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India and The Operational Art of War

A Monograph
by

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ABSTRACT

This paper examines the ability of the Indian Army to conduct the operational art of war. India's size, geographical location, and increasing world economic importance will make her a more influential member of the world order in the next several years. This may necessitate that her military power be used, either defensively or offensively, to achieve a strategic aim(s). An understanding of her Army's ability to conduct the operational art of war is important in the event that the U.S. becomes involved, either as an ally or an adversary, in any future conflict that may result from India's use of military power.

The paper reviews the theory of operational art and then looks for historical and current evidence of the Indian Army's ability to conduct the operational art of war. Particular attention is paid the 1971 India-Pakistan conflict in the historical section. The current perspective section consists of the characteristics, organization, armament, equipment, and training of the Indian Army. The historical and current evidence will be analyzed and evaluated using the following four criteria: 1) the ability of the Indian Army to employ more than one army or equivalent, 2) the ability of the Indian Army to synchronize simultaneous and successive operations, 3) the logistical ability to support distributed operations, and 4) the ability of the Indian Army to conduct joint operations.

An examination of the 1971 India-Pakistan War shows that the Indian Army exhibited a good ability to conduct the operational art of war in three of the four criteria areas. The current perspective reveals that the Indian Army is organized, equipped and trained in a manner that would support her ability to conduct the operational art of war in all of the criteria areas. All this does not imply that the Indian Army is without problems. What it does imply is that her army should be respected and understood in order to benefit the U.S. in any future alliance or adversarial relationship we might have with her.

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I. Introduction

Several years ago Admiral Alfred Thayer Mahan made the comment that, "The Indian Ocean is the key to the seven seas. In the 21st century, the destiny of the world will be decided on its waters."¹ Evolving political-economic conditions in southern Africa, Middle East, South and East Asia not only appear to make Mahan's statement prescient but also make it a reason to focus attention on this area. The region's strategically vital straits, points of entry and exit, as well as its geography continue, as they have for many years, to be of significant importance to United States interests. One of the key countries in the Indian Ocean, and therefore in our interest to understand, is India.

In just over 40 years of independence, India has evolved into a world power. She is no longer a "starving, poverty-ridden country endemically incapable of supporting itself."² She has emerged in the last decade or so to become a power capable of global influence. Among her many significant factors are: the world's largest democratic population, the world's twelfth largest industrial base, and the world's fourth largest standing army. Additionally, she has a self-sufficient food base and enjoys a very respectable geo-strategic location.³ Her position in the Indian Ocean

region is extremely important. According to Gregory Copley, "...India is the pre-eminent military and economic power in the region, filling the power role which in the Indian Ocean had until now been dominated by external powers."⁴

Power, to include military power, can be a difficult thing to measure and quantify; however, it is fair to say that India's power has increased and her importance in the world will continue to be significant. India's military has played, and will continue to play a pivotal role in all this. Understanding her military power, especially her army, will be the focus of this study. Specifically, we will look at the Indian Army's ability to conduct the operational art of war.

The ability of any nation's army to conduct the operational art of war is becoming ever more important. A review of literature that contrasts past battlefields with current or future battlefields illustrates this fact. This review yields common terminology, such as: increased complexity, lethality, and intensity. Additional descriptions refer to the greater scope, speed, and fluidity that will characterize the modern battlefield. FM 100-5, the U.S. Army's operational manual, states that, "The high- and mid-intensity battlefields are likely to be chaotic, intense, and

highly destructive. They will probably extend across a wider space of air, land, and sea than previously experienced."

All of the above descriptions accurately describe the evolution of the modern battlefield. The descriptions also point out that the conflict outcome of two nations possessing a significant modern military capability (like India) may well be determined by the nation that can do a better job of conducting the operational art of war. This fact, combined with India's characteristics as just described, makes the study of her army's capability to conduct the operational art of war an important one.

In order to help us determine the Indian Army's ability to conduct the operational art of war, we will use the following criteria: 1) the ability of the Indian Army to employ more than one army or equivalent, 2) the ability of the Indian Army to synchronize simultaneous and successive operations, 3) the logistical ability to support distributed operations, and 4) the ability of the Indian Army to conduct joint operations. Obviously, there are additional criteria that could be used to aid this analysis. However, by reviewing evidence, from both a historical and contemporary perspective, and by using our criteria as a guide during that review, we can gain enough insight

to determine the Indian Army's ability to conduct the operational art of war.

Like all armies, the current complexion of India's army is a function of many factors. Certainly the Indian Army has been shaped by her pre-colonial and colonial history, particularly the almost three hundred years of British military presence in India. Additionally, her past wars, foreign policy, major defense problems, technology advances, as well as her political/social considerations, have influenced and have continued to shape the Indian Army. We will examine the current Indian Army in light of some of these factors in order to determine her ability to perform at the operational level of war.

The first step is to review some of the theory and doctrine behind the operational level of war and describe, in greater detail, the criteria we are using to aid us in determining India's capability to conduct the operational art of war. This process will yield a definition of some key terms, an understanding of the various levels of war and their relationship, the connection between the operational level of war and operational art, and an understanding of how the criteria will be applied to the evidence we examine.

Next we will focus on the history that has helped shape the Indian Army. We will briefly examine the

major conflicts India has been involved since her independence in 1947. Special emphasis will be paid to the 1971 India-Pakistan war. A current perspective of the Indian Army in terms of her characteristics, organization, armament, equipment and training will be given. Analysis and evaluation of the Indian Army's ability to conduct the operational art of war will be done in both the historical and current perspective sections of the study. Lastly, we will conclude our study with some implications of our analysis and evaluation. Let us now begin by establishing the definitions and theory that will be used in our study.

II. Definition and Theory

The operational level of war and the lexicon that accompanies it are not just central themes in recent U.S. Army doctrine. Other nations, like the Soviet Union and Germany, have dealt with this concept for many years. The U.S. does not have a corner on this particular aspect of warfare; however, for our purposes here, we will define and describe the operational level of war within the U.S. theoretical and doctrinal framework. Using our criteria as a guide, we will then overlay that framework on the Indian Army in order to acquire some insight on its ability to conduct the operational art of war.

Although debatable, the operational level of war was really not a valid concept until the advent of mass armies and the industrial revolution. In his book, The Future of Land Warfare, Chris Bellamy offers a basis for an understanding of how the operational level of war came into being and why it is such an important concept.

For centuries it was adequate to use the term 'strategy' for broad questions affecting the conduct of war in general and the way armies manoeuvred before actually meeting. 'Tactics' described the way a battle was fought when two armies actually met. The creation of mass armies and the industrial revolution of the nineteenth century, which vastly extended the range of weapons and means of transport, gave rise to battles of great spatial scope and long duration. Whilst the operations of such armies were not 'strategic', in that their objectives were purely military and directly aimed at the defeat of the other in battle, they were clearly more than tactical.⁷

There are some important points, for purposes of our study, to glean from all this. First, there are three levels of war, strategic, operational, and tactical, that can be used to describe war. Second, the operational level of war links strategy and tactics. Lastly, the operational level of war is one of greater scope that is concerned with more than just weapons ranges and their effects.⁸

Differentiating between the three levels of war is not always an easy task. Sometimes the overlap between the levels is murky and a clear distinction cannot always be made. Separating the operational and tactical levels seems especially difficult. This can

be seen by the fact that although our own doctrine (i.e. FM 100-5, Operations) has dealt with the operational level of war concept for more than eight years, it is still not always easy to arrive at a common consensus of definition or recognize when conduct of a war is at the operational level as opposed to the tactical level. According to COL (P) L.D. Holder, distinguishing between the tactical and operational levels is not just a semantical exercise. "It holds great potential for good if only because it stakes out the ground in a way that will not let us run large and small unit operations together easily or wholly neglect either one."⁹

In addition to the problem of distinguishing between the three levels of war, there is often debate regarding the operational level of war and operational art. Are they one in the same or is there some discernable difference? To help us come to grips with all these issues we will use FM 100-5, which "...describes the Army's approach to generating and applying combat power at the operational and tactical levels [of war]."¹⁰ as our guide.

FM 100-5 "...distinguishes the operational level of war--the design and conduct of campaigns and major operations--from the tactical level which deals with battles and engagements."¹¹ FM 100-5 also defines

operational art as, "...the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and operations."¹² It would appear that FM 100-5 views the operational level of war and operational art to be inextricable and synonymous. As a minimum operational art is an *activity* conducted at the operational level of war that links strategy and tactics. War at the operational level may be conducted poorly, hence bad art, or it may be conducted well, hence good art.

We have established, through Bellamy and Holder, the theoretical portion of our operational level of war framework.¹³ We have established, through FM 100-5, the doctrinal portion of our operational level of war framework. Accepting this framework as sufficient and given that operational art is an activity, we must now examine the criteria we will use to help us recognize when operational art is being performed.

The first criteria we will use to aid our determination is the ability of the Indian Army to employ more than one army or equivalent. Operational art is an activity of greater scope than just two isolated belligerent forces fighting in a small area and reaching a decision in one afternoon. With this in mind, in order for operational art to be present, we

should see evidence that supports the ability of an army to employ more than one large force (i.e., corps size or larger) throughout a theater of operations. The desired result of the successful accomplishment of this criteria is one of synergism. In other words, an army that can perform at the operational level of war should be able to execute a plan that is, according to Richard Simpkin, "synergetic--that is, its whole [the entire army] must have an effect greater than that of the sum of its parts [i.e. corps or larger]." ¹⁴ This idea of synergism leads us into the next criteria we should see when operational art is being practiced--synchronized, simultaneous and successive operations.

This criteria implies two things. First, it implies that favorable conditions for battle are being set through the synchronization of various forces available to the operational level commander. Second, it implies the "integration of temporally and spatially distributed operations into one coherent whole." ¹⁵ These distributed operations should be synchronized, simultaneous (conducted across the breadth of the theater) and successive (conducted throughout the depth of the theater). ¹⁶

Our third criteria is the logistical ability of the Indian Army to support distributed operations. Probably the best source for elucidating this criteria

is TRADOC Pam 11-9. The PAM discusses six different Operational Level of War Operating Systems (OOS).¹⁷ One of the six OOS is labeled Operational Support. The description given for this OOS will serve as the descriptive basis for our third criteria. The operational support OOS consists of activities that "sustain the force in campaigns and major operations within a theater of operations."¹⁸ This OOS links strategic sustainment to tactical Combat Service Support (CSS).¹⁹ The PAM also gives us some assistance in distinguishing between logistics that are tactical as opposed to operational.

Operational support differs from tactical (CSS) in that the planning and preparation period as well as supported operation are normally longer. Support of the force at the operational level includes balancing current consumption in the theater of operations with the need to build up support for subsequent campaigns or major operations....²⁰

Our fourth and final criteria is the ability of the Indian Army to conduct joint operations. COL (P) Holder offers us some good counsel on why this criteria is important to our study. He says that, "Because of the nature of war today, it [operational art] is inescapably a joint activity when applied to land warfare."²¹ FM 100-5 and FM 100-6, Large Unit Operations, both support this position as well. As we begin to review our data to determine the Indian Army's ability to perform at the operational level of war we will look for evidence that her army can indeed

successfully function with the Indian air and naval forces in a theater of operations.

Our review of the operational level of war theory and doctrine has given us a foundation of understanding which will support our efforts in determining the capability of the Indian Army to perform at the operational level of war. By examining Bellamy and Holder, two contemporary theorists, and various doctrinal sources we established two important points for our study. First, that operational art is an activity conducted at the operational level of war. Second, that the operational level of war links strategy and tactics and that the operational level of war is one of greater scope and perspective when compared to the tactical level of war. Lastly, by clarifying our criteria, we can now begin to array evidence against the criteria to answer our research question. The first set of evidence we will look at is in the realm of history, specifically, how the past has shaped the current Indian Army.

III. Historical Perspective India-Pakistan War of 1971

Since independence in 1947, India has fought four major wars; three against Pakistan in 1948, 1965 and 1971, and one against China in 1962. Additionally, she has been involved in a number of smaller conflicts,

such as the recent peacekeeping operation on the island of Sri Lanka in 1987 and the putdown of an attempted coup in the Maldives in 1988. Each of these wars and conflicts, in their own special ways, have molded the Indian army.

In addition to the experience gained from each of her wars, the Indian Army owes much of its legacy to the influence of the British. The British regimental system along with British warfare methods have strongly influenced the Indian Army and the way she conducts war. According to Bellamy, the Indian Army, up to the 1971 war, "tended to emulate Montgomery [the British Field-Marshal of World War II fame] in massing huge quantities of men and material to crush the enemy in a set-piece battle."²² India's war with Pakistan in 1971 was the exception. "Through a combination of numbers, manoeuvre and liaison with insurgent forces, India decisively defeated Pakistan forces...."²³ For this reason, and the fact that India emerged from the 1971 war as the dominant military force in South Asia, we will focus on this war.²⁴

As we begin to review the 1971 India-Pakistan war we should keep in mind the caveat that Clausewitz offers those of us with 20/20 hindsight.

If the critic wishes to distribute praise or blame, he must certainly try to put himself exactly in the position of the commander; in other words, he must assemble everything the commander knew and all the motives that affected his

decision, and ignore all that he could not or did not know, especially the outcome.²⁵

Our goal then is not to pass judgement, but to begin to look for evidence in the India-Pakistan War of 1971 that either meets or does not meet our established criteria for the practice of operational art.

In fourteen days of fighting, beginning December 3, 1971, the Indian military convincingly defeated an internationally respected Pakistani military. There were several significant results of this war, most importantly the truncation of East Pakistan and birth of a new nation--Bangladesh. Additionally, there was an important military result of this "lightning campaign"²⁶--the emergence of the Indian Army as the pre-eminent army in this region of the world.

The causes of the 1971 war are a complex combination of factors. While it is not the purpose of our study to analyze the exact reasons for the war, a few words on its causes gives us a good starting point from which to begin a further evaluation of the Indian Army in this war. The basis of the war between India and Pakistan can be directly traced to internal Pakistan problems.

Due to the adversarial relationship between Hindu and Moslem, the British, in 1947, could not hand over a united country under one central government.²⁷ The result was the formation of West and East Pakistan

(Moslem) with India (Hindu) between the two (see map Appendix A). Pakistan's 'common religion of Islam could not overcome the deep divisions of geography [East and West Pakistan were separated by a thousand miles], culture and political goals. Pakistan moved toward insurrection and war.'²⁸

Pakistan government, under military rule and located in West Pakistan, would not recognize East Pakistan 1970 elections and their subsequent demands for secession from West Pakistan. Army reinforcements were sent to East Pakistan to ensure they did not secede. The troops acted with great harshness. Many people were killed and a great number (estimated to be nine million) left East Pakistan for India as refugees. India attempted to care for these refugees, however, her abilities were stretched thin because the refugees were in an area where India's own people were impoverished. Indian troops were sent to the East Pakistan border ostensibly to deal with the refugees. It should be noted however, that it was also in India's best interest (both politically and militarily) to see East Pakistan achieve her secession desires. The deployment of troops, therefore, made good strategic military sense; India could prepare for war and support guerilla forces against her potential enemy.²⁹

²⁸From within East Pakistan, and from among the

refugees, she [India] organized, trained and generally supported guerilla forces--known as Mukti Bahini.³⁰ India's involvement with the Mukti Bahini increased and by November of 1971 she was actively taking part in the fighting. Pakistan, hoping for assistance from either the U.S. or China, decided that the situation was intolerable and began a formal war on 3 December, 1971.

Pakistan's basic overall strategy for prosecuting the war consisted of two main points. First, although considered ultimately indefensible, defend East Pakistan long enough to gain support from either the U.S. or China. Second, attack in the west in order to gain Indian territory. Gaining Indian territory would allow Pakistan to trade for lost East Pakistan territory in negotiations after the war.³¹

India's basic overall strategy for prosecuting the war was the exact opposite of Pakistan's. She wanted to conduct a quick decisive campaign and overrun Pakistan in the east before any international intervention while maintaining a defense in the west.

Pakistan initiated the war by launching an air strike designed to cripple the more powerful Indian Air Force. A brief narrative of events following this strike may be found at Appendix B.

Each of the Indian services performed well in this war and made their own special contributions. While

the exact activities of the Indian Navy and Air Force will not be described in any detail it is important to note that we do see the Indian Army interacting with the other two services.

Ravi Rikhye, a Harvard educated Indian scholar and military analyst, offers us some good insight on just how effective the Indian Navy and Air Force were and how they successfully coordinated and integrated their operations with those of the army. Regarding the importance of the Indian Navy he stated the following.

No one, least of all Indians familiar with their obsolete Navy, could have predicted the extent of the Navy's achievements. It blockaded West and East Pakistan, hunted Pakistani submarines, . . . , reduced vital ports to a shambles by gun bombardment, conducted riverine operations, *carried out amphibious operations for the Army, gave the Army fighter support, . . .* [italics added for emphasis] and performed general ocean surveillance.³²

India's fleet was superior to that of Pakistan and demonstrated its superiority in its first full-scale naval war by successfully defending the coast, blockading East Pakistan and attacking shore targets in support of ground operations.³³

Although Pakistan had attempted to emulate the Israelis by a surprise air attack on Indian Air Forces, they failed. Exact events of the air battle are difficult to ascertain. 'What is clear, however, is that the air battle went decisively in India's favour... [and Pakistani Air Forces] played very little part in supporting the ground forces.'³⁴ While the

Indian Air Force (IAF) was able to gain air superiority rather quickly, they were also instrumental in the conduct of the ground war.

India's Air Force in 1971 was fully integrated with the Army, with devastating results for Pakistani Armor....As time passed, India stopped bothering about fighter defense of its airfields: it switched its fighters to supporting the Army....³⁵

There are several examples of cooperation between the IAF and the Indian Army. One of the more illustrative examples comes from an action on the 5th of December in the south of the West Pakistan front. Early on the morning of the 5th a Pakistan infantry brigade, an armoured regiment of T-59 tanks and a squadron of Shermans crossed the border into India. The IAF in conjunction with the army counter-attacked and destroyed some 37 tanks in the course of the day.³⁶

The IAF and Indian Navy enjoyed tremendous success and as discussed above were able to conduct joint operations with the army. The decisive battles, however, were fought on land and so we will next turn our attention to those operations.

On 3 December the comparative army force structures and deployments were as shown in Figure 3-1³⁷. The theater of war was divided into two fronts: the western front (forces in and around the West Pakistan/India border) and the eastern front (forces in

and around East Pakistan/India border). The western front consisted of four segments from the cease-fire line in Jammu and Kashmir in the north of India to the marshes of the Rann of Kutch south of Rajasthan.³⁸

Comparative Forces and Deployments

country \ resource	army-men	tanks	guns
India	860,000	1,450	3,000
Pakistan	365,000	820	1,100

Front	Pakistan	India
East Pakistan	4 infantry	1 armored 6 infantry 1 parachute bde
West Pakistan	2 armored 9 infantry	7 infantry 10 mountain

(all the above are division size strengths)

Figure 3-1

The eastern front was divided by three rivers into four segments also. The Jamuna river runs north to south and cut East Pakistan in half. West of the Jamuna the Ganges river flows west to east and joins the Jamuna at Dacca completing the four-way partition. The segments were as follows: 1) North-Western sector, 2) South-Western sector, 3) Northern sector, and 4) Eastern sector³⁹ (see Appendix C).

The Chief of Army Staff at the time was General S H F J Manekshaw. General Manekshaw's plan paralleled

India's overall strategy. His plan was to 'concentrate maximum effort for offensive operations against East Pakistan and exercise an economy of effort by adopting a general defensive posture in the west.'⁴⁰

General Manekshaw had three important operational advantages inherent in his plan. First, he had the ability to operate on interior lines of communication between both fronts. Second, he was able to attack East Pakistan from all sides. Third, he was able to make use of the Mukti Bahini (eight regular infantry battalion formations) and tens of thousands of irregulars, freedom fighters and a friendly local populace in and around East Pakistan.⁴¹

Although some of the fiercest fighting of the war took place on the western front to include the largest tank battle of the war⁴², the decisive front was in Eastern Pakistan. We will focus our attention on this front while we look for additional evidence to support India's ability to conduct the operational art of war. We need to keep in mind, however, that for India to achieve overall strategic victory it was necessary that the defensive operations in the west be linked to the offensive operations in the east and that each be operationally successful.

Army forces were deployed to the various sectors of the Eastern Front as shown in Figure 3-2⁴³ and

graphically depicted in Appendix D. It should also be noted that Indian forces operating on the Eastern Front made use of the Mukti Bahini, who were of "great value in securing intelligence, full support from the local population in the form of labour, boats and other material to speed up the momentum of operations." 44

Eastern Front

	North-western Sector	South-western Sector	Northern Sector	Eastern Sector
F o r c e s	XXXIII Corps One Inf Div Two Inf Bdes One Armd Regt	II Corps Two Inf Divisions Two Tnk Regts One Arty Regt	101 Commo Zone Two Inf Bdes	IV Corps Three Inf Divs

Figure 3-2

The task given the forces in East Pakistan was to "destroy the bulk of the Pakistani forces in the eastern theatre and to occupy the major portions of East Pakistan...." 45 In order to accomplish this, the campaign plan called for Eastern Command forces to attack "from all directions to break East Pakistan into fragments and then drive directly on to Dacca as fast as possible." 46

In the North-western sector XXXIII Corps was to cut Pakistani communications into the Dinajpur/Rangpur sector and if the situation permitted to attack to capture Bogra. In the South-western sector II Corps was to advance eastward, secure Jessore and Jhenida and

then launch attacks to capture Khulna, Hardinge Bridge, and Faridpur. In the Northern sector two infantry brigades under the 101 Communication Zone, a special field headquarters, were tasked to make a thrust toward Jamalpur, with a diversionary movement to Mymensingh. In the Eastern sector IV Corps was to clear the sector east of the Meghna river and then capture Chittagong.⁴⁷

The attack began on the morning of 4 December. Although success was experienced in all sectors, the most dramatic was in the east by IV Corps. In less than a week, IV Corps had secured the cities of Chandpur and Daudkandi on the eastern side of the Meghna River and by using a combination of local river craft and helicopters had crossed the river to secure Narsingdi. This effectively cut the Pakistani link with the sea and placed the Indian Army IV Corps within final striking distance of Dacca (about 12 kilometers). A good testament to the success and synchronization of operations in the IV Corps area is provided by Maharaj Chopra, a retired wing commander of the IAF.

In record time, the Indian Army mustered more than a corps in this [eastern sector] forbidding area. After a few skirmishes close to the border, this force had rather an easy time fanning out for a short-sword thrust directed at Dacca. It was in this zone that the Pakistanis began to surrender en masse.⁴⁸

The concluding thrust to Dacca, however, was to be made by Indian Army units from the north.⁴⁹

Although Indian forces in the north were held up at Mymensingh until 11 December, they were eventually able to drop a parachute battalion into Tangail, secure Tangail and cut the Pakistani northern withdrawal route from Dacca. Pakistani resistance at Tangail collapsed on the 12th and by the 16th of December Indian Army units had advanced to the outskirts of Dacca. On 16 December the commander of Pakistani forces in Dacca signed an unconditional surrender. The Indian Army had secured an impressive military victory and the country of Bangladesh was a reality.

The Indians knew they had to secure a quick victory before international intervention. The Indian Army had demonstrated that they could rapidly move across land whose trafficability was poor and strike at an objective (Dacca), from several different directions, with several Corps size units. The combination of the tactics used on both fronts were successful in achieving India's overall strategic aim.

If our only criteria for the conduct of operational art were strictly based on the FM 100-5 definition, then certainly India demonstrated an ability to conduct the operational art of war in this conflict. Her military forces were employed through the design, organization, and conduct of a campaign to attain strategic goals. Additionally, her tactics and

strategy were linked by her military operations. While all this is true, the criteria we are using is somewhat more stringent. Let us therefore evaluate each of our criteria before making a decision.

The first criteria we chose to use was the ability of the Indian Army to employ more than one army or equivalent. India employed Corps sized forces not only on two fronts but also in the encirclement of East Pakistan. The employment, particularly on the Eastern Front, did have a synergistic effect. The effect of all Eastern Command forces dissecting East Pakistan and coming at Dacca from several different directions was clearly greater than that of each of the individual Corps accomplishments. The Indian Army demonstrated the ability to employ more than one army or equivalent in the 1971 war.

Our next criteria is the ability of the Indian Army to synchronize simultaneous and successive operations. Access to the Indian Army 1971 war plan is not possible as it is still classified.⁵⁰ It is difficult, therefore, to determine whether their campaign plan called for synchronized, successive, and simultaneous operations. It seems likely, however, based on the orchestration required between the Eastern and Western Fronts as well as the military actions actually demonstrated on the Eastern Front, that the

plan probably called for these type operations.

Regardless, tangible Indian Army performance in this war indicate that she met this criteria.

Her operations were conducted across the breadth of the theater (i.e., the operations were simultaneous). This is true because forces were not only simultaneously employed and operating across two fronts but were also simultaneously employed and operating from all points of the compass on the Eastern Front. While somewhat limited in scale, we do see that her operations on the Eastern Front were also successive (conducted throughout the depth of the theater). This was verified by her "bold employment of helicopters"⁵¹ and paratroopers to bypass enemy strongpoints and maintain the momentum of the attack.

Our third criteria is the logistical ability of the Indian Army to support distributed operations. C. N. Barclay offers us some good insights on this criteria.

It must also be remembered that this campaign was fought within, or very near, the combatants' own frontiers. In these circumstances very elaborate lines of communication were unnecessary. The logistical problems were not comparable to those in campaigns of World War II.... The Indians' problem was not militarily a difficult one and seems to have been solved satisfactorily.⁵²

In addition to having short lines of communication, the Indian's logistics capability appears not to have been significantly tested due to the shortness of the

campaign. If the campaign had continued for several more weeks, it seems likely that logistics would have become a weak point given the following two significant facts: 1) India had prepared for a two-front war, against Pakistan in the west and China in the north; so her logistics layout was not geared up for a major war in the east and 2) the existing logistics infrastructure in East Pakistan was insufficient.⁸³

There is some evidence to support that there was a shortage of replacement tanks and spare parts but due to the shortness of the campaign the Indian Army appears to have not felt it.⁸⁴ "The speed of the Indian advance helped relieve Indian's logistic effort....Their forces were lightly equipped to move quickly to Dacca."⁸⁵ In sum, I believe that because of the brevity and speed of the campaign and the fact that the Indian Army could operate on very short interior lines of communication, we cannot make an accurate judgement of the true logistical ability of the Indian Army to support distributed operations.

Our fourth and final criteria is the ability of the Indian Army to conduct joint operations. Even though the army commander, air force commander, and naval commander were geographically separated and there was no overall integrating authority for joint operations in the 1971 war⁸⁶, joint operations between

the Indian Army and other service elements experienced a good deal of success. Command and control problems aside, the results achieved in this war clearly indicate that the Indian Army functioned well with Indian air and naval forces and demonstrated the ability to conduct joint operations.

India's victory in this lightning campaign was due to several factors. She had many things in her favor: geography, short interior lines of communication, air supremacy, a military with something to prove, and a well-conceived strategy and tactics. The Indian Army not only demonstrated the ability to perform three of our four criteria (the third criteria neither proved nor disproved) for the conduct of operational art, but she made the art look good as well. Whether all of this was just a set of coincidental historical factors or a precursor to the true capability of the Indian Army is the focus of our next section. We will look for evidence in the current Indian Army that will either support or dispute the criteria we have established for the conduct of operational art.

IV. Current Perspective

The 1971 war provided us with some hard evidence that supported three of our four criteria and allowed us to make some objective conclusions regarding the

Indian Army's ability to conduct the operational art of war. Analyzing and evaluating the Indian Army's current capability is more difficult and definitely more subjective. To help us focus our analysis and evaluation Clausewitz offers some guidance.

Essentially, then, the art of war is the art of using the given means in combat.... To be sure in its wider sense the art of war includes all activities that exist for the sake of war, such as the creation of the fighting forces, their raising, armament, equipment and training.⁵⁷

With this counsel in mind, and our criteria as a guide, we will look at the Indian Army in terms of its "raising, armament, equipment and training" and make some determinations as to her ability to conduct the operational art of war.

For our use, "raising" of the fighting forces will address the numbers, characteristics, organization and command and control of the Indian Army. It may be difficult to make any precise judgements regarding the Indian Army's ability to conduct the operational art of war based strictly on the "raising" of the fighting forces as we have described it. However, it will certainly aid our overall understanding of the current Indian Army and provide us a foundation for further evaluation.

The Indian Army is the "only apolitical army in the third world without any Cromwell or Napoleon having risen from its ranks to acquire political power."⁵⁸

Her total active manpower is 1,100,000. In addition, there is a 160,000-man Territorial Army and an 850,000-man Para-military force.⁸⁹ It is the largest all-volunteer Army in the world and 'is a proud army, jealous of its reputation and traditions.'⁹⁰ The army's combat elements normally come from one of the martial races (e.g. Punjabis, Ghurkas, or Rajputs) and are made up of officers, generally from the elite of Indian society, and the *jawan* (i.e. other ranks). They serve in racially and religiously segregated units under a regimental type system.⁹¹ It should be noted that the army is moving toward more integrated units and in fact combat support arms and logistic support services already have a mixed composition of soldiers from different classes and religions.⁹²

The Indian Army has a total of ten corps. The corps are subsets of five regional commands. The five regional commands are: Northern Command, Western Command, Central Command, Southern Command, and Eastern Command. Each of the commands work directly for the Chief of Army Staff (the highest position in the Indian Army)⁹³. Assigned to each of these regional commands are units of the Artillery Corps, Air Defense Corps, and the Army Aviation Corps (see Appendix E). The Northern, Central and Eastern Commands have the preponderance of forces and many of them are already

forward-deployed along the borders of Pakistan and China.⁶⁶ There are a total of two armored divisions, one mechanized division, 19 infantry divisions, 11 mountain divisions, and 17 independent brigades.⁶⁶

The Indian Army has field formations very similar to the U.S. Army. In ascending order, the formations are as follows: section, platoon, company, battalion, brigade, division, corps, and army. The corps may comprise three or more divisions. The corps has engineers, artillery and services (read Combat Service Support (CSS)) directly under its command. The Army may have one or two corps and/or a number of independent divisions. It will also have a share of combat support with a higher proportion of CSS type units. Two, three or more armies may be formed into an Army Group.⁶⁶

It is difficult to draw firm conclusions regarding the Indian Army capability to conduct the operational art of war from the above description of the "raising" of the Indian Army. However, it is clear that the Indian Army's current force structure would allow her to employ more than one field army or equivalent. In fact, a large portion of her forces are already combat deployed, due to geo-strategic considerations, to ensure there is no escalation of small clashes or border incursions by Pakistan and China.⁶⁷

Details on the exact armament and equipment of the Indian Army may be found at Appendix E. There are, however, some important points regarding the modernization efforts of her armament and equipment that bear exploration.

Modernization of the Indian Army has its roots in the 1962 war in which the Indian Army, armed with World War II equipment, was badly beaten by a superior Chinese Army. 'Ever since the traumatic events of October-November 1962 [the attack by China]..., equipping the Indian Army with contemporary weaponry has been constantly reviewed.'⁶⁶

Current Indian Army modernization programs center around the 'development of new weapons systems [most notably indigenous development of the *Arjun* main battle tank], better training, installation of control, command and communication systems and the creation of a unique rapid deployment force.'⁶⁷ Other developments, not yet in service, include new anti-tank and surface-to-air missiles. The Army Aviation Wing is, or will be shortly, strengthened with the acquisition of additional advanced Soviet Mi-35 Hind gunships.⁷⁰

An example of her modernization efforts and resulting success were seen in the Republic Day parade on 26 January 1987.

A squadron of T-72 tanks, a company of mechanized infantry in BMPs, supported by self-propelled guns and air defence

missiles and artillery were accompanied by a detachment of engineers with their trawl tanks and bridge layer tanks. Hovering above this phalanx were five helicopters of the Army Aviation Corps. To coincide with this presentation the *Sainik Samachar*--the official journal of India's armed forces--focused on the Army's 'High-tech Era'.⁷¹

Obviously, just because an army can parade an integrated, modern combat team does not mean it is capable of successfully employing them. What the parade did indicate however, was a concept important for the conduct of operational art.

The moving spirit... was a cerebral and articulate Chief of Army Staff, General Sundarji. He presented the concept of 'force-multipliers' as not just weapons systems but as equipment systems which increased the combat effectiveness of such a force,--the key force multipliers being mobility, surveillance and communications.⁷²

General Sundarji's concept and the parade demonstration clearly indicated a foundation by which the Indian Army could employ her forces in synchronized, simultaneous and successive operations to achieve the synergistic affect necessary to fight and win on the modern battlefield.

As eluded to before, the Indian Army's continuing equipment modernization efforts do not mean the equipment can be successfully utilized to conduct the operational art of war. The training her soldiers and officers, particularly her officers, receive is one of the more significant factors for the effective utilization of the equipment and conduct of the operational art of war. The importance of training is

accurately stated by FM 100-5.

Only excellence in the art and science of war will enable the commander to generate and apply combat power successfully. Thus no peacetime duty is more important for leaders than studying their profession and preparing for war.⁷³

There are basically four categories of training that Indian Army officers can receive. The categories by institution are: pre-commission, regimental, technical, and advanced level institutions.⁷⁴ As evidenced by the statement below, curriculum of the institutions is driven by the Indian Army's past and is at the same time focused on the future.

A nucleus of officers training establishments existed in India before Independence, which were sufficient for a colonial Army and met the earlier requirements adequately. But these could neither satisfy the growing strength of the Indian Army, nor were they capable of fully meeting the challenges of modern war. On the existing infrastructure, therefore, major additions had to be made and many new institutions created. The Officers training establishments now, present a balance between the old and new; geared to the future and the challenges of a new technological era, yet maintaining a link with the past.⁷⁵

According to LTC Vijay Reddy, an Indian Army officer currently attending the Command and General Staff College (CGSC), the operational level of war is referred to by the Indian Army as the grand-tactical or pre-strategic level of war. This level of war is really not dealt with until an officer attends one of the advanced level institutions.⁷⁶ We will, however, in order to familiarize ourselves with the Indian Army education system, briefly review the other categories

of training before addressing in some detail the advanced level institutions.

The pre-commission training institutions are: the National Defence Academy (NDA), the Indian Military Academy (IMA), and the Officers Training Academy (OTA). While the last two institutions are service oriented, it is important to note that the NDA trains officers from all three services. The NDA is similar to our military academies with regard to the stringent selection criteria and general developmental focus on the mental, moral, and physical qualities required of an officer. The IMA trains soldiers for a permanent regular commission in the Indian Army. Selections are primarily from the NDA, civilian universities, and the Army ranks. The OTA accepts candidates from throughout the nation and imparts a short service commission (minimum of five years) to all graduates.⁷⁷

After graduating from one of the above schools, the officer is a university graduate and will be commissioned. Once the Indian Army officer is commissioned, he will be sent to a unit for a period of six months. He then proceeds on to a Young Officers Course for about five months. During the next fifteen years of service he will attend various courses related to some aspect of soldiering. This instruction will average about three months every alternate year.⁷⁸

There are a number of centralized army training institutions throughout India. The more prominent regimental level training institutions are the following: The Infantry School, The High Altitude Warfare School, The Counter Insurgency and Jungle Warfare School, The Armoured Corps School, and The School of Artillery.

The Institute of Armament Technology is an important technical training institution that conducts 28 separate courses of varying duration and specialty, such as tank technology and guided missile courses. This institution is a joint services establishment and its courses generally equate to a Master's degree program in engineering.⁷⁹

The final and most important category for our study are the advanced training institutions. Advanced training institutions consist of the following: College of Military Engineering, Defence Services Staff College, The College of Combat, The Institute of Defence Management, and the National Defence College. With the exception of the College of Military Engineering and College of Defence Management, it is within this category of training institutions that we begin to see training and education at the operational level of war.⁸⁰

The Defence Services Staff College is designed to

train officers, usually promotable LTC's, for higher command and staff functions and inter-service staff appointments. The college has a joint orientation and is organized to train all three services. 'Staff work in operations is stressed, but the Course covers a much wider canvas that includes economic and area studies and analysis of contemporary military campaigns.'⁸¹

The College of Combat was established because, 'by the late 1960's it was realised that the operational art of war, ... was becoming increasingly relevant to the Indian Army.'⁸² Within this college is the Higher Command Course. The course is forty weeks in duration and its curriculum 'includes the theory and application of concepts of strategy, higher direction of war, geopolitical studies and of operations at Corps level and below.'⁸³ This course has enjoyed good success as demonstrated by the British Army sending a delegation to India in order to gain insight prior to their own establishment of a similar course.⁸⁴

The National Defence College roughly equates with our War College.⁸⁵ It is the highest training institution in the Armed Forces made up of students from all three services, from the Civil Services and from friendly foreign countries. The course is 46 weeks in length and covers all facets of national security to include study of the superpowers, different

regions of the world and India's neighbors. It is interesting to note that in addition to a U.S. officer, two Soviet Colonels attended the course in 1988.**

A review of the Indian Army's officers training establishments brings out some important points. First, there is a clear commonality between their officer education system and our own. Second, there is a distinct emphasis on higher levels of intellectual development for selected Army officers. Third, a majority of their training institutions are very much joint oriented. Last, and most important for our study, there is a curriculum to support learning about the operational art of war, particularly in their advanced level institutions.

Learning about and understanding the operational art of war does not ensure that it can be conducted. The surest testing mechanism for placing into practice those things that an army learns during peacetime is a conflict or war with another nation. Although India has had several small conflicts over the last few years, she has not had a major war since 1971. We must therefore turn to the large-scale exercises she has recently conducted to see if, in fact, what she teaches can be exercised. The largest and most recent exercise we can review (only superficially since it is still classified) was an exercise conducted in 1989 called

'Brasstacks'.

It is said that with the exception of North Atlantic Treaty Organization (NATO) and Warsaw Pact exercises no other country has conducted an exercise bigger than 'Brasstacks'.⁸⁷ According to LTC Reddy, the major aims of the exercise were: to test mobilization plans, to test operational plans, to exercise command and staff at all levels, to test Command Control and Communications (C3), and to test the civilian infrastructure required to support a large-scale military effort.⁸⁸

There were four army corps along with a proportional amount of air and naval forces that exercised jointly for about six to eight weeks.⁸⁹ Unfortunately, exact descriptions, results, and lessons learned are still classified. However, the mere fact that such a large-scale operation, with the aims as we discussed earlier, would even be attempted is an indication of the Indian Army's ability to place into practice what its educational system teaches.

Making a judgement about the Indian Army's ability to conduct the operational art of war based on her current capability is more difficult and definitely more subjective than looking back over past historical events. It is clear, however, that she does have the forces, command and control structure, armament and

equipment, as well as the training system to give us a good indication that she can indeed conduct the operational art of war.

As we have seen, she has a large army that is organized with an ability to employ more than one corps-sized element. In fact, she already has corps-sized forces forward-deployed as discussed earlier. Her armament and equipment modernization programs, combined with her concept of force-multipliers, lends credibility to her capability of applying these forces in a synergistic manner.

Her education system, like ours, gives us a positive sign that she can synchronize simultaneous and successive operations. Additionally, conducting an exercise like "Brasstacks" and being involved in several small conflicts over the last several years lends credence to the ability to accomplish this criteria.

Although not proven, it would seem that in order for the Indian Army to conduct an exercise of "Brasstacks" magnitude it must have a fairly sophisticated logistics system. This idea, combined with her day-to-day logistical problems of wide-area troop deployment, certainly lends credibility to the Indian Army's logistical ability to support distributed operations.

The Indian Army's ability to conduct joint operations is primarily demonstrated through her educational system, which, as we have seen earlier, is concerned with joint training in almost all of her institutions. Additionally, we see evidence in exercise 'Brasstacks' of her ability to conduct joint operations.

V. Conclusions and Implications

The most significant phenomenon of the late 1980s was the interaction between defense policy and foreign policy. In 1987 Indian troops landed in Sri Lanka.... In November 1988 Indian troops landed in Maldives.... Contrary to an earlier approach in which defense and foreign policy were not always in tandem with each other, the 1990s will see far greater coordination.... A decade ago, such foreign policy initiatives would have been unthinkable, simply because India lacked the necessary military infrastructure.⁹⁰

Throughout this study we analyzed and evaluated the ability of the Indian Army to conduct the operational art of war. We reviewed selected theorists and Army doctrine to gain some insight on the operational art of war. The review helped us to establish and define the four criteria used throughout our analysis and evaluation. Admittedly there are other criteria that could also be used in a study of this nature, however, our criteria gave us a good focus for the assessment of the Indian Army from a historical and current perspective.

Our historical review showed us that the Indian

Army demonstrated a good ability to perform all but the third criteria (the logistical ability to support distributed operations). We judged that criteria to be neither proved nor disproved due to the speed and shortness of the 1971 campaign.

Our current perspective review showed us that the Indian Army had the potential of demonstrating a good ability to meet all our criteria. Her force structure, organization, equipment, training, exercises, and numerous recent conflicts (e.g., Maldives) all combine to show that even though she is a third world army, her potential to execute the operational art of war is significant.

Although the Indian Army is still a third world army, our review of the 1971 India-Pakistan war and her current capability gives us a clear indication that her army is prepared to accept the greater responsibilities of being the major power in the Indian Ocean Region. A good example of her ability to accept this new responsibility was seen in the late 1988 Maldives action in which the Indian Army (about 3000 soldiers) played a significant part.

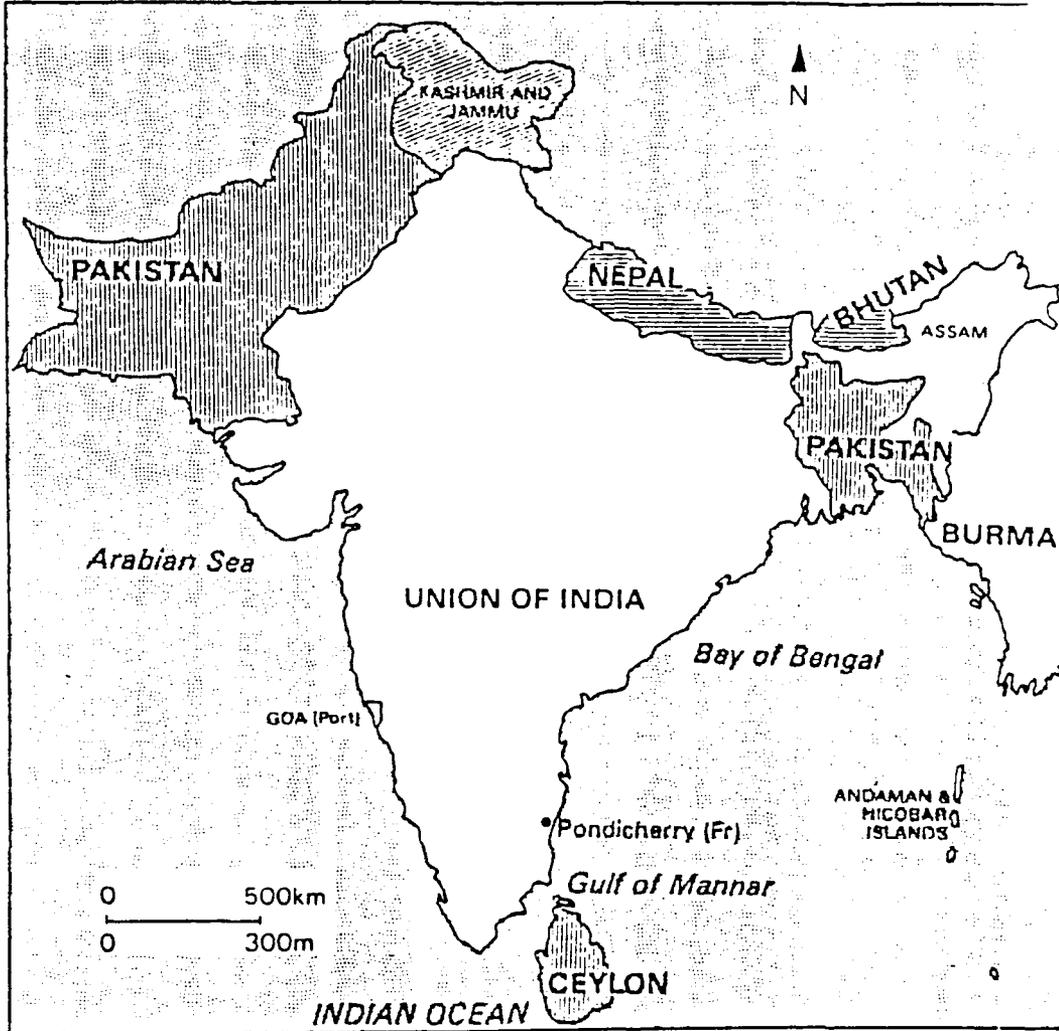
By its actions in Maldives, India has demonstrated its ability, through smooth inter-service coordination, to deploy some 580km away from its coast and to establish a strategic-military bridge to carry out its great power role.⁹¹

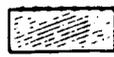
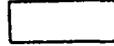
I do not mean to imply that the Indian Army is

without problems. Like any army we can be sure that she struggles with issues both unique to her and common to all armies. What is implied from our study, however, is that her army should be respected and understood in order to facilitate any future alliance, or conflict we might have with her.

No one can accurately predict future alliances or conflicts U.S. forces might have with India. However, India's military power will evolve in accordance with her position in the region and overall strategic aims. Based on this the likelihood of a future alliance or conflict seems reasonable. It is only prudent therefore to better understand her military prior to the alliance or conflict. Recognizing that the Indian Army has a significant capability to conduct the operational art of war is key to complete understanding.

Appendix A
(India and Pakistan in 1971 War) 92



 Disputed States
 Union of India

Appendix B
(Narrative of events)⁹³

--3 December. In the late afternoon the Pakistani Air Force went into action from its bases in West Pakistan against all Indian airfields within striking distance. This was an obvious attempt to emulate the highly successful Israeli air strike of June, 1967, against Egypt; but it won little success. At the same time, Pakistani reinforcements moved forward toward the common frontier and the cease-fire line in Kashmir.

--4 December. A Pakistani spokesman claimed that India had launched a major offensive in the West, which had everywhere been repulsed by Pakistani forces. In the East, Pakistani General Niazi was instructed to keep the guerrillas quiet until mid-February, when monsoon weather would cause flooding and greatly add to the Indian troops' difficulties. He could not expect any reinforcements, but every effort would be made to contrive a political settlement.

--5 December. The war was formalized by a statement by Prime Minister Indira Gandhi to the Indian Parliament and by an announcement to the Pakistani people by General Yahya Khan. On this day the Indian troops in the East started a two-pronged attack on Dacca (the East Pakistan capital) from the West, combined with an assault from the eastern side of the province. On the West Pakistan and Kashmir front, fighting was confined to probing operations, both sides claiming minor successes.

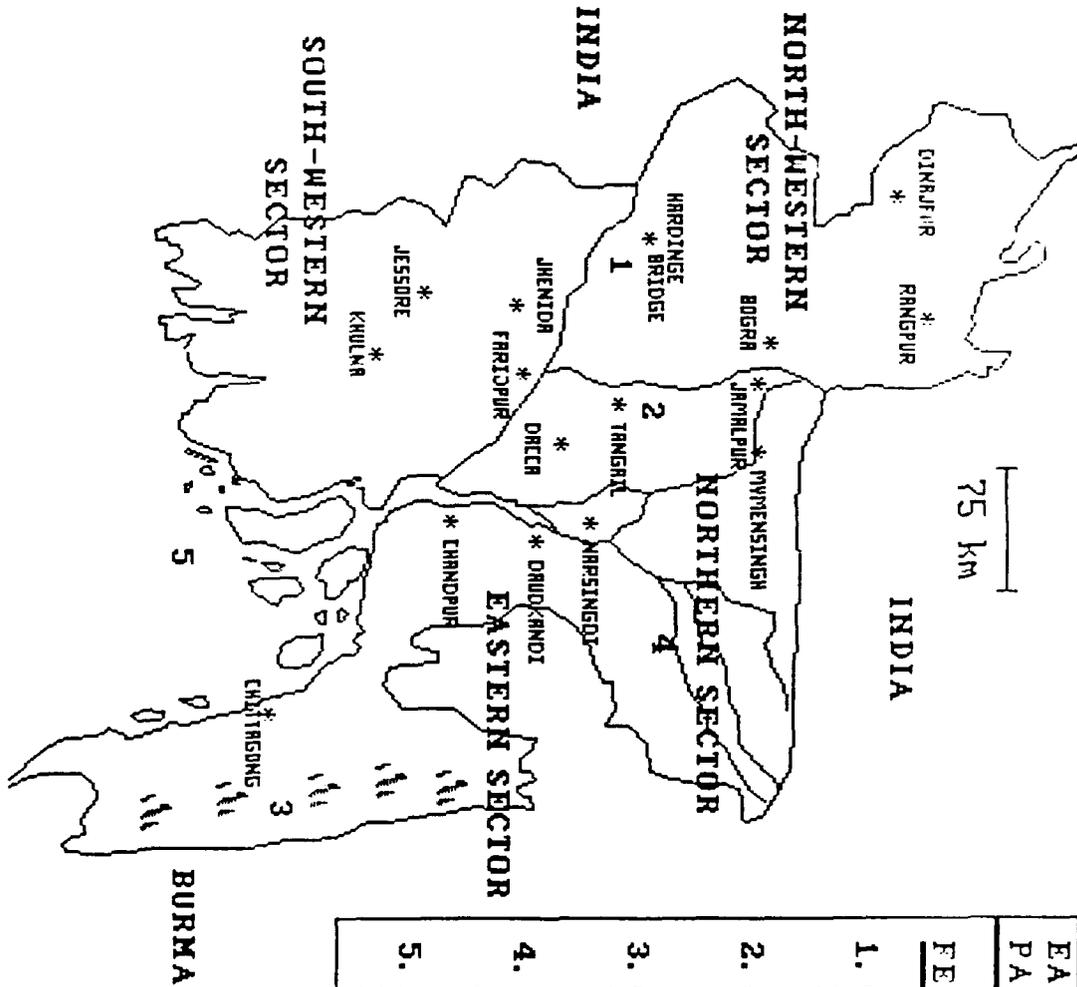
-- 6 December. India recognized the Republic of Bangladesh, and the Pakistani commander gave orders for his troops to withdraw toward Dacca. From this day it became clear that for Pakistan the war was lost.

--By 11 December, Jessore, the main Pakistani stronghold on the western side of East Pakistan, had been occupied by Indian troops. The Pakistani Army was in full retreat and its troops were surrendering in large numbers. The ring around Dacca was tightening. On the West Pakistan front; Indian forces were holding fast against Pakistani attacks designed to relieve pressure on the eastern front. Meanwhile, the Indian Navy was blockading Pakistani ports in both East and West, and in the East carrier-borne aircraft bombed Chittagong and other targets.

Appendix B cont'
(Narrative of events)

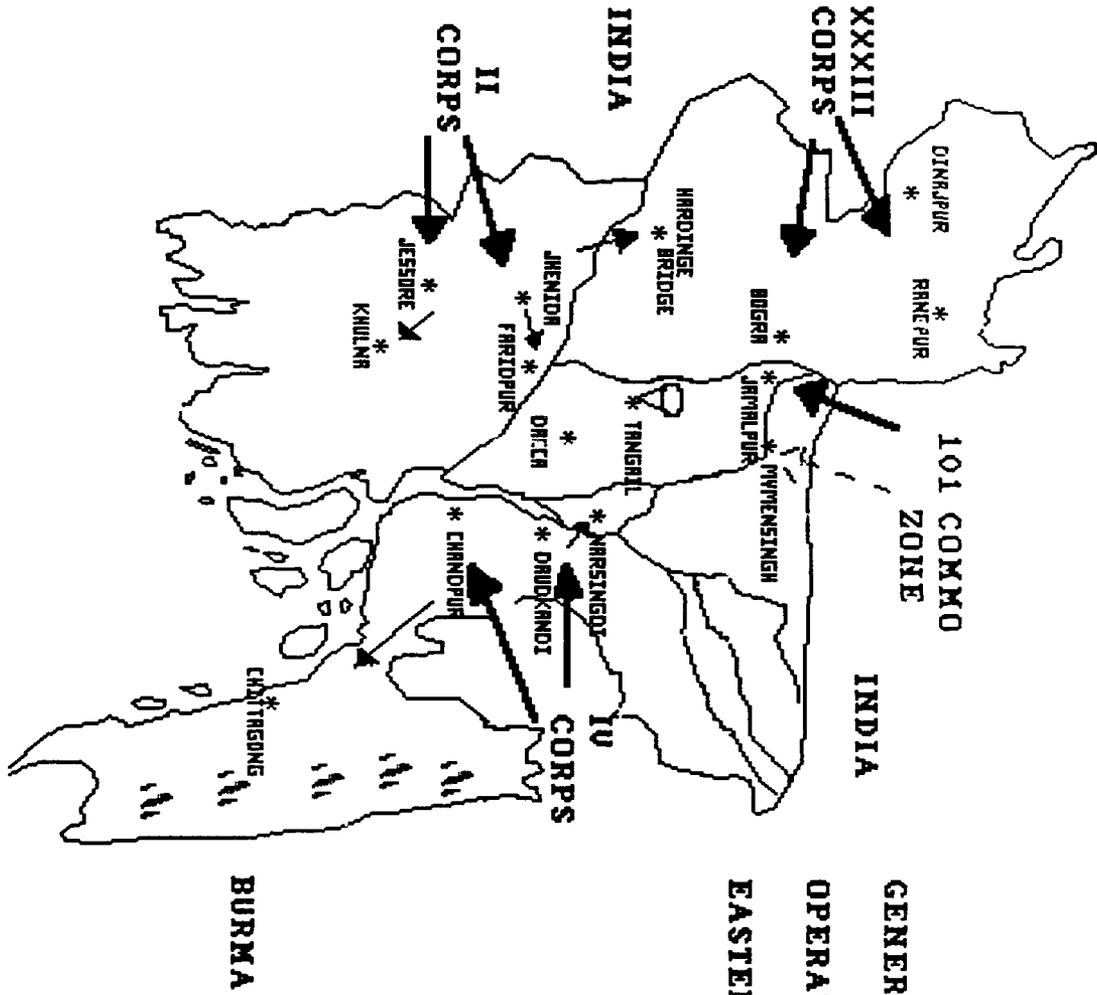
--16 December. Early in the morning at Dacca, General Niazi signed the terms of surrender and he and some 70,000 Pakistani troops became prisoners of war. With news of the surrender in the East the Pakistani forces in the West lost heart, the fighting virtually ceased and the stage was set for a general armistice. As is now well known, Mr. Bhutto succeeded General Yahya Khan as President of Pakistan and the Republic of Bangladesh became an established and recognized separate state under the now released prisoner, Awami League leader Sheikh Mujibur Rahman.

Appendix C
(Eastern Front) 94



EAST-PAKISTAN
<u>FEATURES</u>
1. GANGES RIVER
2. JAMUNA RIVER
3. CHITTAGONG HILLS
4. MEGHNE RIVER
5. BAY OF BENGAL

Appendix D
 (Eastern Front Lines of Operation) 95



GENERAL LINES OF
 OPERATION ON THE
 EASTERN FRONT.

Appendix E
(Indian Army Organization/Order of Battle) ⁹⁶

- 2 armored divisions, each with
 - 2 armored brigades
 - 1 self-propelled artillery brigade each with
 - 2 self-propelled field regiments, with
 - 1 medium regiment brigade

- 1 mechanized division, with
 - 3 mechanized brigades, each with
 - 5 mechanized battalions
 - 3 armored regiments
 - 1 artillery brigade

- 19 infantry divisions, each with
 - 2-5 infantry regiments
 - 1 artillery brigade

- 11 mountain divisions, each with
 - 3-4 mountain brigades
 - 1 artillery regiment

- 1 independent mountain brigade
- 5 independent armored brigades
- 7 independent infantry brigades
- 1 independent airborne/commando brigade
- 3 independent artillery brigades

- 4 engineer brigades

- 6 air defense brigades, each with
 - 29 anti-aircraft artillery regiments
 - 40 surface-to-air missile batteries

Army Aviation Corps

- 3 anti-tank helicopter squadrons
- 3 helicopter transport squadrons
- 4 liaison helicopter squadrons
- 7 utility helicopter squadrons, each with
 - 25 utility helicopter fleets
- 1 observation squadron
- 1 airborne/commando brigade, each with
 - 9 airborne/commando battalions

The Army Aviation Corps was established in 1986 with observation and communications helicopters transferred from the Air Force. The corps will assume the role of close air support from the Indian Air Force, with complete operational capability expected in 1990. All ground attack helicopters will be transferred from the Indian Air Force.

Appendix E cont'
(Indian Army Organization/Order of Battle)

EQUIPMENT

Ground Combat Vehicles

Tanks

- 1,700 Vijayanta (Great Britain Vickers Mk 1)
- 800 T-55 (USSR)
- 350 T-72 (USSR)
- 100 PT-76 light (USSR)

Armored Reconnaissance Vehicles
several BRDM-1

Armored Personnel Carriers

- 700 BMP-1 (USSR)
- a few Sarath (USSR BMP-2)
- 400 OT-62/OT-64 (Czechoslovakia)
- 50 BTR-60 (USSR)
- 75 ZSU-23-4 Shilka air defense vehicle (USSR)

Artillery

Guns

- 180-mm S-23 towed (USSR)
- 140 140-mm 5.5-in towed medium gun (Great Britain)
- 400 130-mm M-46 towed (USSR)
- 100 130-mm modified M-46 self-propelled (USSR)
- 1,000 106-mm recoilless rifle (US M40)
- 80 105-mm Abbot self-propelled (Great Britain FV433)
- 30 105-mm Mark 2 light field gun (India)
- 185 100-mm BS-3 towed (USSR)
- 800 88-mm 25-pounder towed (Great Britain)
- 87-mm M18 recoilless rifle (US)
- 84-mm M2 Carl Gustaf (Sweden)
- 20 76-mm M48 towed mountain gun (Yugoslavia)

Air Defense Guns

- 500 94-mm 3.7-in towed (Great Britain)
- 1,245 40-mm L60 towed (Sweden)
- 790 40-mm L70 towed (Sweden)
- 180 23-mm ZU-23 towed (USSR)

Appendix E cont'
(Indian Army Organization/Order of Battle)

Howitzers

- 203-mm M115 towed (US)
- 50 155-mm FH77B towed (Sweden)
- 152-mm D-20 gun/howitzer towed (USSR)
- 860 105-mm pack Model 56 towed (Italy)
- 75-mm (India)

Multiple Rocket Launchers

- 120 122-mm BM-21 (USSR)
- 122-mm (India)

Mortars

- 500 including
- 50 160-mm M-160 (USSR)
- 160-mm M1943** (USSR)
- 120-mm M1943** (USSR)
- 82-mm M1937** (USSR)
- 81-mm L16A (US)

Missiles

Anti-tank

- Milan (West Germany)
- AT-3 Sagger** (USSR)
- AT-4 Spigot** (USSR)
- SS11 (France)

Surface-to-air

- 168 including
- SA-6 Gainful** (USSR)
- SA-7 Grail** (USSR)
- SA-8 Gecko** (USSR)
- SA-9 Gaskin** (USSR)
- 18 Tigercat (Great Britain GWS 20 Seacat)

Air-to-Surface

- AS11 (France)

ARMY AVIATION

Utility/Communications

- 50 HAOP27 Krishak (India)

Helicopters

- 130 SA315B Cheetah observation (France SA316 Alouette)
- 180 SA316B Chetak observation (France SA316 Alouette)
- 12 Mi-25 Hind-F** attack (USSR Mi-24)
- 20 Mi-35 Hind attack (USSR Mi-24)

Appendix E cont'
(Indian Army Organization/Order of Battle)

DEPLOYMENT

The Indian Army is organized into 5 regional commands, with 10 corps:

Southern (HQ Poona), consisting of 1 corps with
5 infantry divisions
2 independent infantry brigades

Eastern (HQ Calcutta), consisting of 3 corps with
3 mountain divisions

Central (HQ Lucknow), consisting of 1 corps with
1 armored division
2 infantry divisions
2 independent infantry divisions
1 independent mountain division

Western (HQ Simla), consisting of 3 corps with
1 armored division
1 mechanized division
6 infantry divisions

Northern (HQ Srinagar), consisting of 2 corps with
6 infantry divisions
1 mountain division
1 independent infantry division
2 independent armored brigades
1 independent artillery brigade

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30. Ibid., p. 22.
31. Kyle, p. 40.
32. Ravi Rikhye, "Why India Won: The 14-Day War," Armed Forces Journal, (April, 1972), pp. 39-40.
33. Ravi Kaul, "The Indo-Pakistan War and the Changing Balance of Power in the Indian Ocean," U.S. Naval Institute Proceedings, (May, 1973) pp. 173-195. This source could not be located but

was endnoted in the Kyle document, p.44, used elsewhere in this study.

34. Willmott, p. 225.

35. Rikhye, p. 39.

36. Robert Jackson, South Asian Crisis, (New York: Praeger Publishers, 1975), p. 121.

37. Willmott, p. 223 and Barclay, p. 22.

38. Sumit Ganguly, The Origins of War in South Asia, (Boulder, CO: Westview Press, 1986), pp. 97-98.

39. Kyle, pp. 45-46.

40. Lachhman Singh, Victory in Bangladesh, (New Delhi, India: Natraj Publishers, 1981), pp. 31-49.

41. Jackson, p. 133.

42. Ganguly, p. 98.

43. Although not done in tabular form the information for this table comes from Jackson, pp. 133-134. It should also be noted that there are some discrepancies in the exact forces composition of the various sectors when compared to other references; however, the discrepancies are minor and Jackson seems the most reliable.

44. Singh Lachhman, p. 288-289.

45. Singh, Lachhman, p. 46.

46. Willmott, p. 228. It should be noted that Lachhman Singh would find exception in this statement as he states that, "The plans did not give any indication that the ultimate objective was Dacca," p. 48. While Singh may be right, ultimately the tasks given allowed Eastern Command to capture Dacca.

47. The specifics of the campaign plan are difficult to ascertain as various authors are contradictory regarding the exact campaign plan tasks. The synopsis presented in this paragraph represents a compilation and synthesis of several sources. Those sources, as shown in the bibliography and endnotes, are: Lachhman Singh, H.P. Willmott, Rodney S. Kyle, Sumit Ganguly, and Robert Jackson.

48. Maharaj K. Chopra, "Military Operations In Bangladesh," Military Review, (May, 1972), p. 60.

49. Ganguly, pp. 99-100.

- 50.LTC Vijay Reddy, personal interview at Leavenworth, KS., (April 13, 1991). LTC Reddy is an Indian Army Officer attending the Command and General Staff College (CGSC) in Ft. Leavenworth, Kansas.
- 51.Singh, Lachhman, pp. 289-290.
- 52.Barclay, pp. 25-26.
- 53.Singh, Lachhman, p. 252.
- 54.Barclay, p. 26.
- 55.Kyle, p. 51.
- 56.Singh, Lachhman, p. 40-41.
- 57.Clausewitz, p. 127.
- 58.Rajesh Kadian, India and Its Army, (New Delhi, India: Vision Books, 1990), p. 9.
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- 60.Kadian, p. 153.
- 61.Anthony H. Cordesman, "Western Strategic Interests and the India-Pakistan Military Balance," Armed Forces, (March, 1988), pp. 127-128.
- 62.Pushpindar Singh, "The Indian Army Today: Colour and Firepower," Asian Defence Journal, (April, 1987), pp. 10-11.
- 63.Gregory R. Copley, "The Indian Decade," Defense and Foreign Affairs, (April, 1990), pp. 42-43.
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- 66.Kadian, pp. 164-165.
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- 69.Sanjiv Prakash, "Indian Defense: A Conscious Attempt at Pragmatism," Defense and Foreign Affairs, (April, 1990), p. 43.

70. Computer Data Base, U.S. Naval Institute Press, Annapolis, MD. (May 1990).
71. Kadian, p. 149.
72. Ibid.
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75. Ibid.
76. Personal interview with LTC Reddy on or about 16 March, 1991.
77. Banerjee, p. 16.
78. Ibid.
79. Ibid.
80. Ibid.
81. Ibid., p. 22.
82. Ibid.
83. Ibid.
84. Ibid.
85. Reddy.
86. Banerjee, p. 23.
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88. Ibid.
89. Ibid.
90. Prakash, p. 15.
91. S. Bilveer, 'Operation Cactus: India's Prompt-Action in Maldives,' Asian Defence, (February, 1989), p. 33.
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93. Barclay, pp. 23-24.

94. Map of Pakistan, Maps on File, (New York: Facts on File Publications, 1984), p. 2.026. Also used PCGLOBE+. Computer Software, COMWELL Systems, 1989.

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