspective.

As a result, Congress enacted the Defense Reorganization Act of 1958. The act strengthened the authority of the defense secretary over the service department and elevated the status of the JCS chairman. The act removed the service departments from the operational chain of command and gave the unified commanders full operational command of assigned forces. The services did not fully implement the provision regarding the operational chain of command.⁷⁵ Interservice friction over budgetary allocation and poor quality of military advice from the JCS to the executive persisted. Few events in the 1960s and 1970s highlighted the deficiencies in the joint architecture of the U.S. armed forces. The Bay of Pigs invasion of Cuba in 1961, the Vietnam War, the USS Pueblo episode with North Korea in 1968 and the confrontation with Cambodia in 1975 over the hijacking of a U.S. merchant ship illustrated the shortcomings. The executive, as well as the academics, instituted various studies and commissions to rectify the situation. Nonetheless, the lack of political will and strong opposition from the Navy

⁷⁵ Locher, *Victory on the Potomac*, 28.

effectively stalled any reorganization effort.⁷⁶ In summary, the various reorganization efforts post World War II failed to address the core issue of the problem, which is the parochial influence by services in the operational chain of command. The resulting mismanagement of the military matters set the stage but did not tip the balance in favor of significant reforms.

Three Precipitating Events: Iran, Lebanon, Grenada

The inertia built over four decades resisted any significant defense reforms that threatened the autonomy of individual services. A growing realization in the U.S. legislature prevailed over the ineffectiveness of the executive branch to reform the DOD by itself. The need for significant reform in the DOD split the legislature, with many favoring only minor alterations to the existing setup. The Navy and the Marine corps fiercely opposed the reform agenda and did hard lobbying in Congress to garner support for maintaining the status quo. Nonetheless, three precipitating events in the early 1980s finally tipped the scale leading to the enactment of the landmark Goldwater-Nichols Act, 1986.

The initial wake up call for a major reorganization effort came in April 1980 in Iran. Under the codename “Operation Eagle Claw,” the U.S. military initiated a raid to rescue 53 American hostages held in Tehran since Nov 1979. The operation ran aground 265 nautical miles from Tehran at a secret landing strip “Desert One” and failed without even making contact with the enemy. The U.S. lost eight military personnel, seven helicopters, and one C-130 aircraft at “Desert One.” In addition, the U.S. forces

⁷⁶ Locher, *Victory on the Potomac*, 30-31.

abandoned weapons, communication equipment, maps, and secret documents at the landing strip.⁷⁷ A senate study headed by James R. Locher III identified the major shortcoming as the self-centered desire of the services to incorporate all four services in operation at the cost of the mission. This desire culminated in Marine pilots flying Navy helicopters to carry Army commandos for the operation. The report also brought out other shortcomings such as incompatible communication systems, ad-hoc nature of mission planning, and compartmentalized training of various service components due to operational security concerns.⁷⁸ An internal Pentagon investigation headed by a retired admiral reached similar albeit moderated conclusions.⁷⁹ The disastrous results of the operation exemplified a classic case of “Joined” operation and not a Joint operation.

The next major setback to the U.S. Military came in Beirut, Lebanon, in October 1983. The U.S. Armed Forces lost 241 servicemembers, including 220 Marines to a terrorist truck bomb attack on the Marines barracks in Beirut International Airport. The Marines had failed to adopt an effective antiterrorism posture despite the April 1983 car bomb attack on the U.S. Embassy in Beirut, which led to sixty-one fatal casualties. An investigation subcommittee of the U.S. legislature identified inadequate appreciation of the operational environment, caused due to the complex chain of command, as the major shortcoming. At that time, the formal operational chain of command ran from the

⁷⁷ Paul B. Ryan, *The Iranian Rescue Mission: Why It Failed* (Annapolis, MD: Naval Institute Press, 1985), 1-2.

⁷⁸ U.S. Congress, Senate, *Defense Organization: The Need for Change*, 359-363.

⁷⁹ Joint Chiefs of Staff (JCS), *The Holloway Report*, 23 August 1980, 57-60, accessed 9 May 2020, <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB63/doc8.pdf>.

President to the Secretary of Defense, to the Unified Combatant Commanders via the Joint Chiefs of Staff. Nevertheless, the service headquarters responsible for administrative functions wielded undue influence over the service forces assigned to the Combatant Commanders. The service component commands of the Unified Combatant Commander prioritized orders from their service headquarters over the Unified Combatant Commander. This imbalance between authority and responsibility of a Unified Combatant Commander led to the Marine barracks bombing. The unified commander's authority did not include tactical employment of the forces of a service component and excluded antiterrorism defense and training. The Marine administrative chain of command dealt with antiterrorism defense and training. Hence, the lessons learned from the April car bomb attack failed to filter down to the Marines located a few miles away.⁸⁰

The final injunction for the reform effort came not from failure but successful operation. A Marxist coup in Grenada in October 1983 created a dire situation for U.S. Citizens residing in Grenada. The U.S. Military conducted Operation Urgent Fury to rescue U.S. Nationals, especially many medical students studying in Grenada. The JCS planned and executed the operation over a relatively short duration. The National Security Council notified the JCS about a possible contingency on 14 October, and the operation commenced ten days later, on 25 October 1983. The operation achieved all the objectives successfully. The U.S. Military rescued all American medical students, restored democracy in Grenada, and expelled Cuban forces from Grenada. In contrast to

⁸⁰ Locher, *Victory on the Potomac*, 153-58.

Beirut, the U.S. had only 18 U.S. servicemen killed and 116 wounded. Nonetheless, after the initial euphoria of success, a lot of glaring shortcomings came to light. The Locher study pinned the blame on organizational shortcomings caused due to two major aspects. First, the lack of interoperable systems among the services precluded the smooth conduct of operations. During the operations, many instances arose where incompatible communication equipment created significant hurdles to coordinate naval fire support between the Army and the Navy. Also, in another instance, U.S. Navy planes accidentally attacked a U.S. Army brigade headquarters and wounded 17 U.S. soldiers. Second, the services lacked an understanding of the capabilities and tactics of each other. This created problems during the planning and conduct of the operations, including failure to appoint a single ground commander. The marines, army rangers, and the airborne division fought their separate battles on the ground as independent JTFs reporting directly to the overall JTF commander for the operations in Grenada. The lack of understanding also led to significant logistical problems, especially during the deployment phase. The study's summary of the Grenada operation emphatically stated that, "Far more attention must be paid to joint operations because employment of force by the United States in all but the most unusual circumstances will be joint."⁸¹

The three precipitating events highlighted shortcomings at all three levels—Strategic, Operational, and Tactical—of warfare. In Iran, the flawed strategic planning based on the desire to include all services doomed the operation even before making contact with the enemy. In Beirut, the inadequate operational authority vested with the

⁸¹ U.S. Congress, Senate, *Defense Organization: The Need for Change*, 363-70.

unified commander indirectly led to the loss of 241 U.S. Service Members' lives. Finally, in Grenada, lack of coordination at the tactical level precluded the smooth conduct of the operation. All three incidents finally built momentum against the status quo and favored the reformist camp resulting in House and Senate Armed Services committees' independent review of the Pentagon's structure and processes. The end product of the review was the passage of the Goldwater-Nichols Department of Defense Reorganization Act of 1986.

Goldwater-Nichols Department of Defense Reorganization Act of 1986

Designed to make good the deficiencies perceived in the U.S. DOD, the 1986 GNA had a fourfold aim: clarifying the command relationships, strengthening the role of CJCS, incentivizing joint appointments, and efficient joint procurement. First, the GNA clarified beyond doubt that the military chain of command ran from the operational commanders through the Secretary of Defense to the President. Additionally, the act made it clear that the service chiefs were not in the chain of command for military operations. Second, the act elevated the Chairman of the Joint Chiefs of Staff above the service chiefs and made him/ her the principal military advisor to the President. Third, the GNA mandated that the officers considered for higher appointments should have tenanted at the minimum one joint staff appointment. Finally, the act sought to improve the efficiency of the procurement system by creating mechanisms for developing joint capability requirements and acquisition programs.⁸² In summary, the GNA sought to

⁸² Goldwater-Nichols Department of Defense Reorganization Act of 1986, Public Law 99-433, *US Statutes at Large 100* (October 1, 1986): 992-994.

match the responsibility of unified commanders with sufficient authority to create and manage an efficient and effective joint force that can fight and win the nation's wars. The passage of GNA turned out to be the most crucial legislation affecting U.S. national defense since the National Security Act of 1947, and the proof of achievement came within five years in Operation Desert Storm.

Evolution of Jointness in Indian Armed Forces

Pre-Kargil War Indifference

For almost five decades, since independence in 1947, the civilian decision-makers, as well as the Armed Forces in India, showed an indifferent attitude towards Jointness. India attained independence from the British rule in 1947 and became a republic in 1950. Consequently, the colonial era British Indian Army, Royal Indian Air Force, and Royal Indian Navy became the Indian Army, Indian Air Force, and Indian Navy, respectively. At the time of independence, the Commander-in-Chief (C-in-C), India, who was also the head of the British Indian Army, had complete control over all military affairs to include the Army, Air Force, and Navy in British India.⁸³ Post-independence, the newly formed government abolished this post in 1949 and reorganized the higher echelons of the Indian military as per the recommendations of Lord Mountbatten and his Chief of Staff, Maj Gen Ismay.⁸⁴ The government, fearing loss of

⁸³ P. S. Das, "Jointness in India's Military: What it is and What it Must Be," *Journal of Defence Studies* 1, no. 1 (2007): 2, accessed 01 March 2020, https://idsa.in/system/files/jds_1_1_psdas.pdf.

⁸⁴ Vinod Anand, "Evolution of Jointness in Indian Defence Forces: Struck between the Services," in *Handbook of Indian Defence Policy: Themes, Structures and*

civilian control over the military or worse a military coup, split the powers of the C-in-C India between the newly created Ministry of Defense (MOD) and the three services Cs-in-C. This split downgraded the head of the Indian Armed Forces to just heading the Indian Army. The government also made the post of C-in-C India ceremonial and assigned it to the President of India. Later, the government again downgraded the post of service Cs-in-C by redesignating them as Chief of Army Staff, Chief of Air Staff, and Chief of Naval Staff.⁸⁵ Consequently, the Indian Armed Forces hold the unique distinction of being born joint under a single C-in-C and then later growing disjoint under independent service chiefs.

Notwithstanding apprehensions of the newly formed Indian government, Lord Mountbatten, based on his World War II experiences, took some preliminary steps to institute Jointness in the Indian Armed Forces. As stated earlier, Ismay restructured the Indian higher defense organization under the supervision of Mountbatten. One of Ismay's recommendations led to the establishment of the Chiefs of Staff Committee (COSC) comprising the three service chiefs, with the primary task of advising the political hierarchy on all military matters. The committee had a rotating chairman, wherein, the longest-serving chief became the Chairman of the Committee.⁸⁶ As per Mukherjee,

Doctrines, ed. Harsh V. Pant (New Delhi: Routledge, Taylor and Francis Group, 2016), 173.

⁸⁵ Wilkinson, *Army and Nation: The Military and Indian Democracy since Independence*, 21-22; S. K. Sinha, "The Chief of Defence Staff," *Journal of Defence Studies* 1, no. 1 (2007): 134, accessed 01 March 2020, https://idsa.in/system/files/jds_1_1_sksinha.pdf.

⁸⁶ Government of India, Press Information Bureau (Defence Wing), "Mehra Relinquishes Chiefs of Staff Committee Chairmanship," 31 January 1976, Press Information Bureau Archive, accessed 03 March 2020,

Mountbatten had deferred the creation of a permanent chairman because, at the time of independence, the Indian Army officers were 12 years ahead of the Air Force and Navy counterparts in terms of their commissioned service. In addition to COSC, Mountbatten also played a vital role in setting up tri-service training institutions, to foster Jointness, such as National Defense Academy (NDA) for officer cadet training and Defense Services Staff College (DSSC) for training mid-level officers.⁸⁷ Thus, there existed embryonic joint institutions and training establishments in Independent India, which contributed to building inter-service camaraderie and Jointness. Nonetheless, this Jointness based on personal relationships rather than legal enforcement, had severe implications in the conflicts India fought.

India fought five major wars between its independence and the 1999 Kargil War with an increasing degree of Jointness amongst its services. The Indian Army primarily fought the first two of the five conflicts. First, in 1947-48, the newly independent countries India and Pakistan fought each other over the control of Kashmir. The Indian Army primarily fought the conflict with the Air Force providing limited support such as air transport and minimal close air support. Again, in the 1962 Sino-Indian conflict, only the Indian Army got involved because the government, to avoid escalation, forbade offensive employment of the Air Force.⁸⁸ Thus, the Indian Armed Forces hardly learned any lessons about the need for Jointness from both the conflicts because of the limited

http://pibarchive.nic.in/archive/ArchiveSecondPhase/DEFENCE/1976-JAN-DEC-MIN-OF-DEFENCE/PDF/DEF-1976-01-31_041.pdf.

⁸⁷ Mukherjee, “Fighting Separately,” 16.

⁸⁸ Anand, “Evolution of Jointness in Indian Defence Forces,” 174.

employment of the Indian Air Force, and non-participation of the Indian Navy.

Nonetheless, the next three conflicts saw participation from all three services.

The 1965 Indo-Pak War was the first time that all three services of the Indian Armed Forces saw action. Nevertheless, all three fought their own individual wars with little coordination.⁸⁹ A similar situation repeated itself in the 1971 Indo-Pak War but with some difference. The three services planned for the war independently and where required, carried out coordination because of the involvement of individual personalities rather than an institutional mechanism. For instance, the Karachi port bombing incident highlighted the lack of institutional mechanisms. On 9 December 1971, both the Indian Air Force and Navy targeted the Karachi port at the same time without informing the other service about the strike.⁹⁰ In contrast to the other four conflicts, in 1987, the Indian Peacekeeping Force (IPKF) in Sri Lanka exhibited institutional level Jointness for a short duration; however, it soon fell apart because of lack of legal mechanisms to support the effort. For the IPKF, the COSC issued a directive appointing an Army Commander as the Overall Force Commander (OFC) for the mission having command and control over the forces from all three services. Nevertheless, within two weeks of commencement of operations, the Air Force and Navy replaced their component commanders under the OFC with liaison officers. This replacement effectively ended the joint command experiment and returned the IPKF command to the status quo coordination model.⁹¹

⁸⁹ Anand, “Evolution of Jointness in Indian Defence Forces,” 174.

⁹⁰ Ibid., 175.

⁹¹ Mukherjee, “Fighting Separately,” 18.

These events made former Indian Army chiefs such as Manekshaw and K. V. Krishan Rao to advocate for Jointness. In 1989, at a lecture in DSSC, Field Marshal Manekshaw, the victorious Indian Army Chief during the 1971 conflict, commented on the need for a single geographic joint command in a region rather than the existing multiple geographic single-service commands in a region.⁹² General K. V. Krishna Rao, in his 1991 book *Prepare or Perish: A Study of National Security* points out the shortcomings of the COSC and the geographic single-service commands.⁹³ Thus, a brief review of the five major conflicts and the views of former chiefs highlights the indifferent attitude of the Indian Armed Forces towards Jointness; despite the existence of structures such as COSC, and joint training establishments such as NDA and DSSC.

1991 Gulf War and 1999 Kargil War Wakeup Call

During the conduct of the 1991 Gulf War, three capabilities—logistics, information management, and combined arms/joint operations—set the U.S. apart from the rest of the world. In addition, many considered the war as a revolution in military affairs resulting in high-technology high-intensity warfare.⁹⁴ Indian analysts also generated significant literature discussing lessons learned for the Indian Armed Forces

⁹² K. Raja Menon, “Jointness in Strategic Capabilities: Can we Avoid it,” *Journal of Defence Studies* 1, no. 1 (2007): 35.

⁹³ K. V. Krishna Rao, *Prepare or Perish: A Study of National Security* (New Delhi: Lancers Publishers, 1991), 411.

⁹⁴ U.S. Department of Energy, Office of Scientific and Technical Information (DOE OSTI), Report No. 16, *Why the Gulf War still matters: Foreign perspectives on the war and the future of international security*, by P. J. Garrity, xv, accessed 4 March 2020, <https://www.osti.gov/servlets/purl/10178236>.

from the Gulf War; however, that literature paid little to no attention to the crucial aspect of Jointness.⁹⁵ As per a western military analyst, India had drawn a negative example from the Gulf War about possession of nuclear weapons acting as an effective deterrent against future wars and interference from external actors.⁹⁶ The 1999 Kargil War soon tested this false assumption.

In 1950, the Korean War tested a similar assumption of the U.S. about nuclear deterrence and instead forced it to fight a limited war under a nuclear threat. Likewise, the Kargil War fought between May and July 1999, forced India to fight a limited war with Pakistan under the shadow of a nuclear threat.⁹⁷ This war also sharply pointed out the various shortcomings of the national security setup in general and specifically the disjointedness of armed forces. The Kargil War was high-altitude mountain warfare fought primarily by the Indian Army with the Air Force in support. The Navy adopted a high-alert posture along the western seaboard, and its actions had a limited impact on the outcome of the conflict.⁹⁸ The Army and Air Force had a severe disagreement on the employment of airpower in the conflict. This disagreement arose due to the Army's lack of understanding about the capabilities of the Air Force in high altitudes and the Air

⁹⁵ Many articles about the Gulf War and lessons learned for Indian Military appeared in professional journals on Indian defense affairs such as *USI Journal* 121, no. 503 (January-March 1991), no. 505 (July-September 1991), and no. 506 (October-December 1991).

⁹⁶ DOE OSTI, *Why the Gulf War Still Matters*, 32-33.

⁹⁷ See Nuclear Weapons Archive, "Kargil Review Committee Report," Section III-Nuclear Factor, accessed 31 March 2020, <http://nuclearweaponarchive.org/India/KargilRCB.html>.

⁹⁸ Anand, "Evolution of Jointness in Indian Defence Forces," 176.

Force's lack of faith in the Army in not disclosing the complete operational picture.⁹⁹

This disagreement during the conduct of conflict highlights the lack of a joint approach to warfare in the Indian Armed Forces.

In addition, writing about Jointness in the Kargil War, Mukherjee highlights two significant problems: faulty organizational structures and lack of interoperability. First, the ineffectiveness of COSC at the strategic level, lack of information sharing at the operational level, and absence of Forward Air controllers at the tactical level point to faulty organizational structures at all levels of warfare. Second, the lack of interoperable communication systems and maps further compounded the problem.¹⁰⁰ Nonetheless, one major factor which distinguished the Kargil War from the previous conflicts was the effort at the highest level to draw lessons from the conflict. This effort resulted in the government appointing a Kargil Review Committee (KRC) within three days of termination of the conflict.¹⁰¹ The report of the committee brought out serious shortcomings in the national security architecture.

Post-Kargil War Developments

In April 2000, the Indian government, based on the recommendation of KRC, formed a Group of Ministers (GOM) tasked with a complete review of the national security apparatus. The GOM created four task forces to address internal security, border management, intelligence apparatus, and management of defense. Arun Singh, a former

⁹⁹ Das, "Jointness in India's Military: What it is and What it Must Be," 7.

¹⁰⁰ Mukherjee, "Fighting Separately," 21-22.

¹⁰¹ Das, "Jointness in India's Military: What it is and What it Must Be," 7.

Minister of State for Defense, headed the defense management task force. The Arun Singh Task Force made several recommendations to the government. Some of the recommendations significantly affected the organizational, structural, and intellectual dimensions of Jointness. First, the recommendations for the creation of the post of CDS along with a dedicated staff, and establishment of tri-service Andaman and Nicobar Command (ANC) and Strategic Forces Command (SFC) contributed to the organizational dimension. Next, some of the recommendations suggested establishing structures for integrated long-term perspective planning, research and development, and procurement. Finally, recommendations for the creation of National Defense University (NDU) and think tanks provided the intellectual dimension. The government accepted and implemented most of the recommendations.¹⁰² Nevertheless, the implementation had its own fair share of controversies.

First, citing a lack of political consensus and disagreement from the Air Force, the government dithered from creating the post of CDS. Instead, a permanent joint staff called HQ Integrated Defense Staff (IDS) came into being to support the COSC. Second, the creation of ANC as a geographic joint command failed to fulfill the intent of its creation because the services deprived it of resources and the services HQ did not delegate adequate authority to the ANC commander.¹⁰³ Third, the SFC as a functional joint command came directly under the PM's Office, and hence had no significant impact on enhancing Jointness. Fourth, despite the setting-up of think tanks such as the Centre

¹⁰² Anand, "Evolution of Jointness in Indian Defence Forces," 177.

¹⁰³ Mukherjee, "Fighting Separately," 23.

for Joint Warfare Studies (CENJOWS), the NDU is yet to be operationalized. Thus, the unprecedented effort by the government came short because it missed the keystone—the CDS. The Naresh Chandra Committee again revisited the issue of Jointness in 2012, and changed the recommendation for the post of CDS to a Permanent Chairman of the COSC.¹⁰⁴ Nonetheless, the government took no action on the report. Finally, similar to the situation in the U.S. before the enactment of the GNA, perhaps it took three precipitating events to disturb the status quo and force the government into appointing a CDS.

Three Precipitating Events

Three precipitating events—surgical strikes—within the last five years, set the tone for assertiveness and greater involvement of political hierarchy in military matters, which eventually paved the way for appointing the CDS for Indian Armed Forces. First, in June 2015, Indian Special Forces carried out a cross-border raid inside Myanmar to neutralize an insurgent training camp. The raid was in retaliation for the loss of 18 Indian soldiers killed in an ambush in the north-eastern part of India a few days earlier by the same insurgent group. The short duration 40-minute raid resulted, as per various estimates, in neutralizing 30-40 insurgents with no loss of life for the Indian Special Forces.¹⁰⁵ In contravention to existing norms, the government broke the proverbial

¹⁰⁴ Manoj Joshi, “The Unending Quest to Reform India’s National Security System,” (Policy Report, S. Rajaratnam School of International Studies, Singapore, March 2014), 2, accessed 31 March 2020, https://www.rsis.edu.sg/wp-content/uploads/2014/09/PR140301_The_Unending_Quest_to_Reform_India_National_Security_System.pdf.

¹⁰⁵ PTI, “Myanmar operation: 70 commandos finish task in 40 minutes,” *The Economic Times*, last updated 14 July 2018, accessed 6 March 2020,

silence about such special forces operations. It hinted at a cross-border strike by the Indian Army to avenge for the terror strike. Moreover, a prominent minister of the government indirectly referred to Pakistan by stating that “India would carry out surgical strikes at the time and place of our choosing against any future attacks against Indians.”¹⁰⁶ Militarily, this operation had no implications on Jointness because the Indian Army conducted it alone. Nonetheless, the immediate approval from the highest levels of government to retaliate, and the subsequent ownership of the same by the government made it a politico-military response to terror strikes.¹⁰⁷ The next two surgical strikes further reinforced the new politico-military response framework of the Indian government.

Next, in September 2016, Pakistan-based terrorists conducted a suicide attack on the administrative base of an Indian Army Brigade headquarters in Uri, leading to the death of 19 soldiers. Within ten days, the Indian Army retaliated by launching multiple stealth attacks across the Line of Control—the de-facto border between India and Pakistan in Kashmir—on terrorist launchpads in Pakistan Occupied Kashmir.¹⁰⁸ During

<https://economictimes.indiatimes.com/news/defence/myanmar-operation-70-commandos-finish-task-in-40-minutes/articleshow/47617871.cms?from=mdr>.

¹⁰⁶ Arun Vishwanathan, “India gets the message all wrong after Myanmar foray,” *East Asia Forum*, 2 July 2015, accessed 6 March 2020, <https://www.eastasiaforum.org/2015/07/02/india-gets-the-message-all-wrong-after-myanmar-foray/>

¹⁰⁷ Ibid.

¹⁰⁸ The Times of India, “Uri terror attack: 17 soldiers killed, 19 injured in strike on Army camp,” last updated 30 September 2016, accessed 6 March 2020, <http://timesofindia.indiatimes.com/india/Uri-terror-attack-Indian-Army-camp-attacked-in-Jammu-and-Kashmir-17-killed-19-injured/articleshow/54389451.cms>.

the media briefing about the successful conduct of the operation, the Indian Army Director General of Military Operations stated that “the Indian Army conducted surgical strikes at several . . . launch pads to pre-empt infiltration by terrorists.”¹⁰⁹ In contrast to the Myanmar raid, the media briefing by a senior ranking officer about the purpose and conduct of the surgical strike established clear ownership of the same by the government. Like the Myanmar raid, this strike by Indian Army became a politico-military response to the Pakistan-based terrorism and had no direct implication on Jointness.

The third precipitating event with its corresponding politico-military response happened in Pulwama in Jammu and Kashmir. On 14 February 2019, a Pakistan-based terrorist organization conducted a suicide car bomb attack in Pulwama on a convoy of vehicles carrying the Central Reserve Police Forces. The attack resulted in the death of 40 troopers of the Reserve Police. In retaliation, on 26 February 2019, the Indian Air Force launched a surgical airstrike on a terrorist training camp in Balakot in Khyber Pakhtunkhwa province in Pakistan. Like Uri surgical strikes, a senior ranking government official briefed the media the same day as the airstrikes. The Indian Foreign Secretary categorically stated the strike as “non-military preemptive action,” specifically targeting the terrorist training camp.¹¹⁰ Immediately following the airstrike, both India

¹⁰⁹ Government of India, “Press Statement by DGMO,” Press Information Bureau, last updated 29 September 2016, accessed 6 March 2020, <https://pib.gov.in/newsite/PrintRelease.aspx?relid=151242>.

¹¹⁰ Government of India, “Statement by Foreign Secretary on 26 February 2019 on the Strike on JeM training camp at Balakot,” Ministry of External Affairs, last updated 26 February 2019, accessed 6 March 2020, <https://www.mea.gov.in/Speeches-Statements.htm?dtl/31089/Statement+by+Foreign+Secretary+on+26+February+2019+on+the+Strike+on+JeM+training+camp+at+Balakots>.

and Pakistan had their Armies and Air Forces on high alert along the disputed border. Both countries then moved up the escalatory ladder, starting with the exchange of artillery fire and culminating in an aerial dogfight between the two Air Forces resulting in the loss of an F-16 for Pakistan and MiG 21 for India.¹¹¹ In summary, the three precipitating events marked a distinctive pro-active shift in India's strategic thought.

A greater involvement of political hierarchy and national-level intelligence agencies which culminated in an offensive military response characterized all three events. Consequently, these events exposed the top-most political hierarchy to military planning at the highest level and perhaps made the political hierarchy feel the necessity for integrated military advice on such sensitive military matters. Thus, for India, the three precipitating events—Myanmar, Uri, and Balakot strikes—might have triggered executive action to integrate the Indian Armed Forces, much like the Iran, Beirut, and Grenada events triggered legislative action—enactment of GNA—to integrate the U.S. Armed Forces.

Chief of Defense Staff Appointment

Each year on 15 August, the Indian Independence Day, the Indian PM customarily addresses the nation from the ramparts of the historic Red Fort in New Delhi. Over the years, various PMs have utilized this opportunity to announce major policy decisions. Consequently, on 15 August 2019, the Indian PM Narendra Modi,

¹¹¹ Rajat Pandit and Sachin Parashar, "Tension in the air: IAF, PAF lose a jet each; pilot in Pakistan custody," *The Times of India*, last updated 28 February 2019, accessed 6 March 2020, <https://timesofindia.indiatimes.com/india/tension-in-the-air-iaf-paf-lose-a-jet-each-pilot-in-pakistan-custody/articleshow/68192759.cms>.

acknowledging the changing security paradigm and taking cognizance of the recommendations of various defense reform commissions, announced the creation of the CDS post for the Indian Armed Forces. The PM's intent to create the CDS was also based on the need to reform the strategic pace of India. Furthermore, the PM advocated for a unified approach to developing all three services at the same pace.¹¹² Within a week of the PM's announcement, the Defence Ministry appointed an implementation committee headed by the National Security Advisor to recommend a framework for implementing the PM's decision. On 24 December 2019, based on the National Security Advisor led committee's recommendations, the Union Cabinet headed by the PM approved the creation of the post of CDS with the primary task of promoting and bringing about Jointness in Indian Armed Forces within three years of the first CDS assuming office. The cabinet decision stressing upon efficiency and effectiveness enumerated various roles and responsibilities of the CDS covering all the DOTMLPF-P domains (see Table 1).¹¹³ The next chapter explains the DOTMLPF-P analytical framework, and Chapter 4 covers the analysis of the charter of duties of the CDS and its latest implementation status, as relevant to the scope of the thesis.

¹¹² Government of India, Prime Minister's Office, "English rendering of Prime Minister Shri Narendra Modi's address to the Nation from the ramparts of the Red Fort on the 73rd Independence Day-August, 15, 2019."

¹¹³ Government of India, Cabinet, "Cabinet approves creation of the post of Chief of Defence Staff in the rank of four star General."

Table 1. Roles and Responsibilities of the CDS

Doctrine	Implement coordinated defense doctrines and procedures to foster Jointmanship among the three Services.
Organization	1. CDS will not exercise any military command, including over the three Service Chiefs. 2. CDS will command Tri-service agencies/organizations/commands related to Cyber and Space. 3. Administer tri-services organizations. 4. Facilitate restructuring of Military Commands to bringing about Jointness, including through the establishment of Joint or Theatre commands. 5. Bring about Jointness in operations.
Training	Promoting and bringing about Jointness in training for the Services.
Material	1. Promoting Jointness in procurement through joint planning and integration of the Services requirements. 2. Assign inter-Services prioritization to capital acquisition proposals based on the anticipated budget. 3. CDS will be a member of the Defence Acquisition Council chaired by the Defense Minister. 4. Implement the Five-Year Defence Capital Acquisition Plan (DCAP), and Two-Year roll-on Annual Acquisition Plans (AAP), as a follow up of Integrated Capability Development Plan (ICDP). 5. Promoting the use of indigenous equipment by the Services.
Leadership and Education	1. Head the Department of Military Affairs (DMA), within the MOD and function as its Secretary. 2. Permanent Chairman of the COSC.
Personnel	Promoting Jointness in staffing for the Services.
Facilities	1. Bring about Jointness in areas such as logistics, transport, support services, communications, and repairs and maintenance of the three Services. 2. Ensure optimal utilization of infrastructure and rationalize it through Jointness among the Services.
Policy	1. CDS will be a member of the Defence Planning Committee chaired by the National Security Advisor. 2. Bring about reforms in the functioning of three Services aimed at augmenting combat capabilities. 3. Act as the Principal Military Adviser to Defense Minister on all tri-Services matters. 4. Function as the Military Adviser to the Nuclear Command Authority. 5. Provide impartial advice to the political leadership.

Source: Created by the author based on data from Government of India, Cabinet, “Cabinet approves creation of the post of Chief of Defence Staff in the rank of four star General,” Press Information Bureau, last updated 24 December 2019, accessed 6 March 2020, <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1597425>.

Conclusion

The primary research question, “How can the Indian Armed Forces achieve, sustain, and build upon the concept of Jointness in an India specific resource-constrained environment?” is open-ended. The open-ended nature demanded first understanding the concept of Jointness and then, based on this understanding, apply the concept to Indian Armed Forces by comparing with U.S. Armed Forces. The literature review helped comprehend the concept of Jointness in general and its progression in the U.S. and Indian Armed Forces, in particular.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The previous chapter covered the literature available on Jointness through the framework of History, Theory, Doctrine, and Reality. This chapter will elaborate on the research methodology chosen for the thesis and the reasons thereof. The chapter also discusses the analytical frameworks utilized to frame the problem, and to distill a solution based on the analysis. This chapter intends to act as a prism to filter the information available on Jointness and provide frameworks for the comparative analysis of Indian Armed Forces with U.S. Armed Forces in the subsequent chapter.

Research Methodology

As per Nicholas Walliman, in his book *Research Methods: The Basics*, qualitative research primarily deals with words rather than numbers. Researchers generally adopt this research method when people are the focus of the study. This type of research also deals with problem sets “not sufficiently understood initially.” Primarily, data in qualitative research is in the form of words—descriptions, accounts, opinions, feelings—or even pictures.¹¹⁴ The previous chapter highlighted the complexity of the concept of Jointness. Furthermore, the central concept of the thesis—Jointness—is abstract and interpreted in many ways. Hence, there exist multiple interpretations and multiple possible solutions to the primary research question. Moreover, as discussed earlier,

¹¹⁴ Nicholas Walliman, *Research Methods: The Basics* (New York: Routledge, 2011), 130.

Jointness is essentially a human endeavor. The complexity, ambiguity, and human dimension make qualitative analysis the ideal research methodology for comparing Indian Armed Forces with U.S. Armed Forces to draw suitable lessons for Jointness.

To organize and analyze qualitative information, Matthew Miles, Michael Huberman, and Johnny Saldaña in their book, *Qualitative Data Analysis: A Methods Sourcebook* suggests “three concurrent activities: data condensation, data display, and drawing and verifying conclusions.”¹¹⁵ First, data condensation means, “the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear” regarding the subject of research. Second, data display is “an organized, compressed assembly of information,” which facilitates interpretation of relationships and the relative significance of the collated information. Finally, this interpretation aids in drawing and verifying conclusions. Moreover, at the start of the qualitative research, the researcher holds the conclusions “lightly,” but later, with increasing comprehension, the researcher modifies and firms up these conclusions.¹¹⁶ A most crucial aspect of this model is its iterative nature.¹¹⁷ This thesis adopts the three concurrent activities model and assigns an analytical framework each for data condensation and data display.

¹¹⁵ Matthew B. Miles, A. M. Huberman, and Johnny Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed. (Thousand Oaks, CA: SAGE Publications, Inc, 2014), 12.

¹¹⁶ *Ibid.*, 12-13.

¹¹⁷ *Ibid.*, 14.

Analytical Frameworks

This research utilizes the operational design framework for data condensation and the DOTMLPF-P construct for data display. First, as per JP 5-0, “operational design is the conception and construction of the framework that underpins a campaign or major operation plan and its subsequent execution.” Use of operational design aids in finding solutions to complex problems by understanding the context and constraints.¹¹⁸ Second, as defined earlier, DOTMLPF-P is a problem-solving construct for assessing current and future capabilities while managing change. The acronym stands for doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy. The thesis also employs the operational design framework to help frame the problem and develop a solution, and the DOTMLPF-P construct to logically breakdown the solution. The subsequent sections explain both the frameworks.

Operational Design Framework

The operational design framework comprises four distinct components: understand the operational environment, understand strategic guidance, define the problem, and develop an operational approach.¹¹⁹ To simplify, the researcher restates the four components as What is the current state? What is the desired future state? What are the obstacles preventing the achievement of the desired state? How to overcome those

¹¹⁸ Joint Chiefs of Staff (JCS), Joint Publication (JP) 5-0, *Joint Planning* (Washington, DC: Government Printing Office, 16 June 2017), IV-1, accessed 26 February 2020, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp5_0_20171606.pdf.

¹¹⁹ Ibid., IV-6, IV-7.

obstacles? This restatement helps form the basis for the four secondary research questions (see Figure 2) stated in Chapter 1. The use of the operational design framework in the thesis serves two purposes: first, as a conceptual framework to solve the unstructured problem of adopting Jointness in Indian Armed Forces, and second, to condense the vast amount of information available on the subject.

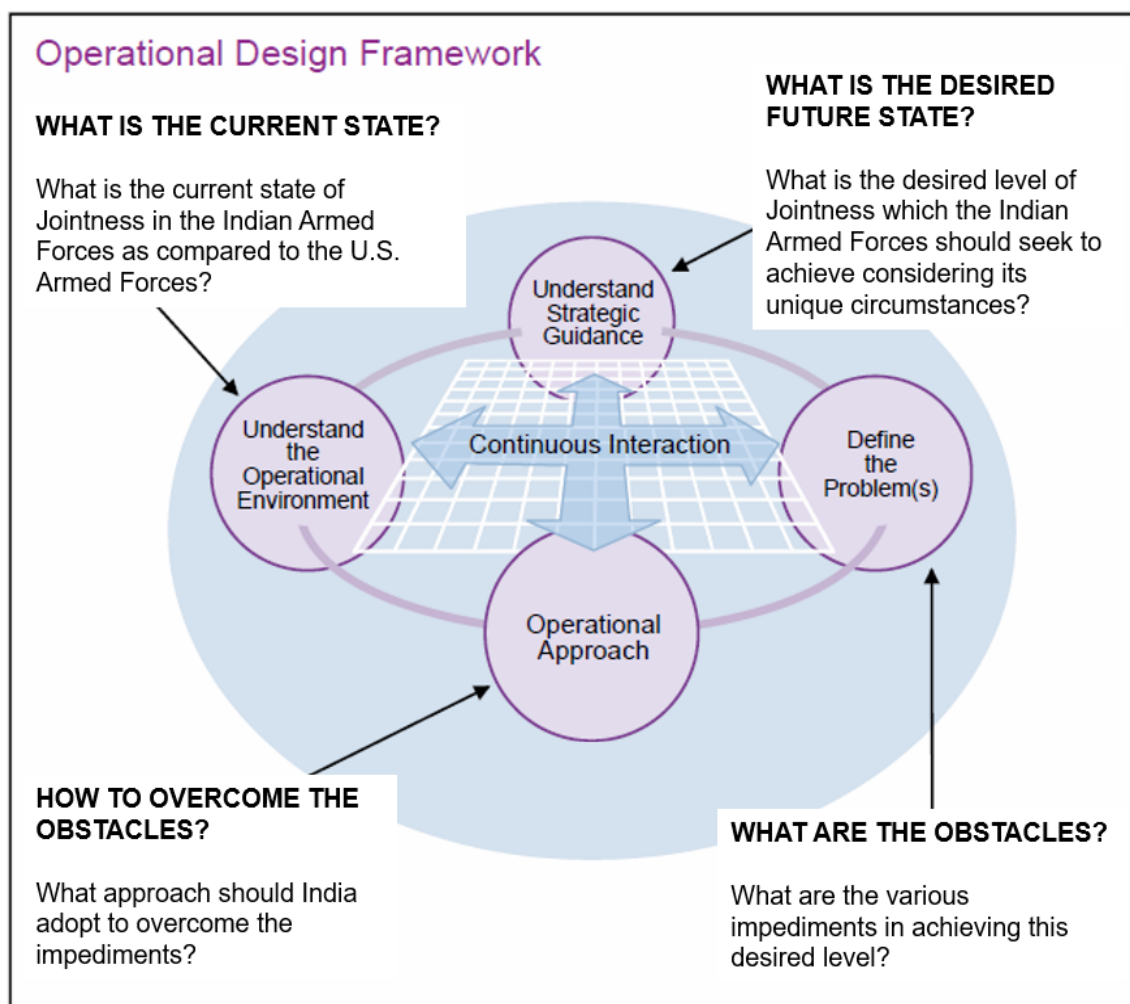


Figure 2. Operational Design Framework and Related Secondary Research Questions

Source: Figure adapted from Figure IV-3 in Joint Chiefs of Staff, Joint Publication 5-0, *Joint Planning* (Washington, DC: Government Printing Office, 16 June 2017), accessed 26 February 2020,

DOTMLPF-P Construct

Next, the DOTMLPF-P is a cognitive structure, comprising eight elements, to organize solutions to a given military capability problem set. The lack of Jointness is a capability gap for the Indian Armed Forces. As stated in the Joint Capabilities Integration and Development System (JCIDS) Manual, the DOTMLPF-P construct comprehensively addresses the identified capability gap by describing the shortcomings—requirements definition—and suggesting mitigating measures—capability development—across the eight elements.¹²⁰ In short, the construct permits an integrated approach to enforce Jointness in the Indian Armed Forces. As stated below, the JCIDS Manual defines each term, and AcqNotes, a non-DOD online defense acquisition information and knowledge center, clarifies each term.

1. Doctrine. “Fundamental principles that guide the employment of military forces in coordinated action toward a common objective.”¹²¹ The doctrine analysis examines the way the military fights, such as maneuver warfare and air-land battle, to see if there is a better way.¹²²

¹²⁰ JCS J-8, *JCIDS Manual*, B-G-F-1.

¹²¹ *Ibid.*, B-G-F-2.

¹²² AcqNotes, “JCIDS Process: DOTMLPF-P Analysis,” last updated 15 June 2018, accessed 27 February 2020, <http://acqnotes.com/acqnote/acquisitions/dotmlpf-analysis>.

2. Organization. “Unit or element with varied functions enabled by a structure through which individuals cooperate systematically to accomplish a common mission and directly provide or support warfighting capabilities.”¹²³ The organization analysis examines how a military organizes to fight, such as divisions and combined-arms task forces, to see if there is a better organizational structure.¹²⁴
3. Training. “Training (including mission rehearsals) of individuals, units, and staffs using doctrine or tactics, techniques, and procedures to prepare forces or staffs to respond to strategic, operational, or tactical requirements considered necessary to execute their assigned or anticipated missions.”¹²⁵ The training analysis examines how a military prepares its forces to fight, such as individual training and unit training, to see if the improvement is possible.¹²⁶
4. Material. “Materiel items, systems, or equipment needed to support the required capability.”¹²⁷ The materiel analysis examines all the stuff, such as weapons and spares, necessary to equip forces so that they can operate effectively and examine if new systems are needed.¹²⁸

¹²³ JCS J-8, *JCIDS Manual*, B-G-F-2.

¹²⁴ AcqNotes, “JCIDS Process: DOTMLPF-P Analysis.”

¹²⁵ JCS J-8, *JCIDS Manual*, B-G-F-3.

¹²⁶ AcqNotes, “JCIDS Process: DOTMLPF-P Analysis.”

¹²⁷ JCS J-8, *JCIDS Manual*, B-G-F-3.

¹²⁸ AcqNotes, “JCIDS Process: DOTMLPF-P Analysis.”

5. Leadership and Education. “Professional development of leaders that is the product of a learning continuum that comprises training, experience, education, and self-improvement.”¹²⁹ The leadership and education analysis examine how a military prepares its leaders to lead the fight from squad level to 4-star level.¹³⁰
6. Personnel. “Qualified personnel to support capability requirements. The number or quantity of personnel is a function of organization, while the quality, type, or skills of personnel is considered in the personnel function.”¹³¹ The personnel analysis examines the availability of qualified people for peacetime, wartime, and various contingency operations.¹³²
7. Facilities. “Pertains to real property consisting of one or more of the following: buildings, structures, ranges, utility systems, associated roads and other pavements, and underlying land.”¹³³
8. Policy. “Any DOD, interagency, or international policy issues that may prevent effective implementation of changes in the other seven DOTMLPF-P elemental areas.”¹³⁴

¹²⁹ JCS J-8, *JCIDS Manual*, B-G-F-4.

¹³⁰ AcqNotes, “JCIDS Process: DOTMLPF-P Analysis.”

¹³¹ JCS J-8, *JCIDS Manual*, B-G-F-5.

¹³² AcqNotes, “JCIDS Process: DOTMLPF-P Analysis.”

¹³³ JCS J-8, *JCIDS Manual*, B-G-F-5.

¹³⁴ *Ibid.*

Similar to operational design, the DOTMLPF-P construct also serves two purposes. First, as a comparative framework to display data gathered from comparing Jointness between Indian Armed Forces and U.S. Armed Forces. Second, as a conceptual tool to organize solutions based on interpretation of relationships. Nonetheless, due to constraints mentioned earlier in Chapter 1, the research employs only the first two elements—doctrine and organization—of the construct to analyze the current state of Jointness, visualize the future state, identify the obstacles, and suggest a suitable approach.

Conclusion

The thesis uses the qualitative research methodology to comparatively analyze the state of Jointness in Indian Armed Forces with U.S. Armed Forces. The operational design framework provides an overarching framework to analyze the current state, envision a future state, identify the obstacles to overcome, and finally suggest an approach to adopt Jointness in Indian Armed Forces. The DOTMLPF-P construct provides the cognitive framework to compare the state of Jointness and categorize the recommended approach.

CHAPTER 4

ANALYSIS

Introduction

The thesis utilizes the operational design as the overarching framework to analyze the state of Jointness in Indian Armed Forces, and the first two domains—doctrine and organization—of the DOTMLPF-P construct as a cognitive tool to aid comparison between the U.S. and Indian Armed Forces. First, after a brief review of the evolution of Jointness in both the countries, this chapter determines the current state of Jointness in Indian Armed Forces by comparing the Indian and U.S. Armed Forces. Next, the thesis proposes a desired state of Jointness in the Indian Armed Forces based on the 24 December Government of India directive listed in Table 1. Third, the author then identifies the problems associated with achieving the desired state. Finally, the thesis recommends a doctrinal and organizational approach to achieve Jointness.

Before the comparative analysis across the two domains, a short review of Chapter 2 discussion on the evolution of Jointness in the U.S. and Indian Armed Forces sets the context. The following table captures this evolution by comparatively tabulating important milestones of the U.S. and Indian Armed Forces in their path towards Jointness (see Table 2). The table has two subparts dealing with events and structures.

Table 2. Evolution of Jointness in the U.S. and Indian Armed Forces

Event	U.S.	India
Events Leading Up to the Landmark Occasion for Jointness		
Felt need for Jointness	World War II (1941-1945)	Indian Peacekeeping Force (IPKF) in Sri Lanka 1987-1990 Kargil War 1999
Significant Legislations/ Measures	1947 National Security Act 1949 Amendment to National Security Act 1958 Defense Reorganization Act	2000 Kargil Review Committee 2001 Task Force on Defense Management 2012 Naresh Chandra Committee
Three Precipitating Events	1980 Iran -Operation Desert One 1983 Beirut – Marine Barracks Bombing 1983 Grenada – Operation Just Cause	2015 Myanmar Raid 2016 Uri Surgical Strikes 2019 Balakot Air Strikes
Landmark Occasion	1986 Goldwater Nichols Department of Defense Reorganization Act	2019 Indian PM announcement about creation of CDS
Establishment of Structures for Unified Command		
Establishment of Joint Theatre Commands	1946 Unified Command Plan	2001 Andaman and Nicobar Command
Formation of Joint Staff	1947 National Security Act	2001 Integrated Defense Staff
Appointment of CDS Equivalent	1949 Chairman, Joint Chiefs of Staff	2020 Chief of Defense Staff

Source: Created by the author based on the discussion from Chapter 2.

The evolution of Jointness in both the armed forces has some similarities and differences. First, both countries felt the need for Jointness during major conflicts—World War II for the U.S. and IPKF for India. Both countries, during the conflict, innovated to bring up joint structures. The U.S. created the JCS and India the OFC for IPKF. The U.S. JCS survives to this day, whereas the Indian experiment with OFC in IPKF ended in two weeks. It then took another 12 years for India during the 1999 Kargil War to revisit the issue of Jointness. Next, based on the experience from the conflicts,

both countries instituted various measures to become joint. The U.S. carried out legislative actions to incorporate the changes, and India, on the other hand, settled for executive actions based on reports generated by government-appointed expert committees. Third, despite these legislative and executive actions in both the countries, the core issues—parochial influence by services in the operational chain of command for the U.S. and the appointment of the CDS for India—remained unaddressed.

Most importantly, the final push to address these core issues came from three precipitating events for both the countries. The U.S. enacted a landmark defense reform legislation, the GNA of 1986, based on the lessons learned from the shortcomings identified in Iran, Beirut, and Grenada. Similarly, the thesis argues that the Indian PM created the post of CDS, based on the requirement for having unified military advice, after three successful cross-border surgical strikes in Myanmar, Uri, and Balakot. Another similarity is that left to themselves, the U.S. and Indian Armed Forces, to maintain service autonomy, had settled for the coordination model of Jointness. Nonetheless, external interference from political hierarchy—legislative for the U.S. and executive for India—pushed through the reform necessary for the integration model of Jointness.

Finally, in both countries, the structures created immediately following the major conflicts became ineffective because of not directly confronting the problem of well-entrenched service parochialism. This entrenchment stifled the growth of the new joint structures—UCP and CJCS for the U.S. and for India, the ANC and HQ IDS. Nonetheless, for India, the critical issue is whether the appointment of CDS is its 1986 Goldwater-Nichols moment or the 1949 CJCS moment? If it is the former, then the

appointment of CDS is truly a landmark event; however, if it is the latter, then India still has much work to do. Hence to clarify this issue, the central argument of this thesis is that the appointment of the CDS is not the end but just the beginning of a long, arduous path towards Jointness. Consequently, the primary research question is “How can the Indian Armed Forces achieve, sustain, and build upon the concept of Jointness in an India specific resource-constrained environment?”

Current State of Jointness

The previous section’s comparative analysis of the evolution of Jointness in the U.S. and Indian Armed Forces sets the context to understand the operational environment, which is the first component of the operational design framework. The first component can also be restated in simpler terms as the current state. The relevant secondary research question is “What is the current state of Jointness in the Indian Armed Forces as compared to the U.S. Armed Forces?”

As indicated earlier, this section compares the U.S. and Indian Armed Forces across two—doctrine and organization—of the eight DOTMLPF-P domains to assess the current state of Jointness in the Indian Armed Forces. Nonetheless, it is vital to note that the eight DOTMLPF-P domains are interrelated, and an impact in one domain will have repercussions across most, if not all, domains. The understanding gained from this analysis helps in formulating a desired state of Jointness, identifying the problem, and developing an effective and efficient approach to achieve Jointness.

Doctrine

As defined in Chapter 2, doctrine is a body of knowledge comprising fundamental principles that provides a common language to help guide and coordinate actions of the profession. This common body of knowledge and language also facilitates Jointness.

Doctrine needs three essential elements: temporal linkage—rooted in the past to provide fundamental principles as a guide for present and future actions, knowledge hierarchy—categorizes the body of knowledge, and intellectual depth—provides the foundation for a sound body of knowledge. Both the U.S. and Indian definitions of doctrine indicate the presence of the three elements. First, as defined in Chapter 2, the U.S. Armed Forces define their doctrine as fundamental principles that guide the employment of U.S.

military forces in coordinated action toward a common objective and may include terms, tactics, techniques, and procedures. Next, the Indian Armed Forces also acknowledge a similar definition by stating that, “NATO defines military doctrine as the fundamental principles by which the military forces guide their actions in support of objectives.”¹³⁵

Doctrine and its three essential elements contribute to Jointness by providing a common language and framework for the services to understand each other through service doctrines and operate together using joint doctrines. The subsequent two sections discuss the three elements and Jointness in the U.S. and Indian Armed Forces.

U.S. Armed Forces

The first element of doctrine—temporal linkage—connects the two significant sources of doctrine: historical experience and concept development. First, doctrine

¹³⁵ India MOD, JP - 01, 56.

primarily derives fundamental principles from historical experiences to guide actions of the present, yet malleable enough to accommodate future changes.¹³⁶ The U.S. Army subtly emphasizes the linkage between history and doctrine by the use of historical vignettes to reinforce information discussed in doctrines.¹³⁷ The U.S. Army has institutionalized historical study by having institutions such as the Center of Military History with the mission of recording the official history of the army in both peace and war and advising the army staff on historical matters. Besides, the center has around 600 publications to its credit.¹³⁸ Second, extending this historical linkage into the future, the U.S. Air Force considers doctrine as part of a temporal continuum from long to short term comprising of vision, concept, and doctrine (see Figure 3). First, vision is the desired state of an operational environment and of corresponding capabilities required to fight in a future environment 15 to 20 years from now. Next, concepts elaborate the vision further by describing the future end-state in more detail and providing specifications for the desired capabilities in the mid-timeframe of the next five to fifteen years. Finally, doctrine deals with current capabilities and in the near-term environment for up to five years. Experiments, wargames, and historical study help translate from

¹³⁶ HQDA, ADP 1-01, 1-2.

¹³⁷ Headquarters, Department of the Army (HQDA), Field Manual (FM) 3-0, *Operations* (Washington, DC: Government Printing Office, October 2017), xi, accessed 25 October 2019, <https://archive.org/details/FM3-0OperationsOctober2017/page/n1>.

¹³⁸ U.S. Army Center of Military History, “The U.S. Army Center of Military History: An Overview,” U.S. Army, accessed 27 March 2020, <https://history.army.mil/html/about/overview.html>; Center of Military History, “Publications Catalog,” accessed 27 March 2020, <https://history.army.mil/catalog/index.html>.

vision to reasonable concept to workable doctrine.¹³⁹ The U.S. Army also has a similar understanding of the link between concepts and doctrine.¹⁴⁰ Hence, doctrine for armed forces is not a stand-alone document but flows from historical experience and from vision to concept to doctrine.

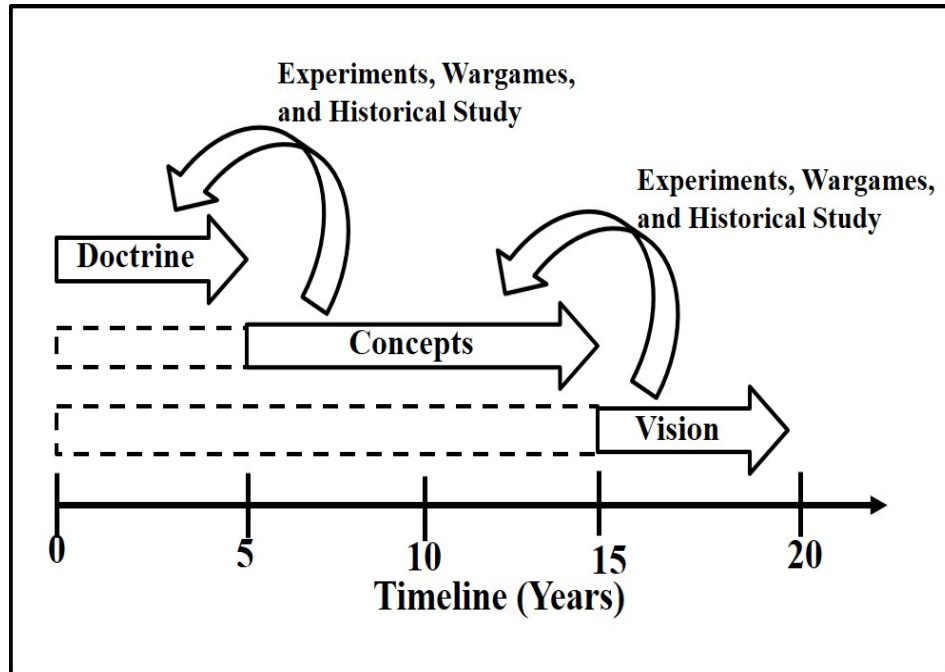


Figure 3. Temporal Continuum: Vision, Concept, and Doctrine

Source: Created by the author based on content from Curtis E. LeMay Center for Doctrine Development and Education, “Doctrine, Operating Concepts, and Vision,” in Vol. I *Basic Doctrine* (Washington, D.C.: Headquarters, U.S. Air Force, 27 February 2015), accessed 29 March 2020, https://www.doctrine.af.mil/Portals/61/documents/Volume_1/V1-D08-Doctrine-Concepts-Vision.pdf.

¹³⁹ Curtis E. LeMay Center for Doctrine Development and Education, “Doctrine, Operating Concepts, and Vision,” in *Basic Doctrine*, vol. 1 (Washington, DC: Headquarters, U.S. Air Force, 27 February 2015), D08, accessed 29 March 2020, https://www.doctrine.af.mil/Portals/61/documents/Volume_1/V1-D08-Doctrine-Concepts-Vision.pdf.

¹⁴⁰ HQDA, ADP 1-01, 2-5.

The second element of doctrine is to understand doctrine as a sub-part of a body of professional knowledge. The U.S. Army doctrine nests within a knowledge hierarchy, and comprises five elements of information, which decides the levels of doctrine. These categorizations are also applicable to the four types of U.S. Army doctrine: Joint, Multinational, Multi-Service, and Single Service (see Figure 4). First, the body of knowledge of a profession serves different purposes. Accordingly, the U.S. Army classifies it into four categories: Regulations and Pamphlets—to deal with administration, Doctrine—to deal with operations, Training Publications—to deal with specific tasks and procedures, and Technical Manuals—to deal with specific equipment related topics.¹⁴¹ Second, the military doctrine has five basic elements of information: principles, tactics, techniques, procedures, and terms and symbols. Principles are “fundamental rules,” tactics is “ordered arrangement of forces,” techniques are “non-prescriptive ways to perform tasks,” procedures are “detailed prescriptive ways to perform tasks,” and terms and symbols are the “language of operations.”¹⁴²

Next, the U.S. Army further categorizes doctrine, from general to specific, into three levels of publications: Army Doctrine Publications (ADP)—deal with fundamental principles, Field Manuals (FM)—deal with principles, tactics, and procedures, and Army Techniques Publications (ATP)—deal with techniques. In addition, the U.S. Army considers two publications: ADP 1 *The Army*, and ADP 3-0 *Operations* as capstone

¹⁴¹ HQDA, ADP 1-01, 1-1.

¹⁴² Ibid., 2-1 to 2-2.

publications which sit on top of the hierarchy chart.¹⁴³ Similarly, the U.S. Joint Chiefs of Staff hierarchy of Joint publications comprises capstone, keystone, and supporting publications. As per CJCSM 5120.01A *Joint Doctrine Development Process*, “The capstone publication (JP 1) links joint doctrine to national strategy . . . keystone publications (JPs 1-0, 2-0, etc.) constitute the doctrinal foundation of the series . . . which follows traditional Joint Staff lines of responsibility to the maximum extent possible . . . Each series has a keystone manual as the first publication in the series,” followed by the supporting publications.¹⁴⁴ These categorizations—knowledge, information, and hierarchy of publications—help understand the structure of doctrine, and prioritize information to determine applicability either for the entire armed forces or for a specific branch of service.

¹⁴³ HQDA, ADP 1-01, 2-4.

¹⁴⁴ The traditional Joint Staff lines of responsibility are J-1 Personnel, J-2 Intelligence, J-3 Operations, J-4 Logistics, J-5 Plans, and J-6 Communications. See Joint Chiefs of Staff (JCS), Chairman of the Joint Chiefs of Staff Manual (CJCSM) 5120.01A, *Joint Doctrine Development Process* (Washington, DC: Government Printing Office, 29 December 2014), D-1 to D-2, accessed 26 March 2020, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/cjcsm5120_01a.pdf.

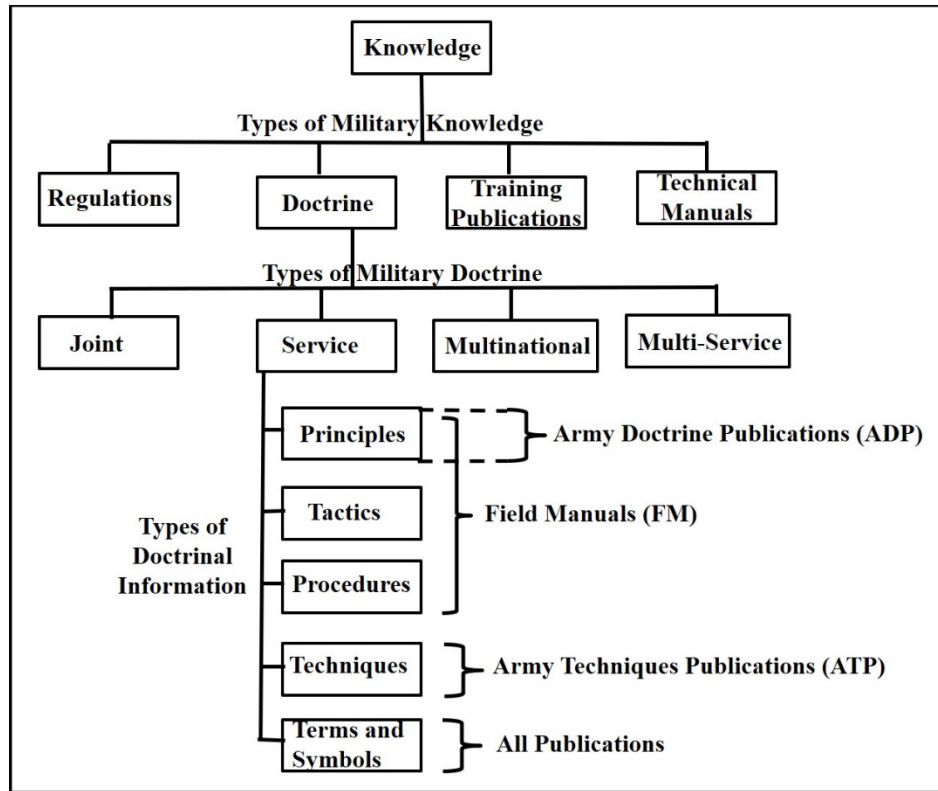


Figure 4. Knowledge Hierarchy and Types of Doctrine and Information

Source: Created by the author based on content from Headquarters, Department of the Army, Army Doctrine Publication 1-01, *Doctrine Primer* (Washington, DC: Government Printing Office, July 2019), 1-1, 2-1, 2-3, 2-4, accessed 26 January 2020, https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN18138_ADP%201-01%20FINAL%20WEB.pdf.

The final but most critical element of doctrine is the intellectual depth, which distinguishes a superficial doctrine from one rooted in academic endeavor. As discussed earlier, the two sources of doctrine are history and concept development. Intellectual effort emanating from a robust institutional mechanism translates both these sources into doctrine. In-depth historical study, wargaming of new concepts, and incorporating

lessons learned from recent operations characterize this intellectual effort.¹⁴⁵ A robust institutional mechanism may comprise both academics who provide depth and continuity and serving officers who offer the latest experiences from operating in the field. This symbiotic relationship between academics and serving officers forms the bedrock of doctrinal development. To illustrate, the Combined Arms Doctrine Directorate (CADD) responsible for managing the U.S. Army Doctrine Program comprises a healthy mix of both academics and serving officers.¹⁴⁶ One such scholar from U.S. Naval War College, Andrew R. Wilson, Professor of Strategy and Policy, considers armed forces as the “most self-reflective of all professions.” He further argues that because the armed forces “do not spend the majority of their time doing what they are trained to do i.e., fight a war,” the armed forces have the “time and advanced education” to contemplate deeply about their profession.¹⁴⁷ Consequently, the armed forces should create doctrine based on the intellectual exercise of self-reflection grounded in historical study.

An avid reader can ascertain the proof of intellectual exercise from three facets: simplicity, structuring, and distribution restriction. First, doctrine authors need to write clearly to facilitate understanding of the common language by the intended audience. The CADD vision statement captures this intent of simplicity by stating that, “all U.S. Army

¹⁴⁵ HQDA, ADP 1-01, 1-2; Curtis E. LeMay Center for Doctrine Development and Education, “Doctrine, Operating Concepts, and Vision.”

¹⁴⁶ U.S. Army Combined Arms Center, “Combined Arms Doctrine Directorate (CADD): Contact Us,” U.S. Army, accessed 24 March 2020, <https://usacac.army.mil/organizations/mccoe/cadd/contact-us>.

¹⁴⁷ Andrew R. Wilson, *Masters of War: History’s Greatest Strategic Thinkers*, (Chantilly, VA: The Great Courses, 2012), 77.

doctrine is clearly written, relevant and as current as possible.”¹⁴⁸ Also, the U.S. Government Federal’s plain language guidelines articulate the requirement for simplicity based on the Plain Writing Act of 2010.¹⁴⁹

Next, the structuring of each doctrine publication should lend itself to easier assimilation and cross-referencing. To achieve this purpose, CJCSM 5120.01A lays down the basic structure of a Joint doctrine, as elaborated in Table 3. Among the many parts preface, a summary of changes, references, and glossary are important to facilitate easier assimilation and cross-referencing. First, a properly worded preface sets the context and identifies the audience. Second, a summary of changes ensures continuity of doctrine by tracking modifications from previous editions. Third, references establish the academic credentials of the doctrine process. Fourth, a glossary defines the language of the doctrinal terms and establishes ownership of these terms. In summary, structuring aids in maintaining academic rigor of doctrine development.

¹⁴⁸ U.S. Army Combined Arms Center, “Combined Arms Doctrine Directorate (CADD)” accessed 24 March 2020, <https://usacac.army.mil/organizations/mccoe/cadd>.

¹⁴⁹ Plain Language Action and Information Network, “Federal plain language guidelines,” U.S. Government, accessed 24 March 2020, <https://plainlanguage.gov/guidelines/>.

Table 3. Basic Organization Structure of a U.S. Joint Publication

Front and Back Covers	Front cover displays the JP title, number, date, Joint Chiefs of Staff, and the five Service logos. Back cover presents a figure showing the joint doctrine development process and hierarchy describing the relative position of the publication.
Security Instructions	Printed at the top and bottom of the front and back covers for classified publications. The publication covers are color-coded as follows: UNCLASSIFIED and FOR OFFICIAL USE ONLY—dark blue; CONFIDENTIAL—blue; SECRET—red; TOP SECRET—orange.
Chairman’s Letter	Included only in capstone and keystone publications to provide personal guidance from the CJCS concerning the subject matter of the publication.
Preface	Describes the scope, purpose, and application of the publications.
Summary of Changes	States significant changes incorporated since the previous edition.
Table of Contents	Describes the contents of the publication.
Executive Summary	Provides an overview of the publication. Comprises overarching themes and synopsis of fundamental principles described in the publication.
Body of Publication	Comprises the main chapters of the publication.
Appendices and Annexes	Provides supplemental information of topics initially discussed in the chapters. In addition, comprises reference and administrative instructions appendices.
Glossary	Consists of two parts: Part I - Abbreviations and Acronyms. Part II - Terms and Definitions.

Source: Created by the author based on content from Joint Chiefs of Staff, Chairman of the Joint Chiefs of Staff Manual 5120.01A, *Joint Doctrine Development Process* (Washington, DC: Government Printing Office, 29 December 2014), E1 - E7, accessed 26 March 2020, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/cjcs5120_01a.pdf.

The final but most definitive proof of intellectual exercise is a doctrine’s distribution restriction. The U.S. Armed Forces have most of their Joint and Army doctrines as unclassified documents and approved for public release. These are available

on the internet with unrestricted access.¹⁵⁰ This unrestricted distribution facilitates scrutiny of the documents by the civilian academics and researchers. Consequently, the multi-dimensional feedback mitigates cognitive bias, such as groupthink among the doctrine developers. Moreover, this transparent system, if followed over the years, ensures a high standard and consistency of doctrine development. To illustrate the impact of the civilian academics and researchers, during the defense reorganization debates of the 1980s, the civilian academics and research institutions played a significant role in influencing U.S. government policy leading to the enactment of GNA in 1986.¹⁵¹ Thus, intellectual depth based on a robust institutional mechanism and transparency acts as the foundation of professional knowledge in general and doctrine in specific.

Last, regarding Jointness, the development philosophy of the U.S. joint doctrine states that, “all Joint Publications directly support the premise of the joint employment of the U.S. Armed Forces and must be consistent with other Joint Publications within the joint doctrine hierarchy.”¹⁵² Similarly, JP 1 links service and joint doctrines by stating that, during the development of joint doctrine, individual service doctrines are considered; however, once joint doctrine is formulated, it takes priority over service doctrines.¹⁵³

¹⁵⁰ Joint Chiefs of Staff, “Joint Doctrine Publications,” accessed 24 March 2020, <https://www.jcs.mil/Doctrine/Joint-Doctrine-Pubs/>; Army Publishing Directorate, “Publications,” accessed 24 March 2020, <https://armypubs.army.mil/>.

¹⁵¹ Locher, *Victory on the Potomac*, 164-165.

¹⁵² JCS, CJCSM 5120.01A, B-1.

¹⁵³ JCS, JP 1, VI-3.

Indian Armed Forces

This section analyses the three elements of doctrine and Jointness in the recent doctrines published by Indian Armed Forces in the open domain. These doctrines are the *Joint Doctrine Indian Armed Forces* (JDIAF) – 2017, *Joint Training Doctrine* (JTD) – 2017, and *Land Warfare Doctrine* (LWD)– 2018. Before starting the analysis, it is crucial to clarify the differing Indian perception of military doctrine. The JDIAF fails to define its interpretation of the term doctrine despite acknowledging the NATO definition of doctrine. Nonetheless, a closer reading of the JDIAF in general and specifically the appendix explaining the term doctrine highlights a different interpretation of doctrine from the NATO definition and, by extension, the U.S. definition.¹⁵⁴ The U.S. Armed Forces consider that “doctrine is based on extant capabilities, i.e., current force structures and materiel” and clearly distinguishes doctrine from policy, strategy, and concepts.¹⁵⁵ In contrast, the JDIAF and its successors JTD and LWD appear to be a mix of policy, strategy, futuristic concepts, and warfighting dictums.¹⁵⁶ This interpretation can partly be

¹⁵⁴ India MOD, JP - 01, 56.

¹⁵⁵ JCS, CJCSI 5120.02D, A-2 to A-7.

¹⁵⁶ For a discussion about these aspects, See Aghijnan Rej and Shashank Joshi, “India’s Joint Doctrine: A Lost Opportunity,” (ORF Occasional Paper # 139, Observer Research Foundation, New Delhi, January 2018), 1, accessed 31 March 2020, https://www.orfonline.org/wp-content/uploads/2018/01/ORF_Occasional_Paper_Joint_Doctrine.pdf; Patrick Bratton and David Smith, “India’s Joint Doctrine: Hopeless Muddle, or the Start of Strategic Articulation?” *War Room*, 06 June 2017, accessed 31 March 2020, <https://warroom.armywarcollege.edu/articles/indias-joint-doctrine-hopeless-muddle-start-strategic-articulation/>; Joy Mitra, “India’s Land Warfare Doctrine 2018: Hoping for the Best, Preparing for the Worst,” *The Diplomat*, 3 January 2019, accessed 31 March 2020, <https://thediplomat.com/2019/01/indias-land-warfare-doctrine-2018-hoping-for-the-best-preparing-for-the-worst/>.

attributed to these doctrines' efforts to bridge the gap created due to lack of a publicly espoused Indian National Security or Defense Strategy.¹⁵⁷ Nonetheless, a recently published supporting document, *Understanding Military Doctrine: A Primer*, seeks to clarify the Indian interpretation of doctrine. This document published by the Directorate of Doctrine, Headquarters Integrated Defence Staff, which is also the proponent for JDIAF and JTD, provides bulletized clarification points about doctrine but falls short by not even defining the term military doctrine.¹⁵⁸ Regardless of the varying Indian interpretation, any doctrine to gain credibility should comprise, as discussed earlier, three components: temporal linkage, knowledge hierarchy, and intellectual depth.

First, as noted previously, temporal linkage through history and concepts act as the key source for doctrine. In the Indian context, the JDIAF recognizes both these sources by stating that, “the principal source of doctrine is experience . . . doctrine captures the lessons of past wars,” and “doctrine is a set of proven concepts.” In addition, the JDIAF briefly discusses the interrelationship between doctrine and concepts.¹⁵⁹ Thus, the capstone doctrine of Indian Armed Forces attempts to establish temporal linkage. Nonetheless, moving from doctrine to real-world, this attempt appears precarious at best for two reasons. First, there exists no mechanism to methodically study military history in

¹⁵⁷ India MOD, JP - 01, 4; Rej and Joshi, “India’s Joint Doctrine: A Lost Opportunity,” 5-7.

¹⁵⁸ India Ministry of Defense (MOD), *Understanding Military Doctrine: A Primer* (New Delhi: Directorate of Doctrine, Headquarters Integrated Defence Staff, September 2018), 3, accessed 31 March 2020, https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/Primer%20on%20Military%20Doctrine-%20September%202018.pdf.

¹⁵⁹ India MOD, JP - 01, 56-57.

the Indian Armed Forces, which invalidates the first claim.¹⁶⁰ Anit Mukherjee points out this absence in his book, *The Absent Dialogue: Politicians, Bureaucrats, and the Military in India*.¹⁶¹ Second, this lack of institutionalized historical study has also deluded strategic studies and concept development in India.¹⁶² For example, the U.S. and China fought the first limited war in the nuclear era in the Korean peninsula between 1950 and 1953.¹⁶³ Nonetheless, this war hardly finds any mention in Indian discourse about the concept of limited war.¹⁶⁴ The nuclear situation between the cold war rivals the U.S. and USSR before the onset of the Korean War was similar to that which existed between India and Pakistan post-nuclearization in 1998. Subsequently, India fought its first limited conventional war—Kargil War—with Pakistan in 1999 under a nuclear shadow. An in-depth comparative study of the Korean War and the Kargil War would have led to

¹⁶⁰ The mechanism to record Indian Military History is an administrative office known as History Division inside the Ministry of Defense. See India, Ministry of Defense, “Department of Defense: History Division,” 16 February 2018, accessed 29 March 2020, <https://mod.gov.in/dod/history-division-0>.

¹⁶¹ Mukherjee, *The Absent Dialogue: Politicians, Bureaucrats, and the Military in India*, 186-187.

¹⁶² P. K. Gautam, *The Need for Renaissance of Military History and Modern War Studies in India*, IDSA Occasional Paper No. 21 (New Delhi: Institute of Defence Studies and Analyses, 2011), 3-6.

¹⁶³ Michael Carver, “Conventional Warfare in the Nuclear Age,” in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret, Gordon Alexander Craig, and Felix Gilbert (Princeton, NJ: Princeton University Press, 1986), 779 - 781.

¹⁶⁴ One instance of mention about lessons from the Korean War for India is an article written by Raja Mohan. See Raja Mohan, “Raja Mandala: Lessons from Korea,” *Indian Express*, 1 May 2018, accessed 31 March 2020, <https://indianexpress.com/article/opinion/columns/india-pakistan-relations-narendra-modi-north-korea-south-korea-meeting-5157726/>.

valuable lessons for India to develop pragmatic concepts for its limited war conundrum with Pakistan.

Nonetheless, it appears India carried out no such historical study to either validate its concepts or in translating concepts to doctrine. To illustrate, the concept of Cold Start, supposedly developed into a doctrine in the early 2000s and later disavowed, stands as proof of failure in firstly validating concepts, and later in its translation into doctrine.¹⁶⁵ Another recent example of this trend is the concept of raising a Mountain Strike Corps to negate Chinese intransigence, which again has met a similar fate.¹⁶⁶ In summary, the Indian capstone Joint doctrine's assertion for temporal linkage appears on shaky ground in reality.

Next, India has some similarities and differences with the U.S. regarding the knowledge hierarchy of the army profession. First, as noted earlier, the doctrine is just one part of the complete knowledge of a profession. Like the U.S. Army, the Indian Army has similar categories of professional knowledge, albeit not expressed as such as in any overarching document. The four categories are Defense Service Regulations and Army Orders—to deal with administration; Doctrine and General Staff (GS) Pamphlets—to deal with operations; Army Training Notes and Special Army Training

¹⁶⁵ For a discussion about the Cold Start Doctrine, See P. K. Mallick, "Indian Army's Land Warfare Doctrine 2018: Questions and Concerns," *The Wire*, 3 January 2019, accessed 23 March 2020, <https://thewire.in/security/indian-armys-land-warfare-doctrine-2018-questions-and-concerns>.

¹⁶⁶ Mayank Singh, "Mountain Strike Corps shelved as it was unwieldy: Senior army official," *The New Indian Express*, 30 August 2019, accessed 31 March 2020, <https://www.newindianexpress.com/nation/2019/aug/30/mountain-strike-corps-shelved-as-it-was-unwieldy-senior-army-official-2026361.html>.

Memorandums—to deal with specific tasks and procedures; Technical Manuals—to deal with specific equipment related topics.¹⁶⁷

Next, in the knowledge hierarchy, as listed earlier in Figure 4, there are different types and levels of military doctrine which contain different types of information. First, the Indian Armed Forces, unlike the U.S. Armed Forces, has only two types of military doctrines: Joint and Service doctrines.¹⁶⁸ Next, the Indian Army publications lack a clear hierarchy. Nonetheless, based on the discussion of levels of doctrine from *Understanding Military Doctrine: A Primer*, these publications related to doctrine and operations can be logically arranged in decreasing order from doctrine to GS pamphlets to Training notes.¹⁶⁹ First, at the helm is the capstone doctrinal publication, the Indian Army Doctrine – 2010; followed by keystone doctrinal publications such as the Land Warfare Doctrine – 2018 and the Doctrine for Sub Conventional Operations – 2006. Next, in the hierarchy, are the various GS pamphlets dealing with basic operations such as Attack, Defense, and Retrograde, followed by the GS pamphlets on specialized operations such as Desert and Mountain Warfare. Last in the hierarchy are the various Army Training Notes and Special Army Training Memorandums dealing with specialized techniques in

¹⁶⁷ Based on the author's experience and personal interpretation.

¹⁶⁸ Though not clearly specified, it can be inferred from the list of doctrines in the bibliography of JDIAF. See India MOD, JP - 01, 66-67.

¹⁶⁹ India MOD, *Understanding Military Doctrine: A Primer*, 7.

operations such as Attack across Linear Obstacle, and Employment of Attack Helicopters.¹⁷⁰

Finally, in the knowledge hierarchy discussion, the types of information in the Indian Army's doctrine are ambiguous due to the differing interpretation of doctrine, which excludes operations and tactics from doctrine. The JDIAF clearly states that "doctrine is neither operations nor tactics."¹⁷¹ As stated earlier, the Indian doctrinal publications illustrate aspects of policy, strategy, futuristic concepts, and warfighting dictums. Nonetheless, facets of general principles, tactics, procedures, and techniques also form part of the types of information on the inclusion of GS pamphlets and Training notes as part of the doctrinal hierarchy.

The final but most crucial component of doctrine is its Intellectual depth, as discussed earlier, emanates from a robust institutional mechanism, and displayed through simplicity, structuring, and distribution restriction of a doctrine. The Indian doctrine primer also captures these ideas while mentioning the effectiveness of a doctrine.¹⁷² Nonetheless, the reality is different from those expressed in the primer. First, similar to the study of military history in the Indian Army, the institutional mechanism for doctrine writing staffed purely by serving officers is devoid of intellectual depth due to the absence of civilian academics. Besides, it appears only in-house consultations are carried

¹⁷⁰ Hierarchical breakdown based on the author's knowledge and personal interpretation of levels of doctrine mentioned in India MOD, *Understanding Military Doctrine: A Primer*.

¹⁷¹ India MOD, JP - 01, 57.

¹⁷² India MOD, *Understanding Military Doctrine: A Primer*, 11.

out before the formulation of doctrines.¹⁷³ Second, if simplicity is defined as presenting ideas in a clear and straightforward language understandable in a single, rapid reading, then Indian doctrines are not simple to read even to the civilian strategists immersed in years of intellectual study.¹⁷⁴ Third, the basic structure of Indian doctrines and pamphlets misses a summary of changes, proper referencing, and glossary, which precludes tracking of continuity, exhibiting academic rigor, and imposing a common language.¹⁷⁵ Finally, the Indian Armed Forces have classified most of their Joint and Service doctrines and pamphlets with a restricted distribution list. Only a few doctrines such as the JDIAF, JTD, and LWD are unclassified and available in the open domain. Even these open domain doctrines have been subject to heavy criticism from civilian strategists and academics for lack of academic rigor, thereby making them ponder about the standard of classified in-house publications.¹⁷⁶ The Indian Armed Forces need to strike a balance between security considerations and the need for constructive criticism to improve the

¹⁷³ For a description of the doctrine formulation process, See India MOD, JP - 01, 68.

¹⁷⁴ For comments on simplicity of JDIAF, see Anit Mukherjee, “Joint Doctrine for Armed Forces: the single-service syndrome,” *The Hindu*, 09 May 2017, accessed 31 March 2020, <https://www.thehindu.com/opinion/op-ed/joint-doctrine-of-armed-forces-the-single-service-syndrome/article18410953.ece>.

¹⁷⁵ For comments on the JDIAF’s referencing, editing, and footnoting technique, See Mukherjee, “Joint Doctrine for Armed Forces: the single-service syndrome;” for lack of summary of changes and glossary, see JDIAF, JTD, and LWD available in the open domain.

¹⁷⁶ See Bratton and Smith, “India’s Joint Doctrine: Hopeless Muddle, or the Start of Strategic Articulation;” Mallick, “Indian Army’s Land Warfare Doctrine 2018: Questions and Concerns;” Mukherjee, “Joint Doctrine for Armed Forces: the single-service syndrome;” Rej and Joshi, “India’s Joint Doctrine: A Lost Opportunity.”

doctrinal process. In sum, the intellectual depth leads to clarity in doctrine, which facilitates understanding and thereby fosters Jointness.

Finally, the contribution towards Jointness of Indian doctrines in general and specifically the capstone joint doctrine JDIAF is uncertain for two reasons. First, the capstone joint doctrine, JDIAF, as stated earlier in Chapter 2, has only a short paragraph discussing Jointness and fails to define it. This short discussion does not adequately clarify the essence of Jointness, which is synergistic employment of various services capabilities and competencies. An Indian strategist highlights this inadequacy by stating that “the doctrine is confusing even on the issue of defining jointness,” and attributes this to entrenched service parochialism attempting to maintain status quo.¹⁷⁷ Second, the capstone joint doctrine, fails to assert the precedence of Joint doctrines over Service doctrines. In the foreword, the Chairman of the COSC makes a passing mention that the JDIAF “remains aligned with the existing Service doctrines.”¹⁷⁸ In addition, the purpose of the Joint doctrine espoused in the appendix of JDIAF is to “coalesce, synthesize and harmonize the tenets, beliefs and principles of the different Services into one common, officially enunciated and accepted guideline for carrying out Joint Operations.”¹⁷⁹ This purpose reflects the coordination rather than the integration approach to Jointness of the doctrine. Consequently, another Indian strategist refers to the JDIAF as a “Joined Doctrine, not Joint Doctrine,” reflective of the lowest common denominator acceptable to

¹⁷⁷ Mukherjee, “Joint Doctrine for Armed Forces: the single-service syndrome.”

¹⁷⁸ India MOD, JP – 01, “Foreword.”

¹⁷⁹ India MOD, JP - 01, 57.

all three services .¹⁸⁰ Thus, to foster Jointness, Joint doctrines should be the start point for developing Service doctrines, and the formulation of doctrines both at Service and Joint levels requires serious introspection to raise the bar on intellectual depth.

Analysis

A comparative analysis of elements of doctrine and Jointness between the Indian doctrines and pamphlets, and the U.S. doctrinal publications would help in identifying the doctrinal desired state, the problems to achieve the desired state, and a doctrinal approach to adopt Jointness. The elements of doctrine employed for comparison are temporal linkage, knowledge hierarchy, and intellectual depth, with each factor comprising many sub-factors. Similarly, the comparison of Jointness deals with its meaning and precedence of doctrinal publications. Table 4 captures this comparative analysis of all the factors and subfactors from the discussion of the preceding two sections.

¹⁸⁰ Arjun Subramaniam, “Indian Military and Jointness,” Episode 16, 24 June 2019, in *National Security Conversations*, interview by Jacob Happymon, Podcast audio, accessed 24 December 2019, <https://podtail.com/podcast/national-security-conversations/ep-16-indian-military-and-jointness/>.

Table 4. Comparative Analysis of the U.S. and Indian Military Doctrines

Factors / Subfactors	U.S. Doctrine	Indian Doctrine
1. Temporal Linkage		
History	Claimed and present.	Claimed but doubtful because no institutional study of military history.
Concepts	Validated to become doctrine.	Hasty incorporation as doctrine, leading to failure
2. Knowledge Hierarchy		
Types of Knowledge	Four types listed: 1. Regulations and pamphlets. 2. Doctrines. 3. Training Publications. 4. Technical Publications.	Four types present but not listed formally: 1. Regulations and Orders. 2. Doctrines and General Staff Pamphlets. 3. Training Notes and Memorandums. 4. Technical Publications
Types of Doctrine	Four types: Joint, Service, Multi-service, and Multinational.	Two types: Joint and Service.
Levels of Military Doctrine	Three levels recognized: 1. Doctrinal Publications. 2. Field Manuals. 3. Techniques Publications.	Not clearly recognized, but logically lends to three levels: 1. Doctrines. 2. General Staff Pamphlets. 3. Training Notes and Memorandums.
Types of Information	Five types listed: Principles, Tactics, Procedures, Techniques, and Terms and Symbols.	No demarcation. Leading to inclusion of strategy, policy, and concepts into doctrine.
3. Intellectual Depth		
Institutional Mechanism	Present and includes civilian academics.	Present and exclusively staffed by serving officers.
Simplicity	Incorporated in a vision statement and mandated by law.	Difficult to read.
Structuring	Lends to continuity, academic rigor, and common language.	Misses key elements such as summary of changes, proper referencing, and glossary leading to lack of continuity, academic rigor, and common language.
Distribution Restriction	Few publications are restricted.	Few publications unrestricted.
4. Jointness	Clearly defined; Joint doctrine drives Service doctrines.	Not clearly defined; Service doctrines drive Joint doctrines.

Source: Created by the author based on discussion of previous two sections.

To summarize, the Indian doctrine's temporal linkage—rooted in the past to provide fundamental principles as a guide—is tenuous at best. On the other hand, the Indian doctrines establish the knowledge hierarchy only partially. Next, the Indian doctrine's intellectual depth requires serious introspection, and finally, Jointness needs more clarity. Recalling Professor Wilson's argument, the Indian Armed Forces need to invest time and obtain advanced education to espouse deep thoughts about its profession with clarity.

Organization

Doctrine has a profound influence on a military organization. The three organizational tensions—centralization versus decentralization, functional versus geographic, and specialist versus generalist—discussed in Chapter 2 shapes the organization of a Joint Force by recognizing the differing service perspectives. Ideally, one of the primary roles of the capstone Joint doctrine is to balance the three organizational tensions by clearly enunciating the concept of Jointness as applicable to that armed forces. Similarly, a Joint organization deals with the structure for synergistic employment of various service capabilities and competencies of a Joint Force. In addition, doctrine also provides “tools for assessing organizational designs.”¹⁸¹ Moreover, any standard military organization has three main features: vertical hierarchy or levels, horizontal spread of components, and the legal authority which binds the organization together. Correspondingly, the tools utilized to compare the U.S. and Indian Armed Forces' Joint Force Organization structure are levels of Joint Force, components

¹⁸¹ HQDA, ADP 1-01, 1-4.

of Joint Force, and command and control of Joint Force. In addition, the thesis also compares the roles of the CJCS in the U.S. and the CDS in India as applicable to the joint force organization.

U.S. Armed Forces

The capstone joint doctrine publication JP 1, *Doctrine for the Armed Forces of the United States*, clearly states the levels, components, and command and control of joint forces (see Figure 5). It lays down guidelines for organizing joint forces at three levels. Also, JP 1 cautions that organizing a joint force does not equate to equal representation of all services for all joint operations. In addition, it specifies the various command and control relationships for organizing a joint force.¹⁸²

¹⁸² JCS, JP 1, i.

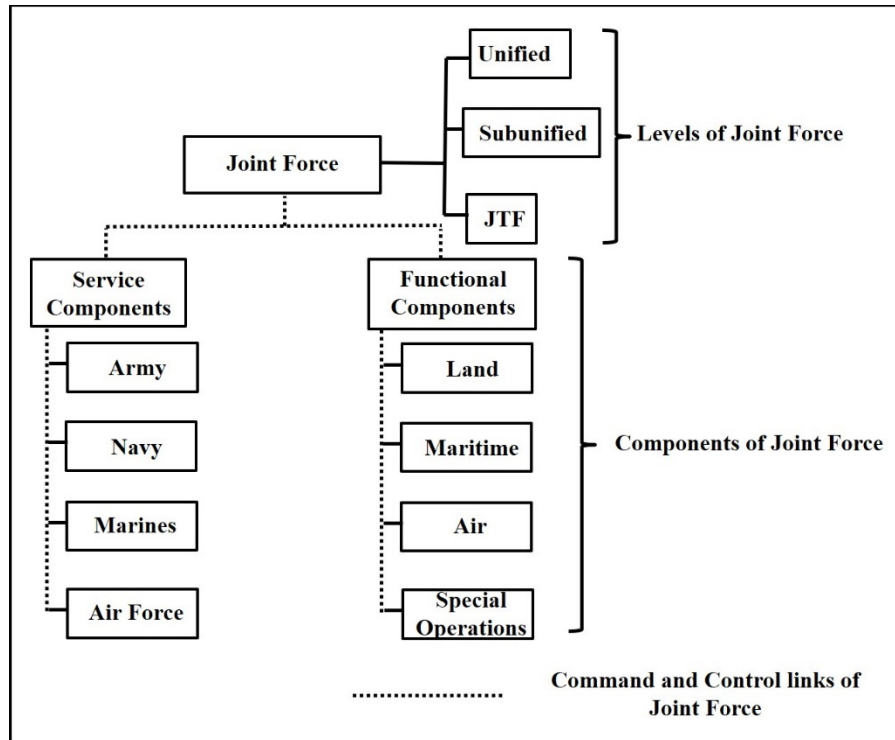


Figure 5. Organization of Joint Force: Levels, Components, and Command and Control

Source: Created by the author based on Figure IV-1 in Joint Chiefs of Staff, Joint Publication 1, *Doctrine for the Armed Forces of the United States*, including change 1. (Washington, DC: Government Printing Office, 12 July 2017), IV-3, accessed 28 September 2019, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_ch1.pdf.

First, the U.S. Armed Forces establish Joint Forces at three levels—unified CCMDs, subordinate unified commands, and JTFs—based on either geographic or functional role.¹⁸³ Being a Joint Force, all three levels comprise components of two or more Military Departments under a single commander. However, they differ in their mission, duration, and establishing authority. Unified CCMDs have a “broad continuing mission” and established by “the President, through the Secretary of Defense with the

¹⁸³ JCS, JP 1, IV-1.

advice and assistance of the Chairman of the Joint Chiefs of Staff.”¹⁸⁴ The UCP specifies the roles, responsibilities, and area of responsibility of the unified combatant commands.¹⁸⁵ The U.S. Armed Forces have 11 unified commands, out of which seven are geographic commands such as USINDOPACOM, and four are functional commands such as USSOCOM.¹⁸⁶

Also, JP 1 lays down two criteria, either or both of which must exist to create a unified command. The prerequisite for both the criteria is the involvement of “significant forces of two or more Military Departments.” The first criterion states that a “broad continuing mission” with the requirement for a “single strategic direction” must exist. The second criterion has three sub-criteria, out of which at least two must exist. The three sub-criteria are the conduct of large-scale operations, requirement for effective joint operations in a large geographic or functional area under a single commander, and the requirement for efficient use of limited logistics resources.¹⁸⁷ These two criteria provide a guideline to validate the creation of new unified commands such as the up-gradation of

¹⁸⁴ JCS, JP 1, IV-5.

¹⁸⁵ Ibid., IV-1 to IV-2.

¹⁸⁶ U.S. Department of Defense, “Combatant Commands,” accessed 24 March 2020, <https://www.defense.gov/Our-Story/Combatant-Commands/>; See Section on Theory of Defense Organization in Chapter 2 to understand the difference between geographic and functional commands.

¹⁸⁷ JCS, JP 1, IV-5.

the U.S. Cyber Command (USCYBERCOM) from a subunified command to a unified command in May 2018.¹⁸⁸

Next, in the hierarchy of Joint Forces below the unified commands, are the Subordinate Unified Commands or subunified commands. These commands “conduct operations on a continuing basis in accordance with the criteria set forth for unified commands” to which they belong. Commanders of unified commands establish these subordinate unified commands, “when so authorized by the Secretary of Defense through the Chairman of the Joint Chiefs of Staff.”¹⁸⁹ For example, United States Forces in Korea (USFK) is a subunified command under USINDOPACOM.

Last, in the hierarchy of Joint Forces, are JTFs. In contrast to the enduring and broad missions or operations of unified and subordinate unified commands, JTFs have “specific limited objectives.” They are established by “the Secretary of Defense, a combatant commander, a subordinate unified commander, or an existing JTF commander.” The JTFs are relatively temporary because the establishing authority dissolves the JTF after the achievement of its objectives. Also, JTFs “do not require overall centralized control of its logistics.”¹⁹⁰ To illustrate, in October 2014, the U.S.

¹⁸⁸ U.S. Cyber Command, “U.S. Cyber Command History,” accessed 24 March 2020, <https://www.cybercom.mil/About/History/>.

¹⁸⁹ JCS, JP 1, IV-10.

¹⁹⁰ Ibid.

DOD created Combined Joint Task Force - Operation Inherent Resolve (CJTF - OIR) to deal with ISIS in Iraq and Syria..¹⁹¹

Second, there are two types of components—service and functional, which can form part of a Joint Force. (See Figure 5). All Joint Forces, irrespective of the level, have service components from all services forming part of the Joint Force. The primary purpose of a service component is to provide “administrative and logistic support.” Nevertheless, a service component may carry out operational missions requiring the use of just a single service. In case the establishing authority does not specify a service component, then the HQ of the senior most officer of the service assigned or attached to the Joint Force performs the role of service component. To illustrate, the Eighth U.S. Army is the army service component of the subunified command USFK. In contrast to service components, the JFC establishes functional components only based on necessity for conduct of operations. Functional components are established either “when forces from two or more Military Departments must operate in the same physical domain,” such as land, maritime, or air, or “there arises a need to accomplish a distinct aspect of the assigned mission,” such as Special Operations.

The delineation of service and functional component is possible because of two distinct chains of command: operational and administrative. The operational chain of command may flow through another service headquarters, i.e. functional component; however, the administrative chain of command can only be within the same service, i.e. service component. The integration of the forces and capabilities of different services

¹⁹¹ Operation Inherent Resolve, “About CJTF-OIR,” accessed 24 March 2020, <https://www.inherentresolve.mil/About-CJTF-OIR/>.

under functional components may be considered the front end of Jointness, whereas the integration of the service components at the level of the JFC may be considered the back end of Jointness.

A unified CCMD or a joint force comprising both service and functional components does not preclude a CCCR or a JFC from conducting single-service operations. As per JP 1, the CCCR of a unified CCMD exercises command authority over subordinate forces through six options: subunified command, service component, functional component, JTF, single-service force, or a specific operational force. Hence, in a Joint Force construct, single service operations are still feasible under either a service component or as a single-service task force reporting directly to the JFC.

Third, the function of Command and Control binds the Joint Force consisting of service and functional components into various combinations. As stated earlier in Chapter 2, the U.S. Armed Forces utilize various command relationships to compose a Joint Force. The various command relationships in decreasing order of control are organic, assigned, attached, appropriated, COCOM, OPCON, TACON, and support relationship. A Joint Force has no organic force, because forces are either assigned or attached to it for the mission. In addition, a higher authority can apportion or appropriate a generic force or capability to a Joint Force for planning purposes. COCOM is a special command relationship exercised only by the CCRs of either geographic or functional CCMDs. A JFC exercises OPCON relationship over assigned or attached forces. A functional commander in a Joint Force exercises TACON relationship over a multinational force or a force from different service. In contrast to hierarchical relationships discussed till now, a support relationship establishes lateral linkages in a Joint Force. A JFC establishes a

support relationship either between two components or its subordinates when placing the supporting unit under the control of the supported unit is not appropriate. Thus, the various command relationships provide a plethora of options for the JFC to organize and control both hierarchically and laterally the different subordinate components in a Joint Force.

Finally, recollecting Chapter 2 discussion about chain of command, the CJCS does not form part of either operational or administrative chain of command (see Figure 6). In fact, JP 1 explicitly states that the CJCS does not “exercise military command over the CCDRs, JCS, or any of the Armed Forces.” Nonetheless, the Chairman has a significant influence on all joint matters including joint organization as an advisor, having an oversight role, and as a channel of communication. The CJCS is the “principal military adviser to the President, the National Security Council, the Homeland Security Council, and the Secretary of Defense.” Also, Section 163 of Title 10 USC states that the CJCS based on Secretary of Defense guidance oversees the functioning of unified commands. In addition, Section 163 routes the communication between the President or the Secretary of Defense and the CCDRs through the CJCS. Thus, the CJCS does not command any military forces both functional and geographic, but serves as a staff advisor to the President and the Secretary of Defense.

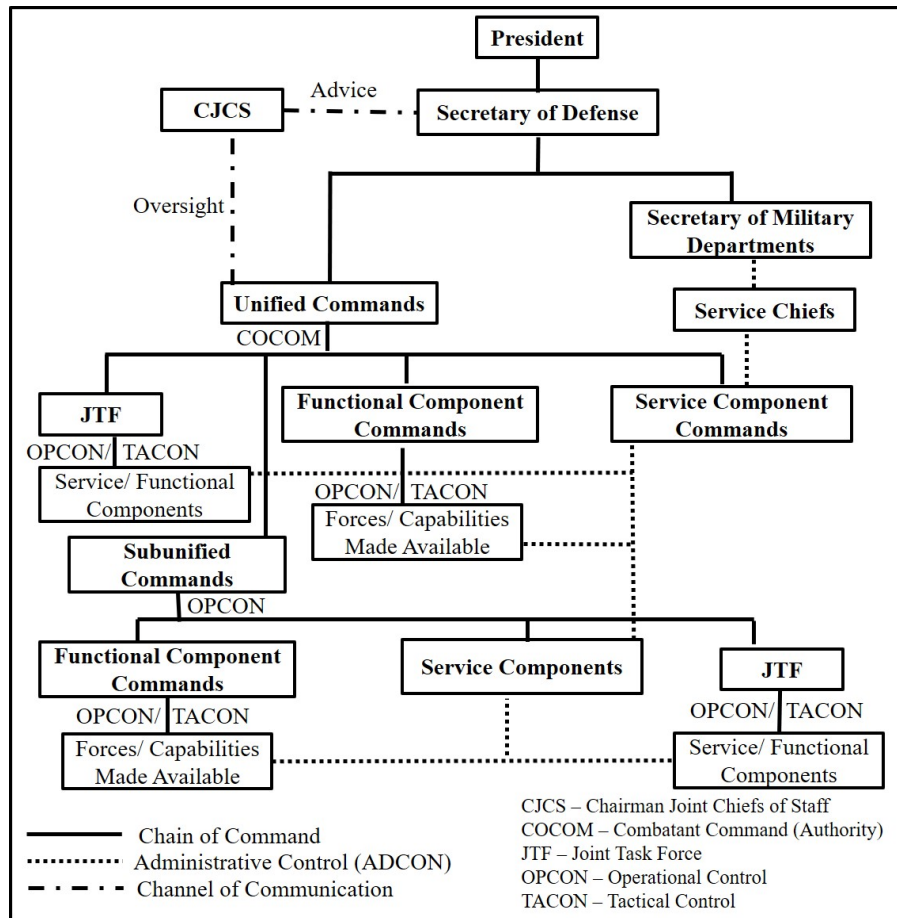


Figure 6. U.S. Chain of Command to include Joint Force Levels, Components, Command Relationships, and Role of CJCS.

Source: Created by the author based on Figure II-3 in Joint Chiefs of Staff, Joint Publication 1, *Doctrine for the Armed Forces of the United States*, including change 1. (Washington, DC: Government Printing Office, 12 July 2017), II-10, accessed 28 September 2019, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_ch1.pdf.

In summary, the illustration in Figure 6 captures the entire discussion of the U.S. organization of joint forces to include levels, components, command relationships, and chains of command. The two different chains of command—operational and administrative—passes through all three levels of joint forces. The operational chain of command comprising COCOM, OPCON, and TACON passes through either functional

or service components and provides flexibility to organize a joint force as per requirement. In contrast, the administrative chain of command passes only through respective services and provides the administrative and service-specific logistic support to the joint force. Finally, the CJCS, by not directly commanding military forces, plays the vital role of balancing the three organizational tensions: centralization versus decentralization, functional versus geographic responsibility, and specialization versus the generalist perspective. Likewise, the CJCS as an advisor, overseer, and communicator keeps the joint force effective and efficient.

Indian Armed Forces

Some similarities exist, but there are significant differences in the levels, components, and command and control of Joint Forces between the U.S. and Indian Armed Forces. Unlike the U.S., the Indian Armed Forces have not defined clear criteria for the creation of unified commands. Similarly, there exists a lack of clarity about the execution of single-service operations under a joint force. Finally, the role of the CDS has similarities as well as differences from that of the CJCS.

First, like the U.S., the Indian Armed Forces have three levels of Joint Force: Tri-Service Commands, Tri-Service Agencies, and JTF. Indian literature uses the terms Tri-Service and Joint synonymously. At present, India has two tri-service commands created after 2001 based on the recommendations of the Arun Singh Task Force. A three-star general officer heads both these commands, one of which is a theatre or geographic command—Andaman and Nicobar Command (ANC), and another a functional command—Strategic Forces Command (SFC). In addition, the Indian Armed Forces have not laid out clearly defined criteria for the creation of such joint commands. The thesis, to

exemplify, tests the existing tri-service commands against the prerequisite criteria of the U.S. Armed Forces for the creation of a joint command, which is the commitment of significant forces of two or more services.

The architects of ANC visualized it as a testbed for the concept of Joint Theatre Commands, which would eventually lead to the formation of theatre commands for the complete Indian Armed Forces. ANC is composed of forces from the three services and the Indian Coast Guard. Nevertheless, in the absence of the enabling mechanism of the CDS until recently, the services deprived the ANC of resources and failed to delegate enough authority to the Commander-in-Chief of the Andaman and Nicobar Command (CINCAN).¹⁹² Hence, the ANC lacks significant forces from either the Army or the Air Force and if judged purely based on the number and related capability; the ANC can at best be a subunified command or just a JTF with the maritime component playing a dominant role. This lack of significant forces is one of the primary reasons for many Indian strategic analysts to question the *raison d'être* of the ANC as a theatre command.

In contrast, the SFC comprises significant forces of all three services and deals with India's nuclear arsenal and delivery systems. Since India possesses the nuclear triad capability, the significance can be measured in terms of capability in all three physical domains and not necessarily the numbers.¹⁹³ Another special feature of the SFC is that its

¹⁹² Patrick Bratton, 'The Creation of Indian Integrated Commands: Organizational Learning and the Andaman and Nicobar Command,' *Strategic Analysis* 36, no. 3 (May-June 2012): 447, <https://doi.org/10.1080/09700161.2012.670540>.

¹⁹³ Government of India, Prime Minister's Office, "Prime Minister felicitates crew of INS Arihant on completion of Nuclear Triad," Press Information Bureau, 5 November 2018, accessed 24 March 2020, <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1551894>.

operational control is vested with the Nuclear Command Authority under the Prime Minister, and only its administrative control rests with the Indian Armed Forces under HQ IDS.¹⁹⁴ Although the exact organization of the SFC is classified, it can be inferred that among the existing joint commands, only the SFC qualifies to be a joint command. In summary, failure to articulate a set of criteria for restructuring the existing single-service commands into joint commands may lead to wastage of the limited time and resources available for such effort.

In addition to the two tri-service or joint commands, India has 17 single-service commands, each headed by a three-star general officer, out of which 13 are geographic, and four are functional commands. Moreover, no two single-service geographic commands of two different services in the same region align with each other in their areas of responsibility (see Figure 7).¹⁹⁵ The 24 December government memorandum, explained at the end of Chapter 2, directs the CDS to restructure the existing single-service commands into joint or theatre commands. Accordingly, the CDS in February 2020 laid out a roadmap for restructuring the single-service commands. As per the CDS, the government is planning to restructure the existing thirteen geographic single-service commands into two to five theatre commands such as the Peninsular Command.

¹⁹⁴ Satish Dua, “India’s Tri-service Integration and new Functional Commands for Cyber, Space and Special Operations,” Episode 36, 2 July 2019, in *National Security Conversations*, interview by Jacob Happyman, podcast audio, accessed 24 March 2020, <https://podtail.com/podcast/national-security-conversations/ep-36-india-s-tri-service-integration-and-new-func/>.

¹⁹⁵ Ranjit Singh, “Unified Commands in the Indian Armed Forces: Imperative for Integrated War Fighting,” (An Issue Brief, Centre for Joint Warfare Studies, New Delhi, 2016), 9-10, accessed March 31, 2020, https://cenjows.gov.in/pdf/Layout_Unified%20Comd%20by%20Brig%20Ranji_03-04-17.pdf.

Furthermore, functional commands such as the Air Defense Command and the Training and Doctrine Command are also under consideration.¹⁹⁶

Service	Commands with Approximate Geographic/ Functional Areas of Responsibility						
Army	Eastern	Central	Northern	Western	South-Western	Southern	Training
Air Force	Eastern	Central	Western	South-Western	Southern	Training	Maintenance
Navy		#			Eastern	Western	Southern*
- 13 Geographic Commands * - Naval Southern Command is a Training Command - 4 Functional Commands # - Area of Responsibility of two different Single-Service Commands in the same geographic region do not exactly align							

Figure 7. Indian Armed Forces Single-Service Commands

Source: Created by the author.

Next, in the levels of Indian Joint Force after the tri-service and single-service commands, are the tri-service agencies and divisions. These agencies and divisions are the Indian equivalents of the U.S. subunified commands. The Indian government formed the Defense Space Agency (DSA), Defense Cyber Agency (DCA), and Special Operations Division (SOD) in May 2019, each headed by a two-star general officer. The government created these agencies with the intent to develop future functional commands

¹⁹⁶ Shaurya Gurung, “India may have 5 theatre commands along borders with Pakistan, China: CDS,” *The Economic Times*, 18 February 2020, accessed 24 March 2020, <https://economictimes.indiatimes.com/news/defence/india-may-have-5-theatre-commands-along-borders-with-pak-china-cds/printarticle/74183766.cms>; The Indian literature considers the U.S. Geographic Unified CCMDs as Joint or Integrated Theatre commands.

in space, cyberspace, and special operations.¹⁹⁷ The USCYBERCOM had followed a similar trajectory. As mentioned earlier, the USCYBERCOM started as a JTF in 1998 to become a subunified command in 2010 and elevated as a full-fledged functional unified combatant command in May 2018.¹⁹⁸

Last, in the levels of the Joint Force, is the JTF. In India, the COSC creates a JTF based on an emergent requirement for either operations or training exercises. Presently, India does not have any JTF. First, JDIAF is silent about the formation of JTF for operations; however, the *Joint Air-Land Doctrine* (JALD) - 2010 lays out the mechanism to form a JTF for amphibious operations based on the directions of COSC. The Amphibious Task Force (ATF) would comprise components from the Army, Navy, and Air Force. Moreover, the COSC would nominate the commander of one of the single-service commands as the Overall Force Commander (OFC).¹⁹⁹ In 1987, India formed a JTF—Indian Peace Keeping Force (IPKF)—in Sri Lanka, comprising all three services headed by the commander of the Indian Army Southern Command acting as OFC. As discussed in Chapter 2, this JTF mechanism soon fell apart and became an Army operation primarily with the Navy and Air Force in support. Second, neither the JDIAF

¹⁹⁷ The Times of India, “Agencies take shape for special operations, space, cyber war,” 15 May 2019, accessed 24 March 2020, <https://timesofindia.indiatimes.com/india/india-begins-setting-up-new-tri-service-agencies-to-handle-special-operations-space-and-cyberspace/articleshowprint/69346012.cms>.

¹⁹⁸ U.S. Cyber Command, “U.S. Cyber Command History.”

¹⁹⁹ India Ministry of Defense (MOD), Joint Publication (JP) - 10, *Joint Doctrine For Air-Land Operations* (New Delhi: Directorate of Doctrine, Headquarters Integrated Defence Staff, March 2010), 43-44, accessed 31 March 2020, https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/Jt%20Doc%20Air%20Land%20Operations-Mar%202010.pdf.

nor its successor JTD spells out the formation of a JTF for the conduct of training exercise. Nonetheless, JTD states that “a Joint Operational Commander, would exercise operational command over the participating Joint forces,”²⁰⁰ implying the formation of a JTF for the training exercises. Nonetheless, the information available in the open domain does not specify the command and control—whether based on a JTF or directly by the ANC—for joint training exercises carried out under the ANC.²⁰¹

Second, having discussed the three levels of the joint force, the thesis next explains the components of a joint force in the Indian Armed Forces. As stated earlier in the previous section, a joint force must have service components, but a JFC creates functional components based on the requirement. Furthermore, the delineation of service and functional components is possible because of two distinct chains of command: operational and administrative. The operational chain of command may flow through another service headquarters as in the case of functional components; however, the administrative chain of command always stays within the same service through a service component. The Indian Armed Forces have only service components and no functional components because, as stated in Chapter 2, the Indian doctrines make no distinction between operational and administrative chains of command. To illustrate, the JALD specifies only three service components—Army, Navy, and Air Force—as part of an ATF. In addition, India’s only integrated theatre command ANC has four service

²⁰⁰ India MOD, JP - 02, 17.

²⁰¹ Government of India, “Defence of Andaman & Nicobar Islands Exercise (DANX-17),” Press Information Bureau, last updated 24 November 2017, accessed 29 March 2020, <https://pib.gov.in/newsite/PrintRelease.aspx?relid=173818>.

components: Army, Navy, Air Force, and Coast Guard. Nonetheless, there exists a possibility to restructure the ANC to have functional components. For example, the ANC can form a functional maritime component comprising both the Navy and Coast Guard, because they both operate in the same maritime domain.

Another reason for the Indian Armed Forces' inability to create functional components is the misunderstanding about the execution of single-service operations under a joint force. The major opposition for the creation of joint theatre commands has been the argument that certain regions of India, such as the northern border regions, preclude employment of significant assets of services other than the Indian Army. Hence, the critics question the requirement for joint commands in such areas.²⁰² This opposition is based on a flawed assumption that the employment of a joint force equates to the employment of all services comprising a joint force. Nevertheless, as brought out in the previous section, a JFC has many options to employ the forces under command, including single-service operations. To illustrate, if India creates a Northern Theater or Joint Command, then the Army Component Command—service component—can carry out single-service operations under the joint force construct during counter-insurgency operations. Similarly, the Army Component also retains the flexibility to transition to a Joint Force Land Component Command—functional component—for conventional operations.

Third, the Indian Armed Forces do not have a sufficiently articulated command and control structure for a joint force. As discussed in Chapter 2, the Indian Armed

²⁰² Bratton, "The Creation of Indian Integrated Commands," 451.

Forces, despite practicing the various command relationships, have not captured it holistically in a doctrine or policy document. This absence has led to a simplistic black and white view of command relationships in a joint force, i.e., either a JFC completely controls the subordinate force of another service or does not. Nevertheless, a closer study of the various command relationships in the U.S. Armed Forces reveals that there are many shades of gray in between the black and white. The command relationships in the U.S. Armed Forces, in decreasing order of control, such as organic, assigned, attached, appropriated, COCOM, OPCON, TACON, and support relationship provide the JFC flexibility to organize and control the different subordinate components in a Joint Force.²⁰³ For example, in the functional maritime component of the ANC discussed previously, if the component HQ of the maritime component is from the Navy, then the Naval commander may not exercise the same type of command relationship over both the Naval and Coast Guard forces. The differing capabilities, operating procedures, and administration of both the forces preclude such a command arrangement. Hence, it would be appropriate for the maritime component commander to exercise OPCON over the Naval forces and TACON over the Coast Guard forces.

Last, the newly created post of the CDS in India has similarities as well as differences with the CJCS. The CDS is triple hatted as Permanent Chairman of the COSC, the Secretary of the newly created Department of Military Affairs (DMA), and the CDS itself (see Table 5). Like the CJCS, the CDS exercises no command over geographic commands, either single-service or joint. Nonetheless, unlike the CJCS, the

²⁰³ For an explanation of each of these terms, see the Section on Command Relationships in Chapter 2.

CDS commands forces in functional domains of cyberspace and space. Like the CJCS, the CDS also acts as the Principal Military Advisor to the political hierarchy, but only on tri-service matters. This arrangement implies that the service chiefs still advise the political leadership on single-service matters. Next, in the role of the Permanent Chairman of the COSC, the CDS would be overseeing, through the COSC mechanism, the functioning of the existing as well as future joint commands, especially geographic commands. Finally, in the role of Secretary of DMA, the CDS would be the channel of communication for routine day to day business—administrative issues—between the government and the services' and IDS HQs. Essentially, the triple-hatting of the CDS has further complicated the military chain of command, especially for the conduct of joint operations.

Table 5. Organizational and Leadership Roles and Responsibilities of the CDS

Roles and Responsibilities	Intent	Implication
1. Head the Department of Military Affairs (DMA), within the MOD and function as its Secretary.	Integrate Services' HQ within MOD.	Administrative flow of work from government to forces routed through the CDS.
2. Permanent Chairman of the COSC.	Make the COSC meaningful.	Operational Chain of Command for joint forces vests with COSC. Hence, CDS as Permanent Chairman has decisive influence.
3. Act as the Principal Military Adviser to Defense Minister on all tri-Services matters.	Make the CDS as a single point advisor to the government on military matters.	By restricting the CDS to tri-service matters, the Service chiefs still have direct access to the government. Most importantly, who classifies an issue as single-service or tri-service.
4. CDS will not exercise any military command, including over the three Service Chiefs.	Not make the CDS a Supreme Commander-in-Chief.	Potential friction point in the functioning of the COSC.
5. CDS will command Tri-service agencies/ organizations/commands related to Cyber and Space.	Cyber and Space domains require a whole of government approach not just the military component.	Possible to integrate personnel from other government departments/ ministries under the CDS.
6. Administer tri-services organizations.	Cater for the administrative chain of command of tri-service forces.	HQ IDS likely to perform the role.
7. Facilitate restructuring of Military Commands to bringing about Jointness, including through the establishment of Joint or Theatre commands.	Replace single-service commands with joint commands for synergistic employment of forces.	CDS to take the lead and layout a roadmap by consulting with Service chiefs.
8. Bring about Jointness in operations.	For effective and efficient employment of forces.	CDS is ultimately responsible for implementing reforms across the DOTMLPF-P domains to achieve Jointness.

Source: Created by the author based on content from Table 1. Roles and Responsibilities of the CDS.

In summary, India has three levels of the joint force, but unlike the U.S. Armed Forces, they do not nest within each other (see Figure 8). Moreover, Indian joint forces

have only service components and a unidimensional command relationship because of the ambiguity between the operational and administrative chains of command. The operational chain of command for joint forces except for space and cyberspace flows from the Defense Minister to the COSC, to the joint force. Similarly, for space and cyberspace, the operational chain of command flows from Defense Minister to the CDS, to DSA or DCA. In contrast, the administrative chain of command, though not specified in doctrine, can be traced based on the Allocation of Business Rules and routine day to day administrative correspondence.²⁰⁴ The administrative chain of command flows from the Defense Minister through the Ministry of Defense, to the Secretaries of Department of Defense and DMA, to the HQ IDS for a joint force or to the Service HQs for single-service commands. Finally, the CDS being triple hatted indirectly wields both administrative control—as Secretary, DMA—and operational control—as Chairman, COSC—over joint forces. This anomaly conflicts with the directive stating that the CDS will not exercise any military command.

²⁰⁴ India Cabinet Secretariat, *Government of India (Allocation of Business) Rules, 1961*, as amended up to 31 January 2017 (New Delhi, 2017), 41-42, accessed 24 March 2020, https://cabsec.gov.in/writereaddata/allocationbusinessrule/completeaobrules/english/1_Upload_1187.pdf; Ministry of Defense, “Creation of New Department of Military Affairs,” Press Information Bureau, last updated 03 February 2020, accessed 29 March 2020, <https://pib.gov.in/newsite/PrintRelease.aspx?relid=198903>.

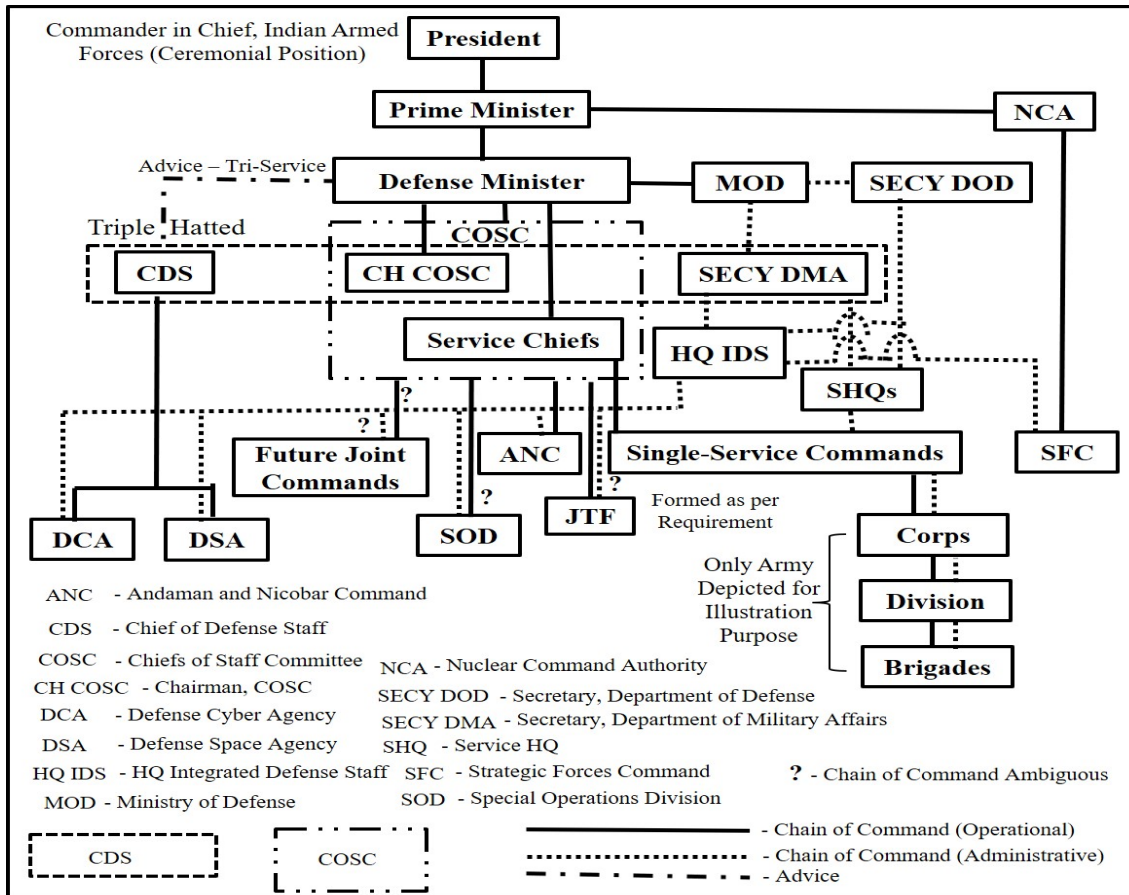


Figure 8. Indian Chain of Command and Role of CDS

Source: Created by the author.

Analysis

A comparative analysis of the organization of the joint force between the U.S. and Indian Armed Forces would help in identifying the organizational desired state, the problems in achieving the desired state, and an organizational approach to adopt Jointness in the Indian Armed Forces. The organizational factors utilized for comparison are levels, components, and command and control of a joint force. Table 6 captures the comparative analysis of these three factors from the discussion of the preceding two sections.

Table 6. Comparative Analysis of the Organization of U.S. and Indian Joint Forces

Factors / Sub-factors	U.S. Armed Forces	Indian Armed Forces
1. Levels of Joint Force		
Types	Two Types 1. Geographic 2. Functional	Two Types 1. Geographic or Operational or Theatre 2. Functional
Levels	Doctrine clearly specifies three levels: 1. Unified Combatant Command – Seven Geographic (E.g. INDOPACOM) and Four Functional (E.g. CYBERCOM). 2. Subunified Command - Two. (USFK under INDOPACOM and Alaskan Command under NORTHCOM) 3. Joint Task Force. E.g. CJTF-OIR.	Three levels present but not specified in doctrine: 1. Joint Commands – One Geographic (ANC) and One Functional (SFC) present; Two to Five Geographic (E.g. Peninsular Command) and One Functional (Air Defence) in future. 2. Joint Agencies and Division – Three (Cyber-DCA, Space-DSA, and Special Operations-SOD) 3. Joint Task Force – Created as per requirement.
Criteria for Creating Joint Commands	Doctrine specifies two criteria, at least one of which must be fulfilled.	No criteria laid down.
2. Components of Joint Force		
Types of Components	Doctrine clearly specifies two types: Service and Functional.	Doctrine only considers service components as part of joint force.
Chains of Command – Operational and Administrative	Clear separation facilitates delineation of Service and Functional components.	No distinction which inhibits delineation of Service and Functional components.
Single-Service Operations by a Joint Force	Explicitly stated as one among the six options for a Geographic CCDR to utilize.	Misunderstanding about various options for employment of a Joint Force.
Flexibility	Flexibility to organize a Joint Force as per requirement.	Inability to organize a Joint Force as per requirement.
3. Command and Control of Joint Force		
Understanding of Command Relationship	Range of options from full command to partial support.	Simplistic view of either having command or not having command over a subordinate force.
Types of Command Relationship	Organic, assigned, attached, apportioned, COCOM, OPCON, TACON, and support relationships.	Not clearly articulated in doctrine, despite some of them being practiced.
4. Role of CJCS/ CDS		
Military Command	None.	Over Space and Cyberspace forces.
Advisor	Principal Military Advisor on all military matters.	Principal Military Advisor on Tri-service matters only.
Oversee	All Unified CCMDs.	As Chairman COSC over all joint forces.
Channel of Communication	All communication between CCDRs and the Secretary of Defense	As Secretary of DMA over all joint and single-service forces.

Source: Created by the author based on the discussion of previous two sections.

To summarize, the Indian joint forces' have similarities with the U.S. in the levels and types of joint force; however, the critical difference lies in not having an explicit criterion for the formation of joint commands. Next, the Indian joint forces, unlike the U.S., only have service components as part of the joint force. The absence of a functional component in the Indian joint force is due to two reasons: first, the lack of distinction between the operational and administrative chain of command in the doctrines, and second, misunderstanding about the conduct of single-service operations by a joint force. Last, the Indian doctrine has a simplistic view of the command relationship for a joint force construct. The net result of the lack of functional component and inadequate command relationship is a lack of flexibility to organize a joint force as per requirement. This situation is further complicated by triple hatting the CDS as the Permanent Chairman of the COSC, Secretary of DMA, and the CDS itself.

Desired State of Jointness

Having surveyed the current state of Jointness across the two domains, the next component in the operational design framework is to understand strategic guidance or, in simpler terms, the desired future state. The relevant secondary research question is, "What is the desired level of Jointness which the Indian Armed Forces should seek to achieve considering its unique circumstances?" Consequently, any vision of the future state should take into consideration the unique circumstances of the Indian Armed Forces, such as budgetary allocation, operational commitment, and officers' shortage. These circumstances will have an impact on the visualized change to promote Jointness in the Indian Armed Forces. First, the defense budget is likely to remain at the current

levels for the near future,²⁰⁵ which implies that any new defense organization or institution proposed would be at the cost of some existing structure. Next, the operational commitment of the Indian Armed Forces along its Western and North-Eastern borders also is likely to continue.²⁰⁶ This substantial operational commitment compels most of the Indian Armed Forces into a paradigm of duality, i.e., to anticipate field tenures while at peace stations and to anticipate peace stations while deployed in the field. Finally, the shortage of officers in the Indian Armed Forces,²⁰⁷ would act as a bottleneck in any change effort in the Indian Armed Forces. As stated previously, Professor Wilson argued that the armed forces do not spend most of their time doing what they are trained to do i.e., fight a war, hence the armed forces have the time and advanced education to contemplate deeply about their profession. In contrast, the three circumstances taken together have created a situation for the Indian Armed Forces wherein they may not have the time and advanced education to contemplate deeply about their profession. Instead, they spend most of their time doing what they are trained to do, i.e., operationally deployed along the restive frontiers.

The next aspect to consider is the strategic guidance, which in this instance, is the directions issued by the Government of India. As described at the end of Chapter 2, the

²⁰⁵ Jane's, "Defence Budget Overview," 22 January 2020, accessed 29 March 2020, <https://janes-ihs-com.lumen.cgscarl.com/Janes/Display/indis090-sas>.

²⁰⁶ Jane's, "India - Armed Forces: Threat Environment," 19 March 2020, accessed 29 March 2020, <https://janes-ihs-com.lumen.cgscarl.com/Janes/Display/INDIS100-SAS#>.

²⁰⁷ Government of India, "Shortage of Officers," Press Information Bureau, last updated 14 August 2018, accessed 29 March 2020, <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1541028>.

24 December Union Cabinet directive specifies the roles and responsibilities of the CDS. The thesis considers the directives specific to doctrine and organization as specified tasks. Likewise, the analysis carried out in the previous section, “Current State of Jointness,” helps derive the implied tasks for achieving Jointness in the Indian Armed Forces through changes in doctrine and organization.²⁰⁸

Doctrine

A clear understanding of the doctrinal end-state, along with its attendant specified and implied tasks, would help in formulating a doctrinal approach. The Union Cabinet, in its 24 December directive, clearly states the doctrinal end-state for achieving Jointness in the Indian Armed Forces. The directive states that the CDS will “implement coordinated defense doctrines and procedures to foster Jointmanship among the three Services.” The author rewrites this directive as a specified task, issued from a higher echelon—the government—to the lower echelon—the CDS, to align with the discussion of the thesis. Hence, the rewritten specified task is “to implement coordinated Joint and Service doctrines and related procedures to foster Jointness.” This task succinctly brings out the essence of the doctrinal approach to Jointness.

Next, the thesis derives five implied tasks for the doctrinal end-state from the comparative analysis of the U.S. and Indian doctrines. First, there should be a clear and unambiguous definition of doctrine enunciated either in the capstone publication or the

²⁰⁸ A specified task is a task specifically assigned to a unit by its higher headquarters. An implied task is a task that must be performed to accomplish a specified task or mission but is not stated in the higher headquarters’ order. See, HQDA, FM 6-0, 9-8.

doctrine primer. The definition and its subsequent explanation should, at a minimum, comprise essential elements of doctrine such as temporal linkage, knowledge hierarchy, and intellectual depth. Next, the formulation of doctrines should lend itself to temporal linkage by rooting itself in historical study and a robust mechanism to validate concepts into doctrine. Third, the Indian Armed Forces need to establish a coherent hierarchy of knowledge integrated both vertically and laterally for its profession. Among other things, this hierarchy should firmly establish the precedence of Joint doctrines over Service doctrines, clearly specify the types of information forming part of the doctrines, and list the levels of various doctrinal publications. Next, the various doctrines should be rooted in an intellectual effort characterized by simplicity, continuity, academic rigor, and openness. Finally, to foster Jointness, first, the capstone Joint doctrine should clearly explain the concept of Jointness as applicable to Indian conditions; next, the various doctrines should strive for clarity, which facilitates a common understanding and thus contributes to Jointness. In brief, the Indian Armed Forces' doctrines need to have a clear definition and understanding of doctrine, temporal linkage, knowledge hierarchy, intellectual depth, and distinct understanding of Jointness.

Organization

In contrast to the doctrinal end-state, the 24 December directive (see Table 6), does not clearly state the organizational end-state for achieving Jointness in the Indian Armed Forces. This ambiguity primarily arises due to the triple hatting of the CDS as the Permanent Chairman of the COSC, Secretary of DMA, and the CDS. The triple hatting provides the CDS indirect influence over the joint commands, which runs contrary to the government directive denying the CDS any military command except for space and

cyberspace forces. Nonetheless, the directive related to the restructuring of Military Commands is the closest to an organizational end-state. Hence, the organizational end-state is to have geographic joint or theater commands covering the complete land and sea domains of India, duly supported by functional joint commands such as space, cyber, and special operations. The related specified task derived from the directive is to restructure the existing single-service commands into either geographic or functional joint commands.

In addition, the thesis derives four implied tasks for achieving the organizational end-state based on the comparative analysis of the U.S. and Indian joint forces' organization. First, the Indian Armed Forces need to firmly establish the three levels of the joint force and set criteria for creating, at the upper level, future joint commands or agencies, and at the lower level, for creating JTFs. Second, the Indian Armed Forces need to establish functional components on a requirement basis for all joint forces. Correspondingly, the misconception about single-service operations under a joint force needs to be dispelled. Third, the Indian Armed Forces need to perceive the command relationships as a spectrum of options to organize a joint force flexibly. Finally, the government should restrict the CDS to the advisory role and upgrade the CDS to become the Principal Military Advisor on all military matters. To summarize the organizational end-state succinctly, the Government of India, based on the advice of the CDS, should direct the Indian Armed Forces to carry out all operations through either geographic or functional joint commands.

Impediments to Desired State of Jointness

The third component of the operational design framework is to define the problem or alternatively, the obstacles preventing the achievement of the desired state. The related secondary research question is, “What are the various impediments in achieving this desired level?” The unique circumstances—budgetary constraints, operational commitment, and officers’ shortage—discussed earlier would also act as limitations. The subsequent two sections discuss the specific impediments to the doctrinal and organizational desired state identified based on the analysis of the current state of Jointness in Indian Armed Forces.

Doctrine

Three major impediments affect the doctrinal end-state. First, the Indian Armed Forces lack a publication which comprehensively deals with the subject of doctrine. This publication, if properly devised, would ensure proper understanding of doctrine, and regulate the knowledge hierarchy of the Indian Armed Forces. Second, the absence of an institutional mechanism that can holistically address the doctrinal process by integrating both the primary sources of doctrine, i.e., history and concepts, and providing intellectual depth. Third, service parochialism influences the formulation of Joint doctrine and makes it an exercise of lowest common denominator acceptable to all three services. In summary, the doctrinal obstacles prevent the Indian Armed Forces from creating doctrines based on intellectual exercise of self-reflection and historical study.

Organization

Akin to impediments to the doctrinal end-state, the organizational end-state has three limitations. Moreover, the doctrine has a profound influence on the organization of a joint force. First, the Indian joint doctrine fails to specify the different levels of the joint force, delineate between functional and service components, and identify the various command and control options for a joint force. The inclusion of these aspects in the Indian joint doctrine would enable a better and flexible organization of the joint force. Second, the Indian Armed Forces have not identified a clear administrative chain of command for all joint forces distinguished from the operational chain of command specified in the JDIAF. This lack of separation has inhibited the creation of functional components under a joint force. Third, the roles and responsibilities of the triple hatted CDS are inconsistent. The 24 December directive explicitly denies the CDS any military command except for space and cyberspace forces and made the CDS, Principal Military Advisor. Nonetheless, as the Permanent Chairman of the COSC, the CDS technically wields operational control over joint forces. Moreover, as Secretary of DMA, the CDS wields administrative control over both joint and single-service forces. To summarize, the lack of clear doctrine and policy to organize a joint force combined with paradoxical responsibilities of the CDS are the major hurdles to achieve organizational end-state.

Doctrinal and Organizational Approach to Jointness

The final component in the operational design framework is to develop an operational approach to overcome the identified obstacles. The related secondary research question of the thesis is, “What approach should India adopt to overcome the impediments?” This approach should also take cognizance of the time and resources

required to implement change in an organization as huge as the Indian Armed Forces. Discussing change, ADP 1-01 states that, “Any change—no matter how small—takes resources . . . an institution only has so much energy to devote to change, worthwhile change must add significant value . . . Change for the sake of change is counter-productive.”²⁰⁹ Taking cognizance of the effort required, the subsequent two sections deliberate upon the doctrinal and organizational approach to Jointness for Indian Armed Forces.

Doctrine

The U.S. Army considers the doctrinal approach as the lynchpin of change management, and as the primary change agent among the eight domains of DOTMLPP-P.²¹⁰ Similarly, a clear and unambiguous concept of Jointness propounded jointly by service, and joint doctrines would act as the change agent for the Indian Armed Forces transition to Jointness. The doctrinal approach comprises three lines of effort corresponding to the three major impediments identified previously (see Figure 9).

²⁰⁹ HQDA, ADP 1-01, 2-5.

²¹⁰ Ibid., 1-1.

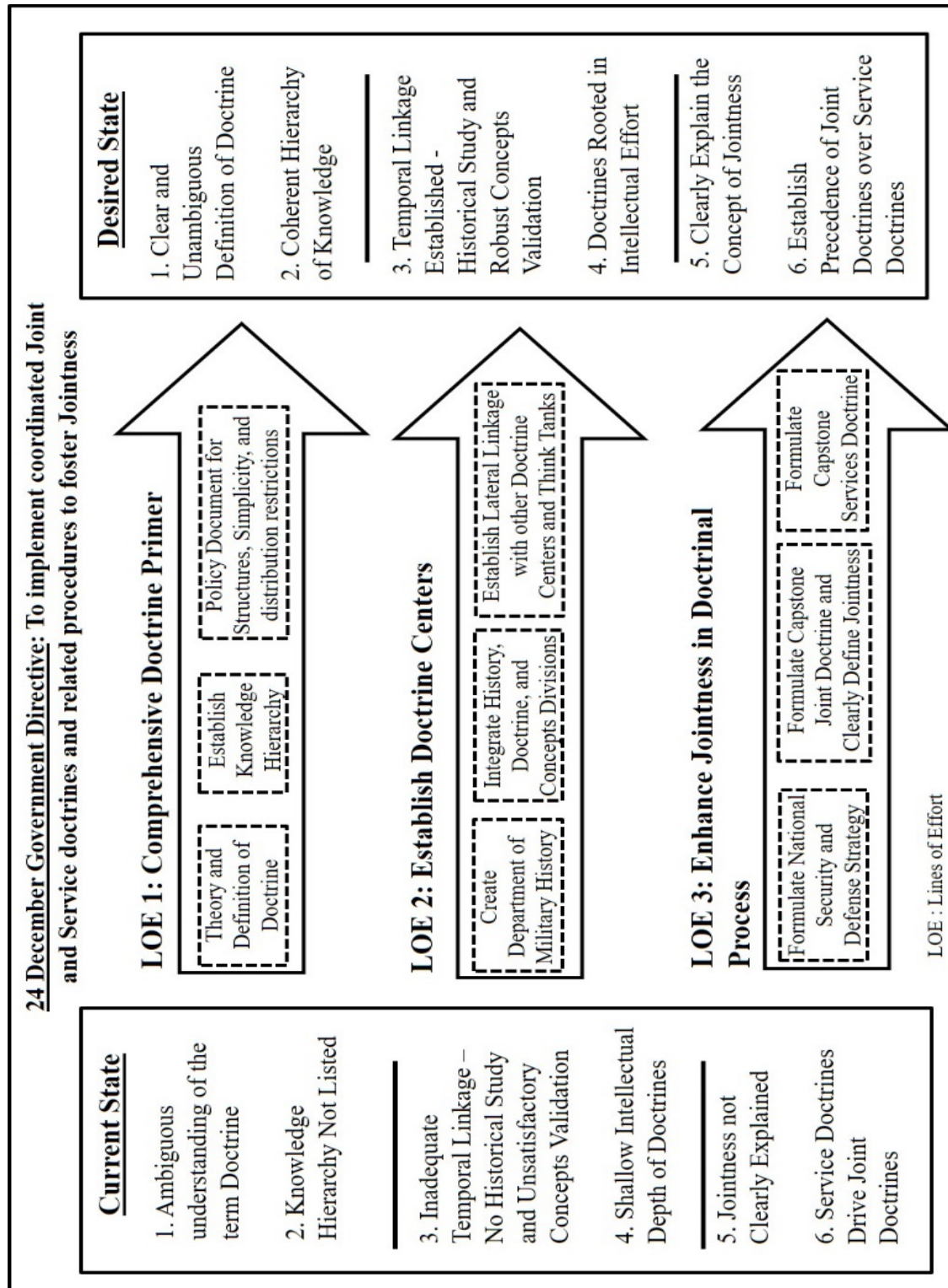


Figure 9. Doctrinal Approach to Jointness: Three Lines of Effort

Source: Created by the author.

First, the Indian Armed Forces need to promulgate a comprehensive doctrine primer to replace the existing bulletized version. This comprehensive primer should comprise, at a minimum, a proper definition of doctrine and establish a knowledge hierarchy for the Indian Armed Forces. The definition of doctrine should not be arbitrary but derived from sound theoretical explanation comprising at least the three essential components of doctrine. Next, the primer should firmly establish a knowledge hierarchy consisting of types of military knowledge, types of military doctrine, levels of military doctrine, and types of information in each level of doctrine (see Figure 6). In addition, the primer or a policy document should address issues such as simplicity, structure, and distribution restrictions of doctrines with the intent of facilitating understanding and promoting academic rigor.

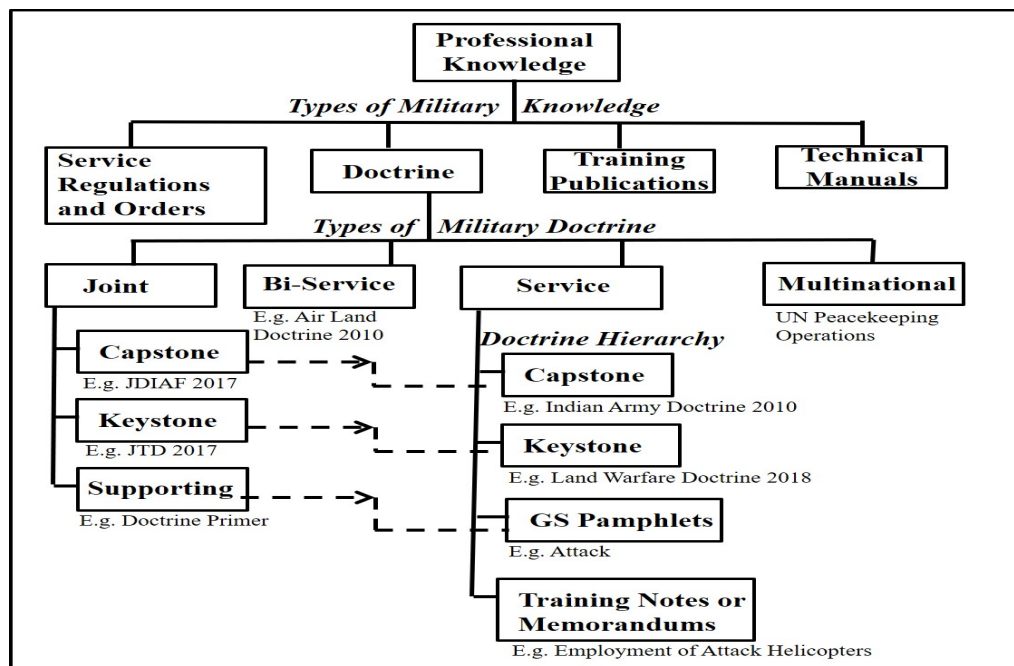


Figure 10. Proposed Hierarchy of Knowledge and Doctrines

Source: Created by the author.

In the second line of effort, the Indian Armed Forces need to create a singular institutional mechanism such as a doctrine center that comprehensively deals with both doctrine and its primary sources i.e., History and Concepts. The doctrine center will comprise three subdivisions under it, namely the History, Doctrine, and Concepts divisions corresponding to past, present, and future, respectively, which consequently provide the temporal linkage for the doctrinal process (see Figure 7). Presently for the Indian Army, among these three divisions, only doctrine and concept divisions exist. Nonetheless, both these divisions are located at different locations under different HQ. The doctrine directorate of Army Training Command is in Shimla and deals with doctrines.²¹¹ Similarly, the Perspective Planning directorate forms part of the Service HQ located in New Delhi and deals with futuristic concept development.²¹² As stated previously, no institutional mechanism exists in the Indian Army to methodically study military history. Hence, the Indian Army needs to create such an academic department of military history in one of its training institutions, such as Army War College. The proposed institutional mechanism should comprise a healthy mix of both serving officers

²¹¹ One of the primary roles of the Army Training Command is to formulate concepts and doctrines; however, the intent of concept as mentioned in the charter of duties is to act as a supplementary text to the standardized doctrine. This intent is contrary to the concept discussed in the thesis till now. See GlobalSecurity, “ARTRAC,” 07 November 2011, accessed 29 March 2020, <https://www.globalsecurity.org/military/world/india/artrac.htm>.

²¹² The Perspective Planning Directorate of Indian Army is its think tank and responsible for developing its view of the future. This view of the future is the concept development discussed till now in the thesis. See Indian Army, “Directorate General of Perspective Planning,” 26 March 2020, accessed 29 March 2020, <https://indianarmy.nic.in/Site/FormTemplate/frmTempSimple.aspx?MnId=d+sgI0tRz4DV5xz1myJUzA==&ParentID=Qp9IRnOsN0+TYfK9b3CgMw==>.

and civilian scholars, and draw the staff primarily from these three departments and directorates discussed above. This mix of staff would greatly enhance intellectual depth in the doctrinal process. Similarly, the Integrated Defense Staff, Air Force, and Navy also need to replicate such an institutional mechanism for their respective doctrines. In addition, these institutions need to have lateral linkage to exchange ideas and best practices. A final component to this line of effort is to involve the various strategic think tanks such as Centre for Joint Warfare Studies, Centre for Land Warfare Studies, and Observer Research Foundation in the doctrinal process.

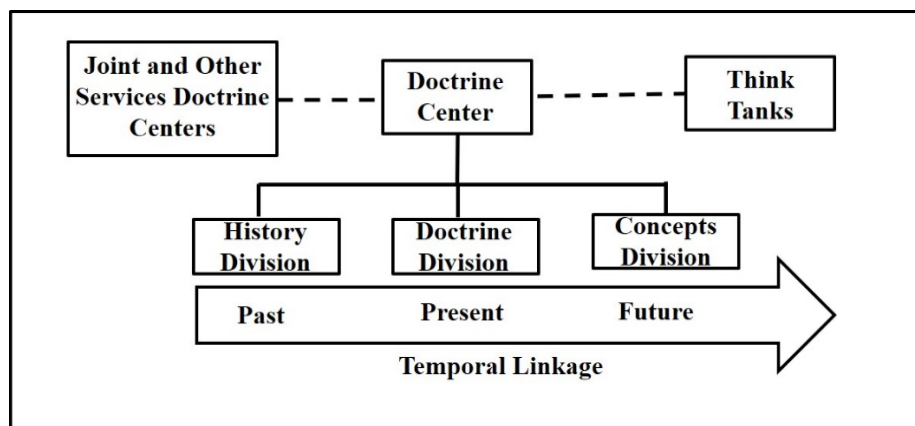


Figure 11. Proposed Organization of Doctrine Center

Source: Created by the author.

Finally, the newly appointed CDS needs to directly tackle the services parochial influence while formulating the Joint doctrine. The Joint doctrine should not become an exercise of lowest common denominator but flow from the National Security Strategy or Defense Strategy. At present, both these documents do not exist. Hence, first, the CDS should get the government machinery under the Defense Planning Committee structure to

draft such guidance documents and then, based on these strategic documents, formulate the capstone Joint doctrine, which will act as a bridge between the military and other instruments of national power. More importantly, the existing services doctrines should not dictate the formulation of the capstone Joint doctrine but just taken as an input for consideration. In addition, the capstone doctrine should clarify the exact meaning of Jointness by delving into the synergistic employment of capabilities and into building trust and understanding among the services. The balance of the keystone and supporting joint publications, and service doctrines and pamphlets should flow from and nested with the capstone Joint doctrine. All these doctrinal publications should communicate using the same doctrinal terms because the ultimate purpose of a doctrine is to establish a common body of language for the profession.

In summary, the doctrinal approach comprising the three lines of effort can have a profound influence on the Indian Armed Forces' transformation towards Jointness. In comparison to other DOTMLPF-P approaches, the doctrinal approach is the easiest, quickest, and often the prerequisite step towards change in other DOTMLPF-P domains.²¹³ The foundation for organizational approach discussed next depends in large measure on the doctrinal approach.

Organization

The organizational approach to Jointness for the Indian Armed Forces comprises three lines of effort to overcome the three major impediments identified previously (see Figure 12). The first line of effort suggests the use of doctrine to elucidate the structure of

²¹³ HQDA, ADP 1-01, 1-1.

the joint force. Next, the second line of effort advocates policy changes to make the joint force effective and efficient. Finally, the third line of effort recommends an unambiguous advisory role for the CDS. In summary, the three lines of efforts seek to address the basic structure of a joint force rather than just recommending new theatre or functional commands.

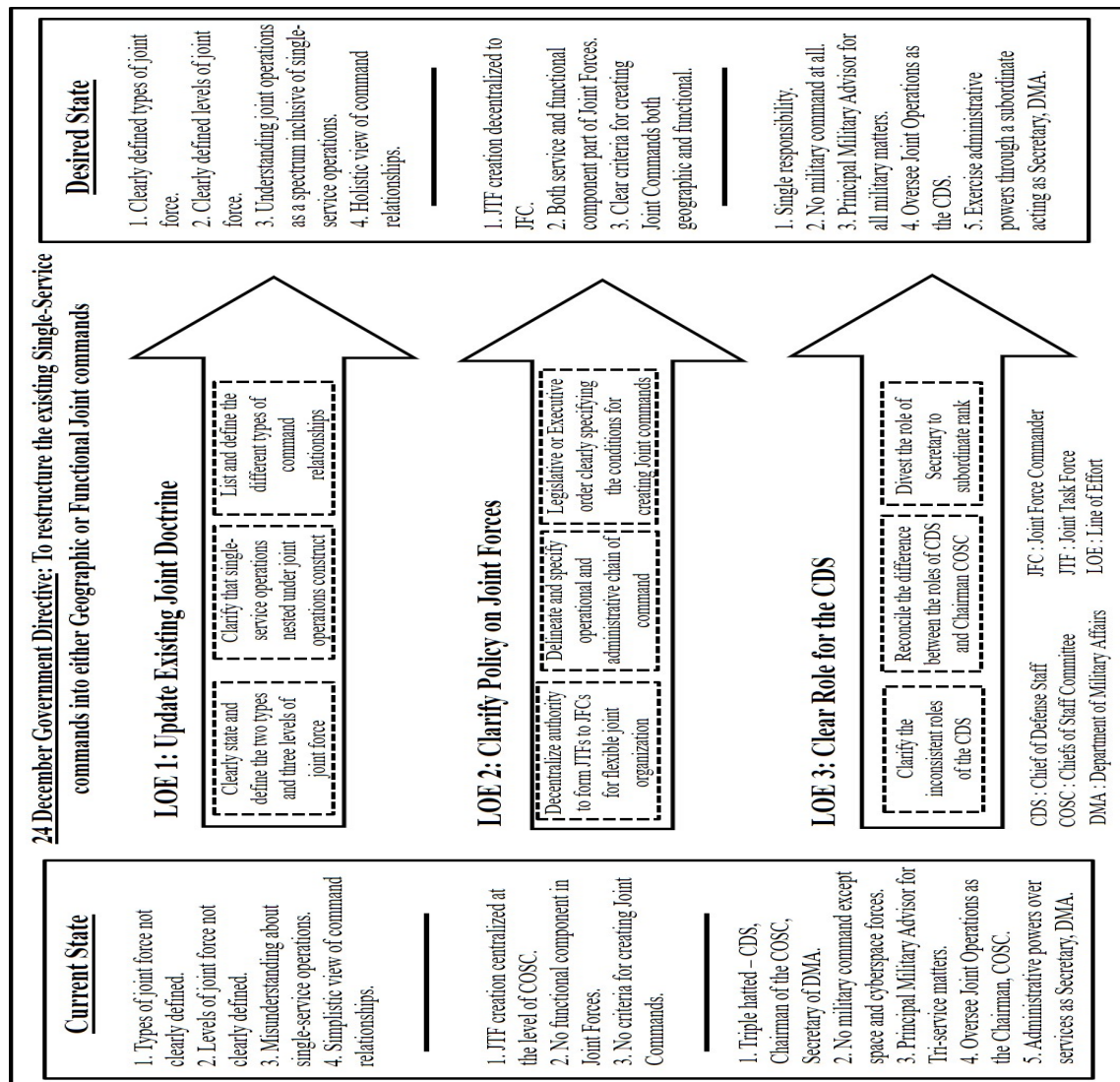


Figure 12. Organizational approach to Jointness: Three Lines of Effort

Source: Created by the author.

The first organizational line of effort seeks to establish the structure of a joint force in the Indian joint doctrine, preferably the JDIAF. First, the doctrine should list and define the two types—geographic and functional—of joint force unambiguously, because varying interpretation may present unintended difficulties in the future. To illustrate, India considers the space domain as functional, whereas the U.S. regards it as geographic. Correspondingly, the Indian DSA is a functional joint organization, and the U.S. Space Command is a geographic CCMD. This differing interpretation becomes more relevant for India because presently, the CDS has no command over military forces other than the functional domains of space and cyberspace. Next, the doctrine should also list and hierarchically nest the three levels—joint commands, joint agencies, and JTFs—of the joint force in India. At present, the total size of the joint forces in India is insignificant compared to the forces in single-service commands. Nonetheless, as India moves towards jointness, the number of troops and assets under joint forces would increase exponentially. This exponential increase would overwhelm the existing system of managing all levels of joint forces under the ambit of the COSC or the CDS. Hence, it is essential to hierarchically nest the joint forces at different levels to efficiently manage their day to day functioning and conduct of operations. Also, the doctrine should explain the conduct of operations under a joint force as a spectrum ranging from single service operations to synergistic employment of all service forces in a joint force. Finally, the joint doctrine should adopt and incorporate the various command relationships, especially COCOM, OPCON, TACON, and ADCON. These command relationships provide the JFC tools to task organize a joint force flexibly. In summary, the joint doctrine should clearly explain the structure and functioning of the joint force.

The second organizational line of effort recommends policy changes through either executive orders or legislative means to better organize a joint force. First, the COSC should decentralize the authority to form a JTF to the JFC's. This decentralization to lower levels would enable the creation of flexible task organizations as per the mission requirement. Nonetheless, as stated previously, the joint doctrine should specify the various command relationships unambiguously as a prerequisite step to facilitate this decentralization. Second, the Indian Armed Forces should delineate the chain of command for joint forces into two: operational and administrative. The operational chain of command flows through the commanders of joint forces irrespective of service, and the administrative chain of command stays within the respective services. This delineation would enable the creation of functional components in the joint force, thereby enabling joint operations at lower levels. Finally, the Indian Armed Forces should articulate the criteria for forming new joint commands, because such massive change efforts consume the limited resources available. Hence, any worthwhile change must add significant value, which can be validated against the criteria. The thesis, to illustrate, tests the existing and proposed joint commands in India against the U.S. criteria for forming new joint commands (see Table 7). As per the U.S. criteria discussed previously, the creation of a joint command is valid when it conforms to the prerequisite criterion, and then fulfills either or both of Criteria 1 and 2. Nonetheless, the second criterion is proven if two of the three sub-criteria—2a, 2b, and 2c—are met. From this stipulation, it can be easily discerned that the prerequisite criterion and the Criteria 1 are the most important. The table brings out the shortcomings of the ANC and the proposed Air Defense Command and suggests remedial measures.

Table 7. Validity of Indian Joint Commands as per the U.S. Criteria

Criteria/ Sub-criteria	ANC (Existing)	SFC (Existing)	Peninsular Command (Proposed)	Air Defense Command (Proposed)
Prerequisite Criteria – Significant Forces of two or more services	Questionable, because of limited assets from the Army and Air Force.	Yes, because of the Nuclear Triad capability	Yes, because of the inclusion of two operational commands of the Navy, one of the Army, and one of the Air Force.	Questionable, because of the type and number of assets to be made available by the Services.
Criteria 1 – Broad continuing mission requiring single strategic direction.	Questionable, because of the proposed Peninsular command.	Yes, because of the nuclear assets.	Yes, because of the Indian Ocean Region.	Yes, because of the aerial threat posed by the Air Forces of both Pakistan and China.
Criteria 2a – Conduct of large-scale operation with a large and complex force	Questionable, in view of likely threats to India.	Questionable, because of the deterrent effect of nuclear weapons.	Yes, because of the possibility of conduct of large-scale operations along the western sea board against Pakistan.	Yes, because of the aerial threat posed by the Air Forces of both Pakistan and China.
Criteria 2b - Large geographic or functional area requiring single responsibility for effective coordination of the operations.	Questionable (geographic), because of the proposed Peninsular command.	Yes (functional), because of the nuclear assets.	Yes (geographic), because of the possibility of conduct of large-scale operations in the Indian Ocean Region.	Yes (functional), because of the aerial threat posed by the Air Forces of both Pakistan and China.
Criteria 2c - Common use of limited logistic means.	Yes, because of budgetary constraints.			
Validity	Questionable	Required	Required	Questionable
Recommendation	Restructure as a subunified command under the Peninsular Command	Continue as a functional joint command.	Create as a geographic joint command.	Consider creation only if two or more services place significant assets under command.

Source: Created by the author based on discussion from the section “Current State of Jointness: Organization - U.S. and Indian Armed Forces.”

The thesis recommends, at a minimum, two additional geographic joint or theatre commands for Indian Armed Forces based on the two most important U.S. criteria: the requirement for significant forces of two or more services and the need for a single strategic direction for a broad and continuing mission. India has two strategic adversaries—Pakistan and China, because of the existing border disputes. Accordingly, India needs a single strategic direction with continuity on a broad range of issues to deal with these two adversaries. Moreover, India is likely to commit significant resources from the Army and the Air Force for such an effort. Hence, the thesis recommends the creation of the Eastern Theatre Command to deal with China, and the Western Theatre Command to deal with Pakistan (see Figure 13).²¹⁴ Nonetheless, the Indian state of Jammu and Kashmir, because of its historical dispute status, requires special considerations. Consequently, India can form a Northern Joint Command as a subunified command under the Western Theatre Command.

²¹⁴ For a similar recommendation, see Singh, “Unified Commands in the Indian Armed Forces,” 12.

Service	Commands with Approximate Geographic Areas of Responsibility						
Army	Eastern	Central	Northern	Western	South-Western	Southern	
Air Force	Eastern	Central	Western		South-Western	Southern	
Navy						Eastern	Western
Joint (Existing)						ANC *	
Joint (Announced)						Peninsular	
Joint (Suggested)	Eastern		Northern #	Western			
Rationale	China		Jammu and # Kashmir	Pakistan		Indian Ocean Region	
# - Subunified command under the Western Theatre Command.							

Figure 13. Recommended Joint Theatre Commands in India

Source: Created by the author based on Figure 7. Indian Armed Forces Single-Service Commands.

The main opposition to the theatre command concept is from the Indian Air Force. The opposition is primarily against the division of limited combat aviation assets among the various theatre commands.²¹⁵ The Air Force rightly argues against the further division of limited combat assets, because it is already under strength by more than six combat squadrons against the sanctioned strength of around 40 combat squadrons.²¹⁶ Hence, to negate this shortcoming, the Indian Air Force can retain some critical aviation assets such as AWACS, air to air refuellers, and some fighter squadrons as service retained forces. The Air Force can then allocate most of aviation assets to the Air Force

²¹⁵ Subramaniam, “Indian Military and Jointness.”

²¹⁶ Business Standard, “IAF to reach full squadron strength by 2032: Air chief,” 5 October 2017, accessed 24 March 2020, https://www.business-standard.com/article/printer-friendly-version?article_id=117100501022_1.

Component of the theatre commands. The Air Force can apportion the service-retained forces to the theatre commands for planning purposes.²¹⁷ The Indian Armed Forces can then validate the plans during training exercises such as Exercise Gaganshakti-2018.²¹⁸

The third line of effort addresses the problems arising out of the multiple roles and responsibilities assigned to the CDS and its impact on the organization of joint forces in India. If the post-Kargil war defense reforms on jointness failed due to the absence of the CDS, then the present initiative to foster jointness may fail because of overloading the CDS with multiple contradictory roles. The CDS must play a crucial role as an arbitrator in balancing the three organizational tensions: centralization versus decentralization, functional versus geographic responsibility, and specialization versus the generalist perspective, which arise while integrating the three services into joint commands. As a result, the actual intent of the government directive is for the CDS, like the CJCS in the U.S. Armed Forces, to act as a Principal Military Advisor with no command over military forces.

Nonetheless, the government contradicted its intent by vesting the CDS, first, with the command of space and cyberspace forces; second, with operational control of joint forces as the Permanent Chairman of the COSC; third, with administrative control as the Secretary of the DMA. The government must unambiguously clarify as to what it wants the CDS to do. The thesis recommends that the government vest the CDS with the

²¹⁷ For a discussion on Apportionment as part of the Global Force Management process see Section on Command Relationships in Chapter 2.

²¹⁸ Government of India, “Conclusion of Exercise Gaganshakti-2018,” Press Information Bureau, last updated 24 April 2018, accessed 29 March 2020, <https://pib.gov.in/newsite/PrintRelease.aspx?relid=178885>.

singular responsibility of being the Principal Military Advisor for all military matters with no command over any military forces. This role, in the long term, would allow the CDS to purely concentrate on strategic issues and effectively integrate the Indian Armed Forces with the whole of government approach. Also, in the short term, this role would allow the CDS to invest the necessary time and energy to effectively restructure the existing single-service commands into either geographic or functional joint commands by balancing the three organizational tensions.

Next, the government directive is silent about the operational and administrative chain of command for future joint commands (refer Figure 8). Presently, the only integrated theatre command—ANC—reports to the COSC. This arrangement may not be sustainable for future theatre commands, because the parochial service interests which paralyze the functioning of the COSC would still be at play. One of the alternatives, akin to the U.S. system, is for the future theatre commanders reporting directly to the Defense Minister, with the CDS acting as the channel of communication. This arrangement also ensures that the CDS has oversight over all joint forces without exercising military command over any joint forces. In this case, the operational chain of command passes directly from the Defense Minister to the theatre commanders. The COSC can then perform the role of the advisory and consultative body for policy formulation and administrative issues. Similarly, the government needs to appoint a subordinate to the CDS—the Vice Chief of Defense Staff—who can then act as the Secretary of the DMA.²¹⁹ In this case, the administrative chain of command passes from the Defense

²¹⁹ Arun Prakash, “The significance of the post of CDS lies in its potential for re-imagining national security,” *The Indian Express*, 10 January 2020, accessed 04 March

Minister to the MOD or DOD to the DMA to the Service Chiefs to the Service Component of the theatre commands. This rearrangement frees the CDS of both operational control and administrative control of joint forces, thereby facilitating the CDS in concentrating on the role of advisor.

In summary, the organizational approach comprising the three lines of effort can help restructure the existing single-service commands into either geographic or functional joint or theatre commands. As stated earlier, the doctrinal approach has a profound influence on the organizational approach wherein the first line of effort depends on doctrinal changes to establish the structure and functioning of a joint force. Similarly, the second line of effort, exemplifying the interrelatedness of the DOTMLPF-P construct, depends on policy changes to create joint commands, functional components, and JTFs. Finally, the third line of effort sought to clarify the roles and responsibilities of the CDS to sustain the transformation process.

Conclusion

This chapter, after a brief review of the evolution of jointness in the U.S. and Indian Armed Forces, utilized the operational design framework to analyze and suggest a doctrinal and organizational approach to jointness for the Indian Armed Forces. The assessment of the current state of jointness by comparing the U.S. and Indian Armed Forces helped visualize the desired end-state of Jointness for the Indian Armed Forces. Then, by comparing the current state and desired state of jointness, the thesis identified

2020, <https://indianexpress.com/article/opinion/columns/general-bipin-rawat-cds-chief-of-defence-staff-india-roles-responsibility-6208780/>.

the impediments for achieving the desired state. Finally, the thesis developed a doctrinal and organizational approach consisting of multiple lines of efforts to achieve jointness in the Indian Armed Forces.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The previous chapter utilized the operational design framework to analyze the state of Jointness in the Indian Armed Forces. The evolution of Jointness in the U.S. and Indian Armed Forces, discussed in Chapter 2, provided the context for the analysis. Moreover, the evolution of Jointness in both the armed forces had some similarities and differences. The U.S. created the post of CJCS, in 1949, as part of post-World War II defense reforms to foster Jointness in their armed forces. Nonetheless, it took the U.S. almost another four decades to enact the landmark Goldwater-Nichols Act in 1986 to enforce Jointness in their armed forces. Similarly, on 1 January 2020, India appointed General Bipin Rawat as the first CDS with the mandate to foster Jointness in the Indian Armed Forces. The comparative analysis of the current state of Jointness in the U.S. and Indian Armed Forces highlighted that the appointment of the CDS might not be the Goldwater-Nichols moment for India.

Consequently, the thesis recommends doctrinal and organizational measures as part of a holistic DOTMLPF-P approach to ensure that the appointment of the CDS becomes India's Goldwater-Nichols moment and not the CJCS moment. The doctrinal approach suggests three lines of effort: issuing a comprehensive doctrine primer, establishing doctrine centers, and improving Jointness in the doctrinal process. Likewise, the organizational approach also comprises three lines of effort: updating current joint doctrines, clarifying policies on joint forces, and establishing a specific role for the CDS. The lines of effort in the approaches are not necessarily sequential, but requires

simultaneous endeavor across multiple lines of effort to tackle the complexity of the problem.

Doctrinal Approach to Jointness

The doctrinal approach comprises three lines of effort corresponding to the three major impediments identified as part of operational design framework analysis (see Figure 14). First, the Indian Armed Forces need to promulgate a comprehensive doctrine primer comprising a proper definition of doctrine and establishing a knowledge hierarchy. In addition, the primer should address structural issues of doctrines with the intent of facilitating comprehension and promoting academic rigor. Second, India needs to create an institutional mechanism, such as a doctrine center, to formulate doctrine holistically. The doctrine center will comprise three subdivisions: History, Doctrine, and Concept divisions. Third, the CDS should enhance Jointness in the doctrinal process by nesting the joint doctrines with the National Security and Defense Strategy. This nesting would also keep the parochial service interests at bay by forcing the service doctrines to nest with the joint doctrine. In summary, the doctrinal approach comprising the three lines of effort can have a profound and lasting influence on the Indian Armed Forces' transformation towards Jointness.

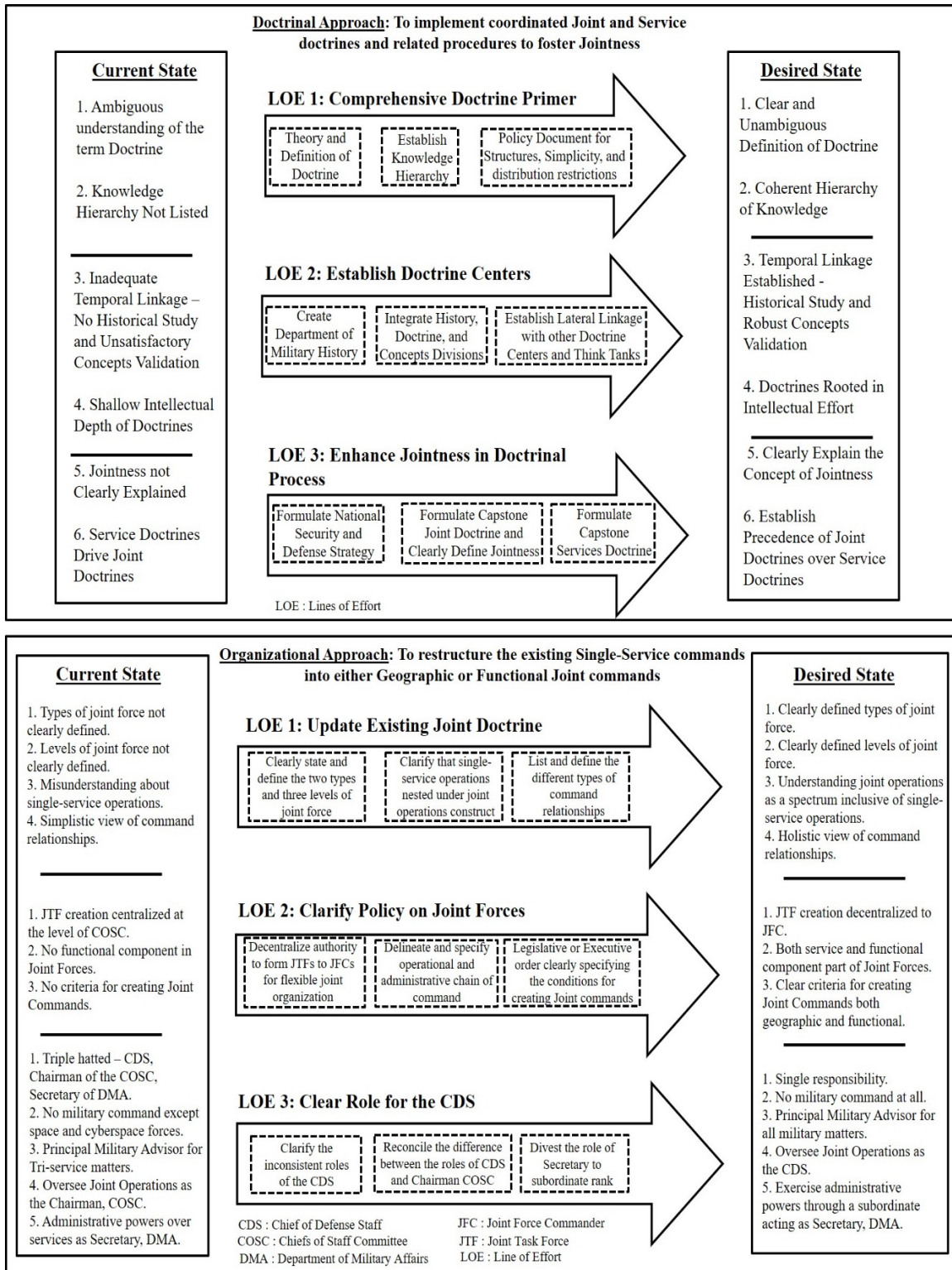


Figure 14. Combined Doctrinal and Organizational Approach to Jointness

Source: Created by the author from Figures 9 and 12.

Organizational Approach to Jointness

Like the doctrinal approach, the organizational approach also comprises three lines of effort (see Figure 14). The first organizational line of effort seeks to clearly establish the structure of a joint force in the joint doctrine. The doctrine should elucidate the types and levels of a joint force, the various command relationships, and the spectrum of joint operations to include single-service operations. Next, the second line of effort recommends policy changes through either executive orders or legislative means to better organize a joint force. This line of effort has three sub-components: decentralize authority to form JTFs to JFCs, delineate operational and administrative chain of command, and lay down clear criteria for the formation of joint commands. Additionally, based on the U.S. criteria, the thesis recommends the formation of two additional theatre commands with the option first to apportion than to divide the limited aviation assets of the Indian Air Force to various theatre commands. Finally, the third line of effort recommends a singular advisory responsibility for the CDS with the authority to oversee joint operations. Furthermore, the thesis recommends divesting the CDS of the role of Secretary of the DMA and handing over the responsibility to a subordinate general officer. In summary, the organizational approach seeks to restructure the existing single-service commands into either geographic or functional theatre commands, and simultaneously correct the basic structure of the joint force in India.

Recommendations for Future Research

The thesis dealt with the complex issue of Jointness in the Indian Armed Forces. The author carried out a comparative analysis of Jointness in the U.S. and Indian Armed Forces to draw suitable lessons for India. The thesis intends these lessons to help guide

the transition of the Indian Armed Forces from single-service commands to joint commands in the future. Nonetheless, due to constraints mentioned in Chapter 1, the author restricted the thesis to developing an approach for Jointness from just two—doctrine and organization—of the eight domains of the DOTMLPF-P construct. Hence, the author makes two recommendations for future research on this topic. First, a future researcher can carry out a comparative analysis of Jointness in the Indian Armed Forces and any other western military power such as the U.K., Australia, or Canada to draw suitable lessons for India. Second, a future researcher can build upon this thesis by developing an approach for Jointness in the Indian Armed Forces from any of the rest six domains of the DOTMLPF-P construct.

BIBLIOGRAPHY

- AcqNotes. "JCIDS Process: DOTMLPF-P Analysis." Last updated 15 June 2018. Accessed 27 February 2020. <http://acqnotes.com/acqnote/acquisitions/dotmlpf-analysis>.
- Anand, Vinod. "Evolution of Jointness in Indian Defence Forces: Struck between the Services." In *Handbook of Indian Defence Policy: Themes, Structures and Doctrines*, edited by Harsh V. Pant, 173-186. New Delhi: Routledge, Taylor & Francis Group, 2016.
- Army Publishing Directorate. "Publications." U.S. Army. Accessed 24 March 2020. <https://armypubs.army.mil/>.
- Basit, Saira. "India-Myanmar Relations and the Management of Transnational Militant Threats." *Journal of Strategic Security* 11, no. 2 (2018): 73-92. Accessed March 5, 2020. www.jstor.org/stable/26477720.
- Beaumont, Roger A. *Joint Military Operations: A Short History*. Westport, CT: Greenwood Press, 1993.
- Bratton, Patrick. "The Creation of Indian Integrated Commands: Organizational Learning and the Andaman and Nicobar Command." *Strategic Analysis* 36, no. 3 (May-June 2012): 447. <https://doi.org/10.1080/09700161.2012.670540>.
- Bratton, Patrick, and David Smith. "India's Joint Doctrine: Hopeless Muddle, or the Start of Strategic Articulation?" *War Room*. Last updated 06 June 2017. Accessed 31 March 2020. <https://warroom.armywarcollege.edu/articles/indias-joint-doctrine-hopeless-muddle-start-strategic-articulation/>.
- Business Standard. "IAF to reach full squadron strength by 2032: Air chief." 5 October 2017. Accessed 24 March 2020. https://www.business-standard.com/article/printer-friendly-version?article_id=117100501022_1.
- Carver, Michael. "Conventional Warfare in the Nuclear Age." In *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, edited by Peter Paret, Gordon Alexander Craig, and Felix Gilbert, 779-814. Princeton, NJ: Princeton University Press, 1986.
- Collins, John M. *Military Geography: For Professionals and the Public*. Washington, DC: National Defense University Press, 1998.
- Congressional Research Service (CRS). *Defense Primer: The Department of Defense*, by Kathleen J. McInnis. Washington, DC: Library of Congress, 24 January 2020. Accessed 27 January 2020. <https://fas.org/sgp/crs/natsec/IF10543.pdf>.

- . CRS Report R44474, *Goldwater Nichols at 30: Defense Reform and Issues for Congress*, by Kathleen J. McInnis. Washington, DC: Library of Congress, 2 June 2016. Accessed 25 January 2020. <https://fas.org/sgp/crs/natsec/R44474.pdf>.
- Curtis E. LeMay Center for Doctrine Development and Education. “Doctrine, Operating Concepts, and Vision.” In *Basic Doctrine*. Vol. 1., D08. Washington, DC: Headquarters, U.S. Air Force, 27 February 2015. Accessed 29 March 2020. https://www.doctrine.af.mil/Portals/61/documents/Volume_1/V1-D08-Doctrine-Concepts-Vision.pdf.
- Das, P. S. “Jointness in India’s Military: What it is and What it Must Be.” *Journal of Defence Studies* 1, no. 1 (2007): 1-12. Accessed 01 March 2020. https://idsa.in/system/files/jds_1_1_psdas.pdf.
- Drea, Edward J., ed. *The History of the Unified Command Plan, 1946-2012*. Washington, DC: Joint History Office, Office of the Chairman of the Joint Chiefs of Staff, 2013.
- Dua, Satish. “India’s Tri-service Integration and new Functional Commands for Cyber, Space and Special Operations.” Episode 36, 2 July 2019. In *National Security Conversations*. Interview by Jacob Happymon. Podcast audio. Accessed 24 March 2020. <https://podtail.com/podcast/national-security-conversations/ep-36-india-s-tri-service-integration-and-new-func/>.
- Gautam, P. K. *The Need for Renaissance of Military History and Modern War Studies in India*. IDSA Occasional Paper No. 21. New Delhi: Institute of Defence Studies and Analyses, 2011.
- GlobalSecurity. “ARTRAC.” Last updated 7 November 2011. Accessed 29 March 2020. <https://www.globalsecurity.org/military/world/india/artrac.htm>.
- Goldwater-Nichols Department of Defense Reorganization Act of 1986. Public Law 99-433, *US Statutes at Large 100* (October 1, 1986).
- Government of India. “Conclusion of Exercise Gaganshakti-2018.” Press Information Bureau. Last updated 24 April 2018. Accessed 29 March 2020. <https://pib.gov.in/newsite/PrintRelease.aspx?relid=178885>.
- . “Creation of New Department of Military Affairs.” Press Information Bureau. Last updated 03 February 2020. Accessed 29 March 2020. <https://pib.gov.in/newsite/PrintRelease.aspx?relid=198903>.
- . “Defence of Andaman & Nicobar Islands Exercise (DANX-17).” Press Information Bureau. Last updated 24 November 2017. Accessed 29 March 2020. <https://pib.gov.in/newsite/PrintRelease.aspx?relid=173818>.

- . “General Bipin Rawat assumes charge of first Chief of Defence Staff; Vows to create more synergy between the Armed Forces.” Press Information Bureau. Last updated 1 January 2020. Accessed 6 March 2020. <https://pib.gov.in/PressReleasePage.aspx?PRID=1598155>.
- . “Press Statement by DGMO.” Press Information Bureau. Last updated 29 September 2016. Accessed 6 March 2020. <https://pib.gov.in/newsite/PrintRelease.aspx?relid=151242>.
- . “Shortage of Officers.” Press Information Bureau. Last updated 14 August 2018. Accessed 29 March 2020. <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1541028>.
- . “Statement by Foreign Secretary on 26 February 2019 on the Strike on JeM training camp at Balakot.” Ministry of External Affairs. Last updated 26 February 2019. Accessed 6 March 2020. <https://www.mea.gov.in/Speeches-Statements.htm?dtl/31089/Statement+by+Foreign+Secretary+on+26+February+2019+on+the+Strike+on+JeM+training+camp+at+Balakots>.
- Government of India, Cabinet. “Cabinet approves creation of the post of Chief of Defence Staff in the rank of four star General.” Press Information Bureau. Last updated 24 December 2019. Accessed 6 March 2020. <https://pib.gov.in/PressReleseDetail.aspx?PRID=1597425>.
- Government of India, Ministry of Defence. “Department of Defense: History Division.” Department of Defence. Last updated 16 February 2018. Accessed 29 March 2020. <https://mod.gov.in/dod/history-division-0>.
- Government of India, Press Information Bureau (Defence Wing). “Mehra Relinquishes Chiefs of Staff Committee Chairmanship.” 31 January 1976. Press Information Bureau Archive. Accessed 03 March 2020. http://pibarchive.nic.in/archive/ArchiveSecondPhase/DEFENCE/1976-JAN-DEC-MIN-OF-DEFENCE/PDF/DEF-1976-01-31_041.pdf.
- Government of India, Prime Minister’s Office. “English rendering of Prime Minister Shri Narendra Modi’s address to the Nation from the ramparts of the Red Fort on the 73rd Independence Day-August 15, 2019.” Press Information Bureau. Last updated 15 August 2019. Accessed 31 March 2020. <https://pib.gov.in/PressReleseDetail.aspx?PRID=1582107>.
- . “Prime Minister felicitates crew of INS Arihant on completion of Nuclear Triad.” Press Information Bureau. Last updated 5 November 2018. Accessed 24 March 2020. <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1551894>.

- Gurung, Shaurya. "India may have 5 theatre commands along borders with Pakistan, China: CDS." *The Economic Times*. 18 February 2020. Accessed 24 March 2020. <https://economictimes.indiatimes.com/news/defence/india-may-have-5-theatre-commands-along-borders-with-pak-china-cds/printarticle/74183766.cms>; The Indian literature considers the U.S. Geographic Unified CCMDs as Joint or Integrated Theatre commands.
- Headquarters, Department of the Army. Army Doctrine Publication 1-01, *Doctrine Primer*. Washington, DC: Government Printing Office, July 2019. Accessed 26 January 2020. https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN18138_ADOP%201-01%20FINAL%20WEB.pdf.
- . Field Manual 3-0, *Operations*. Washington, DC: Government Printing Office, February 2008. Accessed 29 January 2020. <https://people.uwplatt.edu/~hood/FM3-0.pdf>.
- . Field Manual 3-0, *Operations*. Washington, DC: Government Printing Office, October 2017. Accessed 25 October 2018. <https://archive.org/details/FM3-0OperationsOctober2017/page/n1>.
- . Field Manual 6-0, *Commander and Staff Organization And Operations*. Including Change 1 & 2. Washington, DC: Government Printing Office, 22 April 2016. Accessed 29 January 2020. https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN14843_FM_6-0_Incl_C2_FINAL_WEB.pdf.
- House, Jonathan M. "Toward Combined Arms Warfare: A Survey of 20th-Century Tactics, Doctrine, and Organization." Combat Studies Institute Monograph, U.S. Army Command and General Staff College, Fort Leavenworth, KS, August 1984. Accessed 26 January 2020. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a528264.pdf>.
- India Cabinet Secretariat. *Government of India (Allocation of Business) Rules, 1961*. As Amended up to 31 January 2017. New Delhi, 2017. Accessed 24 March 2020. https://cabsec.gov.in/writereaddata/allocationbusinessrule/completeaobrules/english/1_Upload_1187.pdf.
- India Ministry of Defense. Joint Publication - 01, *Joint Doctrine of the Indian Armed Forces- 2017*. 2nd ed. New Delhi: Directorate of Doctrine, Headquarters Integrated Defence Staff, April 2017. Accessed 31 March 2020. https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/JointDoctrineIndianArmedForces2017.pdf.

- . Joint Publication - 02, *Joint Training Doctrine: Indian Armed Forces- 2017*. New Delhi: Directorate of Doctrine, Headquarters Integrated Defence Staff, November 2017. Accessed 31 March 2020.
https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/JTD-14-NOV-FINAL.pdf.
- . Joint Publication - 10, *Joint Doctrine For Air-Land Operations*. New Delhi: Directorate of Doctrine, Headquarters Integrated Defence Staff, March 2010. Accessed 31 March 2020.
https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/Jt%20Doc%20Air%20Land%20Operations-Mar%202010.pdf.
- . *Understanding Military Doctrine: A Primer*. New Delhi: Directorate of Doctrine, Headquarters Integrated Defence Staff, September 2018. Accessed 31 March 2020.
https://www.ids.nic.in/IDSAdmin/upload_images/doctrine/Primer%20on%20Military%20Doctrine-%20September%202018.pdf.
- Indian Army. “Directorate General of Perspective Planning.” Last updated 26 March 2020. Accessed 29 March 2020.
<https://indianarmy.nic.in/Site/FormTemplate/frmTempSimple.aspx?MnId=d+sgIOtRz4DV5xz1myJUzA==&ParentID=Qp9lRnOsN0+TYfK9b3CgMw==>.
- Jane’s. “Defence Budget Overview.” Last updated 22 January 2020. Accessed 29 March 2020. <https://janes-ihs-com.lumen.cgsccarl.com/Janes/Display/indis090-sas>.
- . “India - Armed Forces: Threat Environment.” 19 March 2020. Accessed 29 March 2020. <https://janes-ihs-com.lumen.cgsccarl.com/Janes/Display/INDIS100-SAS#>.
- Joint Chiefs of Staff. Chairman of the Joint Chiefs of Staff Manual 5120.01A, *Joint Doctrine Development Process*. Washington, DC: Government Printing Office, 29 December 2014. Accessed 26 March 2020.
https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/cjcs5120_01a.pdf.
- . Chairman of the Joint Chiefs of Staff Instruction 5120.02D, *Joint Doctrine Development System*. Washington, DC: Government Printing Office, 5 January 2015. Accessed 26 January 2020.
https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/cjcsi5120_02d.pdf.
- . “Joint Doctrine Publications.” Accessed 24 March 2020.
<https://www.jcs.mil/Doctrine/Joint-Doctrine-Pubs/>.
- . *The Holloway Report*. 23 August 1980. Accessed 9 May 2020.
<https://nsarchive2.gwu.edu/NSAEBB/NSAEBB63/doc8.pdf>.

- . Joint Publication 1, *Doctrine for the Armed Forces of the United States*. Including Change 1. Washington, DC: Government Printing Office, 12 July 2017. Accessed 28 September 2019.
https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_ch1.pdf.
- . Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*. As Amended through 15 February 2016. Washington, DC: Government Printing Office, 8 November 2010. Accessed 29 January 2020.
https://fas.org/irp/doddir/dod/jp1_02.pdf.
- . Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*. As Amended through 17 October 2007. Washington, DC: Government Printing Office, 12 April 2001. Accessed 29 January 2020.
https://fas.org/irp/doddir/dod/jp1_02.pdf.
- . Joint Publication 3-0, *Joint Operations*. Incorporating Change 1. Washington, DC: Government Printing Office, 22 October 2018. Accessed 29 January 2020.
https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf?ver=2018-11-27-160457-910.
- . Joint Publication 3-35, *Deployment and Redeployment Operations*. Washington, DC: Government Printing Office, 10 January 2018. Accessed 29 January 2020.
https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_35.pdf.
- . Joint Publication 5-0, *Joint Planning*. Washington, DC: Government Printing Office, 16 June 2017. Accessed 26 February 2020.
https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp5_0_20171606.pdf.
- Joint Chiefs of Staff J-8. *JCIDS Manual*. Washington, DC: Government Printing Office, 31 August 2018. Accessed 26 February 2020.
<https://www.dau.edu/cop/rqmt/DAU%20Sponsored%20Documents/Manual%20-%20JCIDS,%2031%20Aug%202018.pdf>.
- Joshi, Manoj. “The Unending Quest to Reform India’s National Security System.” Policy Report, S. Rajaratnam School of International Studies, Singapore, March 2014. Accessed 31 March 2020. https://www.rsis.edu.sg/wp-content/uploads/2014/09/PR140301_The_Unending_Quest_to_Reform_India_National_Security_System.pdf.
- Lederman, Gordon N. *Reorganizing the Joint Chiefs of Staff: The Goldwater-Nichols Act of 1986*. Westport, CT: Greenwood Press, 1999.
- Locher, James R. *Victory on the Potomac: The Goldwater-Nichols Act Unifies the Pentagon*. College Station: Texas A & M University Press, 2002.
- Mallick, P. K. “Indian Army’s Land Warfare Doctrine 2018: Questions and Concerns.” *The Wire*. Last updated 3 January 2019. Accessed 23 March 2020.

- <https://thewire.in/security/indian-armys-land-warfare-doctrine-2018-questions-and-concerns>.
- Menon, K. Raja. "Jointness in Strategic Capabilities: Can we Avoid it." *Journal of Defence Studies* 1, no. 1 (2007): 35.
- Miles, Matthew B., A. M. Huberman, and Johnny Saldaña. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks, CA: SAGE Publications, Inc., 2014.
- Mitra, Joy. "India's Land Warfare Doctrine 2018: Hoping for the Best, Preparing for the Worst." *The Diplomat*. Last updated 3 January 2019. Accessed 31 March 2020. <https://thediplomat.com/2019/01/indias-land-warfare-doctrine-2018-hoping-for-the-best-preparing-for-the-worst/>.
- Mohan, Raja. "Raja Mandala: Lessons from Korea." *Indian Express*. 1 May 2018. Accessed 31 March 2020. <https://indianexpress.com/article/opinion/columns/india-pakistan-relations-narendra-modi-north-korea-south-korea-meeting-5157726/>.
- Mukherjee, Anit. "Fighting Separately: Jointness and Civil-Military Relations in India." *Journal of Strategic Studies* 40, no. 1-2 (July 2016): 6-34. Accessed September 28, 2019. <https://www.tandfonline.com/doi/full/10.1080/01402390.2016.1196357>.
- . "Joint Doctrine for Armed Forces: the single-service syndrome." *The Hindu*. Last updated 09 May 2017. Accessed 31 March 2020. <https://www.thehindu.com/opinion/op-ed/joint-doctrine-of-armed-forces-the-single-service-syndrome/article18410953.ece>.
- . *The Absent Dialogue: Politicians, Bureaucrats, and the Military in India*. New York: Oxford University Press, 2020.
- Murray, Williamson, and Allan R. Millett. "Introduction." In *Military Innovation in the Interwar Period*, edited by Williamson Murray and Allan R. Millett, 1-5. New York: Cambridge University Press, 1996.
- Nuclear Weapons Archive. "Kargil Review Committee Report." Accessed 31 March 2020. <http://nuclearweaponarchive.org/India/KargilRCB.html>.
- Operation Inherent Resolve. "About CJTF-OIR." Accessed 24 March 2020. <https://www.inherentresolve.mil/About-CJTF-OIR/>.
- Pandit, Rajat, and Sachin Parashar. "Tension in the air: IAF, PAF lose a jet each; pilot in Pakistan custody." *The Times of India*. Last updated 28 February 2019. Accessed 6 March 2020. <https://timesofindia.indiatimes.com/india/tension-in-the-air-iaf-paf-lose-a-jet-each-pilot-in-pakistan-custody/articleshow/68192759.cms>.

Plain Language Action and Information Network. "Federal plain language guidelines."
U.S. Government. Accessed 24 March 2020.
<https://plainlanguage.gov/guidelines/>.

- Prakash, Arun. "The significance of the post of CDS lies in its potential for re-imagining national security." *The Indian Express*. Last updated 10 January 2020. Accessed 04 March 2020. <https://indianexpress.com/article/opinion/columns/general-bipin-rawat-cds-chief-of-defence-staff-india-roles-responsibility-6208780/>.
- PTI. "Myanmar operation: 70 commandos finish task in 40 minutes." *The Economic Times*. Last updated 14 July 2018. Accessed 6 March 2020. <https://economictimes.indiatimes.com/news/defence/myanmar-operation-70-commandos-finish-task-in-40-minutes/articleshow/47617871.cms?from=mdr>.
- Rao, K. V. Krishna. *Prepare or Perish: A Study of National Security*. New Delhi: Lancers Publishers, 1991.
- Rej, Aghijnan, and Shashank Joshi. "India's Joint Doctrine: A Lost Opportunity." ORF Occasional Paper # 139, Observer Research Foundation, New Delhi, January 2018. Accessed 31 March 2020. https://www.orfonline.org/wp-content/uploads/2018/01/ORF_Occasional_Paper_Joint_Doctrine.pdf.
- Ryan, Paul B. *The Iranian Rescue Mission: Why It Failed*. Annapolis, MD: Naval Institute Press, 1985.
- Siddiqui, Huma. "For the first time ever Kazakh troops join Indian peacekeepers under UN Flag for operations in Lebanon." *Financial Express*. Last updated 6 December 2018. Accessed 24 March 2020. <https://www.financialexpress.com/defence/for-the-first-time-ever-kazakh-troops-join-indian-peacekeepers-under-un-flag-for-operations-in-lebanon/1405319/>.
- Sinha, S. K. "The Chief of Defence Staff." *Journal of Defence Studies* 1, no. 1 (2007): 133-137. Accessed 01 March 2020. https://idsa.in/system/files/jds_1_1_sksinha.pdf.
- Singh, Mayank. "Mountain Strike Corps shelved as it was unwieldy: Senior army official." *The New Indian Express*. Last updated 30 August 2019. Accessed 31 March 2020. <https://www.newindianexpress.com/nation/2019/aug/30/mountain-strike-corps-shelved-as-it-was-unwieldy-senior-army-official-2026361.html>.
- Singh, Ranjit. "Unified Commands in the Indian Armed Forces: Imperative for Integrated War Fighting." An Issue Brief, Centre for Joint Warfare Studies, New Delhi, 2016. Accessed 31 March 2020. https://cenjows.gov.in/pdf/Layout_Unified%20Comd%20by%20Brig%20Ranji_03-04-17.pdf.
- Subramaniam, Arjun. "Indian Military and Jointness." Episode 16, 24 June 2019. In *National Security Conversations*. Interview by Jacob Happymon. Podcast audio. Accessed 24 December 2019. <https://podtail.com/podcast/national-security-conversations/ep-16-indian-military-and-jointness/>.

- The Times of India. "Agencies take shape for special operations, space, cyber war." Last updated 15 May 2019. Accessed 24 March 2020.
<https://timesofindia.indiatimes.com/india/india-begins-setting-up-new-tri-service-agencies-to-handle-special-operations-space-and-cyberspace/articleshowprint/69346012.cms>.
- . "Uri terror attack: 17 soldiers killed, 19 injured in strike on Army camp." Last updated 30 September 2016. Accessed 6 March 2020.
<http://timesofindia.indiatimes.com/india/Uri-terror-attack-Indian-Army-camp-attacked-in-Jammu-and-Kashmir-17-killed-19-injured/articleshow/54389451.cms>.
- U.S. Army Center of Military History. "Publications Catalog." U.S. Army. Accessed 27 March 2020. <https://history.army.mil/catalog/index.html>.
- . "The U.S. Army Center of Military History: An Overview." U.S. Army. Accessed 27 March 2020. <https://history.army.mil/html/about/overview.html>.
- U.S. Army Combined Arms Center. "Combined Arms Doctrine Directorate (CADD)." U.S. Army. Accessed 24 March 2020.
<https://usacac.army.mil/organizations/mccoe/cadd>.
- . "Combined Arms Doctrine Directorate (CADD): Contact Us." U.S. Army. Accessed 24 March 2020.
<https://usacac.army.mil/organizations/mccoe/cadd/contact-us>.
- U.S. Army Training and Doctrine Command (TRADOC). TRADOC Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*. Fort Eustis, VA: TRADOC, 6 December 2018. Accessed 26 January 2020.
https://www.tradoc.army.mil/Portals/14/Documents/MDO/TP525-3-1_30Nov2018.pdf.
- U.S. Congress. Senate. S.Rept. 99-86, *Defense Organization: The Need for Change*. Staff Report to the Committee on Armed Services. Washington, DC: Government Printing Office, 1985.
- U.S. Cyber Command. "U.S. Cyber Command History." Accessed 24 March 2020.
<https://www.cybercom.mil/About/History/>.
- U.S. Department of Defense. "Combatant Commands." Accessed 24 March 2020.
<https://www.defense.gov/Our-Story/Combatant-Commands/>.
- . *Capstone Concept for Joint Operations*. Version 2.0. Washington, DC: Government Printing Office, August 2005. Accessed 28 September 2019.
<https://apps.dtic.mil/dtic/tr/fulltext/u2/a476464.pdf>.

- U.S. Department of Energy, Office of Scientific and Technical Information. Report No. 16, *Why the Gulf War still matters: Foreign perspectives on the war and the future of international security*, by P. J. Garrity. Accessed 4 March 2020.
<https://www.osti.gov/servlets/purl/10178236>.
- Vishwanathan, Arun. "India gets the message all wrong after Myanmar foray." *East Asia Forum*. 2 July 2015. Accessed 6 March 2020.
<https://www.eastasiaforum.org/2015/07/02/india-gets-the-message-all-wrong-after-myanmar-foray/>
- Walliman, Nicholas. *Research Methods: The Basics*. New York: Routledge, 2011.
- Wasson, James. "The Development of The Corps D'Armée And Its Impact on Napoleonic Warfare." The Napoleon Series. Accessed 26 January 2020.
https://www.napoleon-series.org/military/organization/c_armycorps.html.
- Wilkerson, Lawrence B. "What Exactly Is Jointness?" *Joint Forces Quarterly*, no. 16 (Summer 1997): 66-68. Accessed 27 January 2020.
<https://ndupress.ndu.edu/portals/68/Documents/jfq/jfq-16.pdf>.
- Wilkinson, Steven. *Army and Nation: The Military and Indian Democracy since Independence*. Cambridge, MA: Harvard University Press, 2015.
- Wilson, Andrew R. *Masters of War: History's Greatest Strategic Thinkers*. Chantilly, VA: The Great Courses, 2012.