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**Personalities, Organizations, and Doctrine in the Indian Military**

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## Introduction

While scholars have scrutinized Indian arms acquisition<sup>1</sup> and civil-military relations,<sup>2</sup> India's conventional military doctrine has been comparatively neglected.<sup>3</sup> Notable exceptions have focused on changes to military doctrine following the overt nuclearization of South Asia in 1998.<sup>4</sup> This article takes a wider view, seeking to explain four periods in Indian Army doctrine: a period of defensive defense from 1947 to the mid-1960s, a drift toward maneuver warfare after 1971, an acceleration of mechanization in the 1980s, and an emphasis on rapid, limited offensive strikes beginning in 2002.

The explanation for doctrinal thought in India offered here has two linked components. India's unique civil-military relations resulted in creation of distinct spheres of civilian and military authority, with *minimal civilian interference* in those matters adjudged to be in the latter sphere. Without civilian intervention, the Indian Army has engaged in behavior predicted by *organizational theory*.<sup>5</sup>

Indian Army choices have, above all else, been characterized by "satisficing," attempting to minimally change Indian doctrine while still being "good enough" to avoid future defeat. Indian doctrine has been characterized more by inertia than change, as a result. When change has taken place, it has always been in one direction: toward maximizing the initiative available to future Indian Army leaders to undertake offensive action. This offensive tendency is entirely consistent with a large corpus of organization theory. Offensive doctrines preserve the initiative of the military, deny initiative to the adversary, require more resources, and their complexity tends to dissuade non-military interference.<sup>6</sup>

This article proceeds in three parts. First, I define military doctrine and describe how we can distinguish doctrinal change from doctrinal persistence. Second, I propose a theory of doctrinal change and explain why it is especially likely to apply in the Indian context. Third, and finally, I trace doctrinal change in the Indian Army since 1947.

### **What is Doctrinal Change?**

Doctrine is a “theory of victory,” an institutionally approved set of ideas about how—and which types—of military force can best be employed to achieve national aims.<sup>7</sup> If strategy is concerned with the employment of limited means to achieve national goals in the context of at least one other calculating actor, then doctrine is focused primarily on “how” such means can be best employed. For example, is offense the best form of defense, or does defense have inherent advantages against an aggressor? Different militaries at different times and places have had distinct answers to such fundamental questions.

Doctrine can exist at all levels of warfare, from the strategic to operational to tactical. This article focuses on major doctrinal change. Doctrinal tinkering is commonplace, especially at the tactical and operational levels, but major doctrinal change that requires new resources, new types of equipment, and altered structures is harder, rarer, and more consequential.<sup>8</sup>

This article focuses on the Indian Army because it is the largest and most influential Indian military service. The Indian Army has historically been the largest and best funded service, with a budget today that is nearly double of its closest funding competitor, the Air Force.<sup>9</sup> Additionally, the Indian Army has had the primary role in every military crisis so far involving either of India’s principal military rivals, Pakistan and China. The Indian Army remains central to Indian strategic

planning, and hence explanations for changes in Army doctrine have large implications for evaluating when and how Indian national security policy adapts to new circumstances.

### **Political Apathy and Military Drift**

As Anit Mukherjee has detailed, Indian civil-military relations since the 1960s have been characterized by a seemingly paradoxical combination of “strong bureaucratic control with military autonomy.” While civilians engage in smothering oversight of budgetary matters, including force size, pay, and acquisitions, they largely cede “purely military matters” to the uniformed services, with “very little civilian guidance” on issues pertaining to “doctrine, training, force structures, and military education.”<sup>10</sup>

“This arrangement,” Srinath Raghavan explains, emerged from a “particular understanding” of the disastrous outcome of India’s 1962 war with China, namely that “the [Indian] defeat was the result of extensive civilian interference dating back to 1959.”<sup>11</sup> Subject to withering criticism after 1962, politicians sought not to intrude in military matters and the Indian military—as organization theory would predict—was eager to have that autonomy. While the military in neighboring Pakistan was developing tutelary norms to interfere in civilian politics, the civilian politicians in India were embracing non-interventionist norms in spheres of military conflict where direct budgetary consequence were minimal.<sup>12</sup>

Indian civilians have exerted firm control on defense spending, typically keeping expenditures between 2 and 4 percent of GDP (see Figure 1). This means India today spends less on its military as a share of its overall economy than many other regional and great powers,

including Colombia, Iran, Israel, Pakistan, Russia, Saudi Arabia, South Korea, Singapore, and the United States, but more than China, France, Germany, Japan, and the United Kingdom.<sup>13</sup>

[INSERT FIGURE 1 ABOUT HERE]

Funding constraints were more severe before the acceleration in India's economic growth rates in the late 1980s and early 1990s, and such limits were compounded during the first four decades of Indian independence by current account pressures, which led to restrictions on arms imports that would require scarce hard currency. These economic constraints substantially limited the doctrinal innovation permissible within the Indian Army, since army leaders may have desired more offensive, maneuver-oriented doctrines but could not acquire the equipment to implement them.<sup>14</sup> Certain types of doctrinal innovation, such as an emphasis on defense, might have permitted the Indian Army to do more with less, but would have been contrary to the impulses highlighted by organizational theory that favor more elaborate and expensive offensive strategies.

In the absence of abundant resources (and frequently even with them), major doctrinal revisions require time: to acquire new equipment, to identify and groom personnel more suitable to the revised doctrine, to change instructional curricula and major exercises, and to reorganize military formations. In the presence of a continuous vision of doctrinal change, funding constraints become less serious since acquisitions can be spread over many years. The Indian system does not grant its senior-most officers that time, disrupting continuity of vision, impairing doctrinal change, along with acquisitions and organizational reforms to implement such change. Command tenure is short at the brigade, division, and corps-level,<sup>15</sup> but the problem is especially consequential at the highest level: the Army chief. Since 1949, when General K. M. Cariappa became the first Indian (rather than British) Commander-in-Chief of the Indian Army, to the present, the average

tenure of the highest-ranking officer in the Indian Army has been 2.6 years.<sup>16</sup> In comparison, U.S. Chiefs of Staff of the Army served on average 3.5 years, while their counterparts in Russia (and formerly the Soviet Union) served on average 4 years.<sup>17</sup> If anything, these aggregate figures understate the problem. For example, only four out of twenty-six Indian Army chiefs (Cariappa, Thimayya, Chaudhuri, and Manekshaw) have served longer than the U.S. average tenure of 3.5 years, whereas thirteen of the twenty post-1949 U.S. chiefs of staff of the army have held that position for nearly four years or more. Extensions in the post are exceedingly rare in India, so Indian Army chiefs—and those seeking to wait them out—can forecast the duration of their tenure with precision.

While nearly all professional militaries observe term limitations on their senior leaders, India's is notable for the comparatively short standard tenure of three years, or less if the retirement age of 62 is reached, as well as the rarity of extensions. Following independence, Indian civilian leaders consciously sought to limit military officers' tenure "to avert the development of any Bonapartist tendencies of warlordism among the senior officers," former senior Indian defense official K. Subrahmanyam explained.<sup>18</sup> These tenure limitations were all the more noticeable given the rapid promotions of general officers in the aftermath of decolonization, which meant the topmost Indian Army officers frequently retired many years prior to mandatory retirement age.<sup>19</sup>

Brief tenure is not the only unique feature of Indian Army leadership. It has combined with a strong aversion, especially after Nehru, to political leaders selecting their favorites for Army Chief among the qualified list of lieutenant generals, and instead led to a system that favors the more senior candidate in terms of time in rank. This seniority-focused system generally has impeded either political or military leaders from ensuring a continuous reform program over time. New Army chiefs come and go, largely irrespective of their stances on doctrinal debates of the

day. When civilians have intervened, they appear to have done so almost exclusively based on concerns over whether a prospective army chief will accept civilian primacy, rather than over that candidate's views on defense strategy.<sup>20</sup> The result is that a reformer may be followed by a more conservative leader, or conceivably a reactionary one.

Given the predictability of the seniority-based system, Army chiefs have some ability to look into the ranks of more junior general officers and identify potential candidates for chief in advance, and there is some evidence that they attempt to clear a path for favored candidates. Even this, though, typically permits grooming future Army chiefs one, two, or three chiefs removed, and is hardly a recipe for continuity of reform. An Army chief can attempt to create a path for high-achieving brigadiers or major generals to become chief many years hence. In contrast, he frequently has little to no say in determining which one of the Army's most-senior lieutenant generals will replace him. As a consequence, any Army chief knows efforts to alter the immediate line of succession may be nullified. It is alleged, for example, that Gen. V.K. Singh attempted to prevent the promotion of then-Lt. Gen. Dalbir Singh Suhag, which would have prevented Dalbir Singh's eventual elevation to Army chief. Immediately upon V.K. Singh's retirement, however, that attempt was nullified by the new Army chief, Gen. Bikram Singh in 2012, which ensured Dalbir Singh's promotion to Army chief in 2014. Though reports of attempts to alter the line of succession are rare, those publicized accounts allege motives of ethnic favoritism, regimental loyalty, or other personal attachment, not doctrinal disagreement.<sup>21</sup> Nothing in the public record suggests it is either easy or common for Army chiefs to select successors based on a commitment to doctrinal reform.

Theories of doctrinal innovation emphasize the role of individual military reformers in affecting change. Barry Posen explains that civilians themselves may comprehend the inadequacy

of existing defense planning, but “do not necessarily have the expertise to directly change military doctrine in order to bring it into conformity with an overall grand strategic design.” Instead, he argues, “They must rely upon mavericks within military organizations for the details of doctrinal and operational innovation.”<sup>22</sup> Stephen Rosen, in contrast, minimizes the influence of civilian intervention, and instead emphasizes the role of senior military leaders that formulate a strategy for innovation, and create new pathways to promotion that favor young officers that support such innovation.<sup>23</sup> Both theories imply that the lack of continuity created by short leader tenure and apolitical promotion to chief will impede military innovation.

Collectively, this suggests that major change should be rare in the Indian military and, absent effective external oversight, such change should seek to preserve organizational prerogatives by maximizing autonomy and minimizing uncertainty, favoring offensive over defensive doctrines. This pattern of behavior is recurrent in the evolution of Indian Army doctrine since independence.

## **Indian Army Doctrine since 1947**

### *Independence to the China War*

India inherited British Army doctrine, and kept that inheritance long after the British departed. Two aspects of that inheritance are especially important to understanding the trajectory of Indian doctrine. First, the British Indian Army was always less mechanized than the British Army core, and the British Army overall was less mechanized than its European peers because of its extensive India obligations.<sup>24</sup> British Indian Army officers nevertheless had a comfortable familiarity with mechanized warfare doctrine even prior to World War II, and the curriculum at

the Indian Staff College in Quetta was coordinated with that of its British counterpart in Camberley. Even so, the British Indian Army did not require tank regiments to prevail against its pre-World War II opponents on the frontier, and mechanization was not a priority.<sup>25</sup> As Figure 2 demonstrates, it did not become a priority for the post-independence Indian Army until the 1970s and 1980s.<sup>26</sup> In the initial decade after independence it was still an “infantry-oriented” force “lacking the balance of supporting arms..., equipped with World War II weaponry,” recalls Maj. Gen. Sukhwant Singh.<sup>27</sup>

[INSERT FIGURE 2 ABOUT HERE]

The second doctrinal inheritance prescribed the best way to defend India’s frontiers. Prevailing British military thought at the time of independence advocated defense-in-depth prior to launching a counterattack.<sup>28</sup> While British planning prior to 1938 had catered for the possibility of major offensive operations against Afghanistan, subsequent plans on British India’s western frontier assumed an Afghan initiated attack met by mainly defensive Indian responses along with possible “small localized counteractions.”<sup>29</sup>

India’s 1947-1948 war with Pakistan, in which Pakistan seized a portion of the former princely state of Jammu and Kashmir, accentuated the importance of a policy of forward defense, lest Pakistan attempt future limited aims operations to seize chunks of Indian territory. After independence and the 1947-1948 India-Pakistan war, Indian Army contingency planning into the early 1960s expected a Pakistani attack that would trigger a large Indian counterattack towards Lahore and Sialkot, which would lead to a ceasefire at Pakistan’s request. India did not plan to seize or hold substantial portions of adversary territory.<sup>30</sup> As late as 1954, major Indian Army

exercises occurred with British assistance, and posited substantial withdrawal prior to counter-offensive.<sup>31</sup>

Nehru intervened extensively in military affairs. He sharply limited military spending based on his belief in the necessity of using those funds for developmental tasks combined with his assessment that Pakistan was the principal threat to India, and one that could be managed with modest defense funding.<sup>32</sup> In this constrained funding environment, the Indian Army proceeded without serious strategic introspection, let alone major doctrinal change. It already had a doctrine well suited to scarce funds: defense-in-depth. Even with such an undemanding doctrine, Major K. C. Praval would later write of this period, “Behind the facade of peacetime ceremonials and nicely kept messes..., there was a certain hollowness.”<sup>33</sup>

The prime minister stressed the Army should focus on Pakistan and that “no military preparation against China was necessary.”<sup>34</sup> Nehru’s thinking changed following clashes along the Sino-Indian border in October 1959.<sup>35</sup> Prior to that year, the limited numbers of Indian troops in the east were present mostly to deal with insurgency.<sup>36</sup> Subsequently, India began to modestly increase forces in the area, though poor logistical infrastructure and scarce transport aircraft for resupply placed severe limits on any troop buildup. The numbers of troops, the quality of their provisioning, and the infrastructure to sustain them could have been improved with additional funding, but military requests for increased resources were modest and even these were largely not granted given a serious current account crisis that made arms imports painful.<sup>37</sup> In the end, army planning proceeded according to defense-in-depth. As the postwar Henderson Brooks report explained, there was to be a “three-tier system of defense.... The forward most tier consisted of border outposts... [which were] not meant to fight, but to delay and fall back to firm bases in the rear. In the middle tier were the vulnerable points in which the border outposts were dependent

and to which they would fall back, when attacked. These vulnerable points were sufficiently in depth so as to increase the logistic problems of the Chinese. The last tier was the ‘Defense Line’, where the main the main battle would be fought and from where offensive action would be launched....”<sup>38</sup>

Defense-in-depth, however, could not provide a military answer to limited Chinese encroachments. Given a political imperative not to cede disputed territory to China, but a military reality that resources were inadequate for such a forward policy, there was a profound mismatch between military means and political goals. Focused on the China threat, retired Army chief Gen. K. S. Thimayya complained publicly in June 1962 that the “present strength of the army and air forces of India are even below the ‘minimal insurance’ we can give to our people.”<sup>39</sup> Perhaps doctrinal innovation could have overcome this under-resourcing, but none was attempted. Maj. Gen. D. K. Palit suggests that the Army could have attempted to more closely involve local tribes in the defense and resupply of the area, but instead it acted as “an imperial force,” a stance unsurprising given its inherited identity.<sup>40</sup>

Absent some novel solution, political pressure appears to have led the Indian Army to position troops forward in an attempt to prevent easy Chinese encroachment, but oftentimes creating Indian positions indefensible with the limited manpower available, reliant on vulnerable lines of supply, and with inadequate plans for retreat if faced with superior enemy forces. This was not doctrinal change, but rather ignoring doctrine and hoping for the best.<sup>41</sup> Given superior forces, when China did decide to act, the results were catastrophic for India. “The puny forward policy posts stood no chance and were rapidly wiped out,” Raghavan recounts.<sup>42</sup> The result of a strategy that had insufficient means according to established doctrine was a stunning defeat by the Indian military in a war with China in the fall of 1962.

*From the China War to the Liberation of Bangladesh*

The China defeat did not spur serious doctrinal change, but did lead to substantially more resources. The defense budget in 1963 was more than twice as large as the budget in 1960 as a percentage of Indian GDP, while the Army budget was nearly two-and-half times as large in real terms as it had been prior to the war.<sup>43</sup> The Army itself grew in size with 50 percent more personnel, going from a sanctioned size of 550,000 to 825,000 soldiers, with much of the increase coming from the raising of ten mountain divisions equipped with more vehicles and lighter weapons than divisions tasked with fighting on the plains.<sup>44</sup> The defeat also generated the civil-military arrangement discussed earlier whereby civilian politicians avoided operational interference in defense matters, even as they continued to micromanage budgetary choices.

Army thinking in this time was largely “more of the same,” where more resources were allocated to undertake defense plans largely consistent with pre-1962 doctrine. The continuity of doctrine is evident in India’s plans on the western front against Pakistan. Here, the goal was “a holding action in Kashmir,” followed by counterattack on more favorable terrain in southern Kashmir or Punjab to relieve pressure on Indian defenders, with the Indian counteroffensive into Pakistani Punjab designed to preempt any Pakistani horizontal escalation into Indian Punjab.<sup>45</sup> India’s counterattacking force had certainly grown larger, and more mechanized, than had been the thinking in the late 1940s or 1950s, but the core of the prior doctrine—absorbing an enemy attack and then counterattacking on favorable terrain—remained.

In the fall of 1965, after a failed attempt to stir up an insurrection in Kashmir, Pakistan launched an armored thrust toward the Indian town of Akhnur, seeking to sever a line of communication between the city of Jammu and the northwestern portions of the Indian state of

Jammu and Kashmir. India counterattacked toward Sialkot in Pakistan Punjab and the large Pakistani city of Lahore near the border. In the Lahore sector the Indian advance was surprisingly rapid until Pakistan collapsed bridges across the canal systems ubiquitous in the area. The combined barrier and water obstacle effectively halted the Indian advance.<sup>46</sup> The Indian attack toward Sialkot was slow going, resulting in two weeks of inconclusive armor battles. For its part, Pakistan launched a counterattack southeast of Lahore that was thwarted by well-prepared Indian defensive locations surrounded by intentionally flooded terrain.<sup>47</sup>

The seeming lesson of 1965 was the strong advantage of defense, reinforcing India's doctrinal instincts, combined with the necessity of armor forces for counterattack. If anything, the success of the Pakistan in defending Lahore along the Ichhogil Canal east of the city led both countries to invest even more in fortifying such obstacles. In India, the defenses are sometimes referred to as DCB for ditch-cum-bundh, while in Pakistan the array of obstacles is referred to as the canal defenses line. Given the vast stretches of irrigated agriculture along the Indo-Pakistani border, this set of obstacles "cannot be outflanked because it is a continuous stretch of over 2,000 kilometers from Chammb in J&K to the middle of Rajasthan," assess Lt. Gen. (ret'd.) V. K. Sood and Pravin Sawhney.<sup>48</sup>

After 1965, India began to establish its own ditch-cum-bundh line a few kilometers behind its western border, with the paramilitary Border Security Force working with military personnel to hold the intervening territory while the bulk of the force operated behind the "linear defense." India would absorb an attack and then counterattack.<sup>49</sup> Brigadier S. K. Sinha explained in 1970, "Defense does not merely mean waiting to be attacked at the enemy's point of own choosing. It requires the defender to retaliate so that through counter-offensive the aggressor may be frustrated and defeated."<sup>50</sup>

Militaries are able to learn from direct experience, even those suffering from the bounded rationality typical of organizations. India's comparative success in 1965, especially compared to its failures in 1962, suggested that no serious rethinking was required. Initiatives in favor of mounting counterattacks to relieve defensive positions gained currency, creating a permissive environment for even more offensively oriented lessons following the success of 1971 in the east.

The war over East Pakistan, which resulted in the creation of Bangladesh, led India to believe a lightning campaign, such as that which defeated Pakistani forces in the east, could be launched in the west.<sup>51</sup> This lesson was learnt despite the overwhelming superiority of Indian forces in the east, where they likely enjoyed a 2-to-1 advantage over badly outnumbered Pakistani forces. Even this likely understates India's numeric advantage given the existence of between 50,000 and 100,000 Bangladeshi guerilla forces. Pakistan's task in the east was complicated further by the absence of similar defensive obstacles such as the canal system in the west, as well as an operational plan that sought to deny India any substantial territorial incursions out of a fear that India could use even a small portion of liberated terrain to announce the creation of a newly independent state.<sup>52</sup>

In the west, India's progress was much slower. Near Sialkot, Indian forces advanced at an approximate rate of 1 kilometer per day. Even in the lightly defended desert areas further south, India's advance was only about 4 kilometers per day, and appeared to slow considerably toward the end of the war. Some of this slow progress is certainly attributable to an Indian political-military decision that the east was the primary theater, and the goal of Indian military offensives in the west were merely to prevent any Pakistani gains that could obviate Indian gains in the east.<sup>53</sup> Much of the slow advance, however, had to do with a more symmetric conventional balance of forces combined with the defensive advantages afforded by Pakistan's extensive canal system and

the difficulties of maintaining offensive momentum in the desert areas along the southern Indo-Pakistani borders.

Indian Army leaders also came to believe that relying on the ditch-cum-bundh line in certain sectors in 1971 permitted Pakistani aggressors to secure lodgments on Indian territory that were difficult to remove, resulting in limited—but still unacceptable—territorial gains that Pakistan could use at the negotiating table.<sup>54</sup> Maj Gen Sukhwant Singh, deputy director of military operations during the 1971 war, argued the DCB system “proved its worth” in the war, but Army chiefs beginning with G. G. Bewoor, were unnecessarily fearful the DCB would create a “Maginot line mentality” and a “defensive outlook,” and pushed Army doctrine in a more offensive direction.<sup>55</sup>

#### *Mechanization after 1971*

The Indian Army was energized by the success of 1971, and sought to develop the capability to recreate it in the more difficult conditions of India’s western border. There warfare remained “slow and static due to the inability” of the Indian Army to “master the technique of mobile warfare,” lamented Lt. Gen. (retd.) B. N. Sarkar.<sup>56</sup> If doctrine prior to 1971 was characterized by defense supplemented by counterattack, after 1971 doctrine shifted toward maneuver warfare. In 1973, K. K. Hazari argued in his National Defense College dissertation that the defenses in Punjab necessitated shifting the main thrust of any future Indian attack further south “to the Rajasthan sector” and that the “offensive component... should consist of three Army corps—two for the main offensive and one for the subsidiary one.”<sup>57</sup> Indian military leaders apparently sought the ability to defeat Pakistan before superpower intervention, the CIA subsequently concluded.<sup>58</sup> By 1975, a study group under then-Lt. Gen. Krishna Rao examined the

steps needed to raise another strike corps on the west to develop “adequate counteroffensive capability.”<sup>59</sup> Rao would subsequently write, “The main point that came out in [the 1971] war was that Armored Formations should be employed concentrated in order to get the best results.... It was necessary that infantry divisions had their own integral Armor, so that Armored Formations are not depleted.”<sup>60</sup> In Rao’s group was an ambitious infantry officer, K. Sundarji, interested in mechanizing that service arm to operate more effectively with armor units. All of this Indian rethinking was occurring during a period of global “doctrinal effervescence,” in Col (retd.) Ali Ahmed’s phrase, as the United States and the Soviet Union also sought to create new, more offensively capable Army structures.<sup>61</sup>

The steady mechanization of the Indian Army, which began in 1969 with orders for armored personnel carriers (see Table 1), continued even more rapidly following the war. In 1979 the Army formally raised a Mechanized Infantry Regiment—that is, an administrative entity responsible for recruitment, training, and equipping of battalions.<sup>62</sup> Krishna Rao became Army chief in 1981, and sought to fulfill Hazari’s vision of three strike corps, leaving India one additional corps to outmatch Pakistan’s two strike corps.<sup>63</sup> Rao had a unique opportunity to recommend a successor, given civilian concerns about the seniormost officer in line for chief, Lt. Gen. S.K. Sinha.<sup>64</sup> Rao recommended Arun Vaidya, an armored officer, who in turn was succeeded by Sundarji, an infantry officer but one deeply immersed in armor operations given his interest in mechanized infantry. Sundarji was one of two Indian Army infantry officers ever to have commanded an armored division. Sundarji had K.K. Hazari as his vice chief, who had written on the importance of three strike corps just over a decade earlier.

[INSERT TABLE 1 ABOUT HERE]

Sundarji proceeded even faster along the mechanization path. He sought deep and rapid offensive operations, 100 kilometers in 72 hours. Privately, his corps commanders doubted that it was possible to obtain that rate of penetration, let alone sustain it.<sup>65</sup> But Sundarji was able to push for this offensive, strike corps-oriented vision because of the unique continuity afforded him by the generally shared doctrinal vision since Rao became chief in 1981. While Sundarji was perhaps the boldest thinker, and certainly most public face, in this lineage, he was in fact in the middle of a string of chiefs from the armor or mechanized infantry all amenable to this trajectory for the Army.

Sundarji not only had institutional inertia behind his modernization effort, but faced a somewhat more credible threat along the western front than his predecessors had since 1971. The United States restarted aid to Pakistan following the Soviet invasion of Afghanistan in 1979, as well as arms sales with bearing on the Army balance, such as TOW anti-tank missiles, M-113 armored personnel carriers, as well as modest numbers of Cobra helicopters. Even so, Sundarji sought—and largely received—the capabilities needed to defeat Pakistan in a war, not just capabilities needed to defend India against Pakistan. The Indian Army was “fully capable” of “defending the country from external aggression,” the CIA assessed in 1985, the year prior to Sundarji’s ascension to chief, and the U.S. spy agency believed the Indian Army’s advantage would only grow over the following five years.<sup>66</sup>

The Army benefited from Sundarji’s effective advocacy.<sup>67</sup> Sundarji had a much stronger working relationship with his civilian superiors, the Minister of State for Defense Arun Singh and Prime Minister Rajiv Gandhi (who personally held the Minister of Defense portfolio), than was typical—arguably “at no other time... has the Indian military and political leadership been so closely associated,” argued a contemporaneous account.<sup>68</sup> Over his career, Sundarji had come to

believe that armor and mechanized infantry—mass combined with speed—were what was needed to create an effective army and he convinced Indian civilians to fund defense expenditures at their highest rate as a percentage of the Indian economy in India’s history.<sup>69</sup> Armored officers had finally tilted Indian Army doctrine away from infantry forces. Ironically, it occurred at exactly the time strategic trends substantially diminished maneuver warfare’s importance.

### *The Urgent Overwhelms the Merely Important*

Morton H. Halperin and colleagues write, “an organization accepts new functions only if it believes that to refuse to do so would jeopardize its position with senior officials or if it believes that new function will bring in more funds and give the organization greater scope to pursue its ‘own’ activities.”<sup>70</sup> The Indian Army found itself in a position where it assessed it could not refuse new counterinsurgency missions following the emergence of widespread internal violence first in Punjab beginning in 1984 and more significantly in Kashmir beginning in 1989. K. Sundarji, following his retirement as chief, would say publicly that if the Indian Army did not involve itself in counterinsurgency, it would be forced to content itself with the elaborate changing of the guard ceremony at Rashtrapati Bhavan (the presidential palace).<sup>71</sup> Civilian demand for Army involvement would not permit Army shirking of this task.

By 1993, the Indian Army had two of its ten corps and seven of its thirty infantry divisions based in Kashmir, with a large portion of the approximately 150,000 troops engaged in counterinsurgency missions.<sup>72</sup> Equally important, Kashmir became the theater for ambitious officers to demonstrate command and combat experience that could propel them more rapidly up

the ranks and increase their chances of reaching general officer status. By 1998, 44 percent of Indian Army infantry battalions were involved in counterinsurgency.<sup>73</sup>

The new emphasis diminished what had been slightly more than a decade of sustained doctrinal effort to transform the Indian Army into an offensive maneuver-oriented force. This pause in thought occurred simultaneous with the increasingly overt nuclearization of South Asia, with both India and Pakistan moving from a recessed nuclear capability that could be assembled over time in a prolonged crisis to readier arsenals with nuclear weapons that had been tested on delivery vehicles.<sup>74</sup> The focus on counterinsurgency may have prevented a reconsideration of doctrine at precisely the time when such a reconsideration was needed. The likely *casus belli* had changed from Pakistani conventional military aggression to Pakistani proxy violence, and the danger resulting from India using its large maneuver formations to execute offensive operations had increased.

The strategic shift that militated against deep penetration maneuver warfare was already evident when Sundarji became chief in 1986. Sundarji himself had overseen Operation Blue Star to evict Sikh radicals from the Golden Temple in Amritsar, and Sundarji would oversee the deployment of the Indian Peacekeeping Force (IPKF) in Sri Lanka, which would eventually fail in its attempt to end the civil war there. Furthermore, India's closest strategic partner, the Soviet Union, had been bogged down in a costly intervention in Afghanistan since 1979, facing insurgents supported by India's longest foe, Pakistan. An intervention force of 115,000 Soviet troops struggled to maintain security in a country with a population of 11 million. The risk that India's disaffected minorities might engage in insurgency sufficiently large to require Indian Army intervention did not require prophecy, but also did not appear to dissuade Sundarji and the Indian Army from emphasizing mechanization in the 1980s.

If the trend lines were visible regarding the enhanced dangers of insurgency, then the other strategic revolution—the growing prominence of nuclear deterrence in South Asia—was unmistakable. Sundarji made the study of nuclear deterrence a personal intellectual focus, writing on the topic at some length by the early 1980s.<sup>75</sup> By the early 1990s, if not earlier, Sundarji appears to have believed, “Pakistan’s possession of nuclear weapons makes unexploitable a large Indian conventional edge,” even as Indian Army acquisitions that he had set in motion appear to have sought to create just such an edge.<sup>76</sup> Ashley Tellis, after seeing Sundarji’s “Army Plan 2000,” the perspective planning document generated during his tenure as chief, summarized that it sought “jugular options aimed at decisively defeating the enemy” and “deep armored offensives—in gigantic enveloping maneuvers,” all with “a determination that the next war in the subcontinent should be the last.”<sup>77</sup> Sundarji’s plans for the Army—which were reflected in massive acquisitions during his tenure—and Sundarji’s nearly simultaneous assessment of the implications of nuclear deterrence are starkly at odds. While Sundarji “foresaw the coming nuclear age,” Sunil Dasgupta writes, “he still chose to develop armored strike capability that would be useless.”<sup>78</sup> Sundarji’s predecessor, Krishna Rao, similarly acknowledged the importance of nuclearization in his memoirs, but merely stressed that armored and mechanized forces were better able to withstand nuclear weapons effects.<sup>79</sup>

This failure to confront the nuclear revolution and instead persist with a doctrine initially conceived in the 1970s is perhaps the most telling evidence of satisficing in Indian Army behavior. It cannot be explained as merely optimizing given limited resources. Shifting resources away from mechanization and large Strike Corps and toward light infantry focused on counterinsurgency would save money. Instead, the Indian Army attempted to do both—engaging in manpower intensive counterinsurgency and preparing for capital-intensive armored warfare. This expansion

of missions in the 1990s occurred while government expenditures on defense shrank because of austerity efforts and alongside the loss of generous Soviet financing of arms sales. The result was not doctrinal innovation, but instead a hollowed-out army, which lacked spare parts, depleted its reserves, and was unable to update decades-old infantry equipment.<sup>80</sup>

### *After Kargil*

While the Indian military's knowledge of India's nuclear weapons program was sharply constrained by secrecy well into the 1990s, the Indian military knew that it likely faced a nuclear-armed Pakistan by the late 1980s.<sup>81</sup> The Indian Army played a major role in two nuclear-tinged crises with Pakistan in 1986-1987 (associated with Sundarji's Brasstacks Exercise) and 1990 (where Pakistan practiced its own large-scale conventional mobilization), and India's intelligence community concluded by 1988 that Pakistan possessed nuclear weapons.<sup>82</sup> Despite a darkening nuclear shadow, internal army seminars admired—as late as 1997—the Soviet/Russian “heavy breakthrough” concept that sought a “sledgehammer blow with mechanized forces” that would penetrate “into the bowels of the enemy's defenses.”<sup>83</sup> By 1999, this was incorporated into official doctrine, with the Indian Army Training Command (ARTRAC) writing, “If forced into a war, the aim of our offensive(s) would be to apply a sledgehammer blow to the enemy. The Indian Army's concept of waging war is to ensure a decisive victory.”<sup>84</sup>

It would take two *more* crises in 1999 and 2001-2002 to prompt doctrinal re-examination. The overt nuclearization of May 1998 was followed within a year by the Kargil War. The conflict took place under the nuclear umbrella but without a full-scale mobilization of the army, especially those expensive strike corps elements that had been carefully assembled by Rao and Sundarji. The Indian military was placed under strict constraints not to cross the Line of Control by civilian

leaders, let alone the international border. While the Indian military always reserved for itself the right to seek permission from political leaders for horizontal escalation, there was no apparent eagerness on the behalf of civilians to authorize it.<sup>85</sup>

Within a year of the conflict, both Indian civilians and the military were beginning to rethink what nuclearization meant for conventional military doctrine. The civilian defense minister, George Fernandes, gave a speech at the ministry-funded Institute for Defense Studies and Analyses in early January 2000, where he proposed that limited war was still possible despite the nuclearization of the subcontinent. Whether this indicates civilian prompting for military rethinking is ambiguous since it appears that Fernandes speech was written, perhaps entirely, by IDSA's influential director, retired Air Commodore Jasjit Singh. The following day, Gen. V. P. Malik offered a similar address, again emphasizing the possibility of limited war under the nuclear umbrella.<sup>86</sup>

This stated necessity to consider limited military campaigns did not diffuse to planning or doctrine. As a consequence, a December 13, 2001, attack on the Indian parliament building resulted in the first full mobilization of the Indian Army since 1971 and since Sundarji had designed strike corps that could "cross the border boldly into the Thar desert."<sup>87</sup> The planning during the 2001-2002 military crisis overwhelmingly focused on decisive offense, whereby the strike corps would force Pakistan's armored reserves to confront them until a battle of maneuver and attrition destroyed the Pakistani forces and left India with substantial territory in the desert sector.<sup>88</sup> Then-Army Chief S. Padmanabhan appears to have planned to use all three strike corps in simultaneous offense, rather than holding one corps in reserve as a countervailing force as most observers expected out of prudence (and Hazari had suggested in 1973).<sup>89</sup>

The organizational tendencies toward offensive action left the Indian Army with capabilities and plans that Indian civilians were unwilling to use. Indian journalist Praveen Swami argues “doctrinal baggage... crippled India’s early options in 2002.”<sup>90</sup> Rather than reconsider the benefit of large-scale offensive operations, the Indian Army acknowledged the likely civilian constraints in a future conflict and began thinking of how to repackage existing capabilities into smaller pieces, to permit more limited offensive operations along a wider front—in essence, preserving the maneuver emphasis and offensive initiative of Sundarji’s mechanized force but offering smaller portion sizes given Indian civilian concerns about nuclear escalation.

This ability to more quickly launch limited ground operations became known as the “Cold Start” doctrine, though for over a decade the Army preferred to refer to them as proactive strategy options.<sup>91</sup> While new doctrinal thinking has occurred, it is less clear that Indian civilians approve of such plans. Major changes in basing arrangements that would appear to be necessary to implement any Indian Army reorganization around Cold Start do not appear to have taken place. In particular, disaggregating the strike corps into smaller division-sized elements seems not to have occurred, though some progress has likely been made in equipping and planning for “pivot” (formerly “holding”) corps to be able to undertake limited offensive operations while the strike corps are still mobilizing.<sup>92</sup> Given potential limits on how the strike corps can be employed following mobilization—for fear of triggering a Pakistani nuclear response—Brig. (retd.) Gurmeet Kanwal appropriately asks, “If the Indian Strike Corps are going to be employed only to achieve small, operational or even tactical-level gains, why have them at all?” Nevertheless, Kanwal reports that as of 2008 most serving Indian Army officers prefer to retain the strike corps in their present form.<sup>93</sup> Rather than reconsider the desirability of decisive offensive operations against a nuclear foe, the Indian Army now seeks to create equivalent strike corps in the much more difficult

terrain of the Sino-Indian border, an outcome that cannot occur without massive acquisitions of rotary aircraft and lightweight mobile equipment.<sup>94</sup>

## **Conclusion**

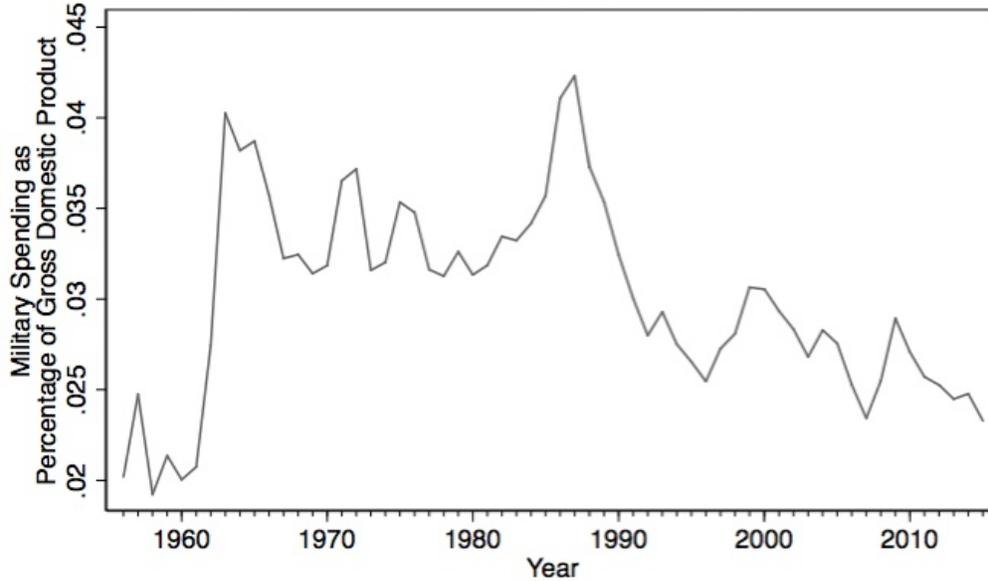
Militaries are complicated, expensive organizations, and there is a tendency for civilians to shirk the specialized demands of defense oversight. This generalized tendency has been reinforced in the Indian context by a set of beliefs that emerged in the aftermath of the 1962 war with China that civilian intervention in the operational military domain contributed to India's defeat. While politicians and bureaucrats have closely managed military budgets, which after all impinge directly on funds available for domestic purposes, they have avoided interference in military doctrine and planning.

Militaries, like organizations elsewhere, prize autonomy and seek to avoid uncertainty. They tend to persist with doctrine even in the face of changing circumstances, but when they change they have a strong predilection for offensive doctrines. The Indian Army has been no different. Despite some evidence in 1947-1948, 1965, and 1971 about the strong defensive advantages afforded by the Indo-Pakistani border, the Indian Army shifted slowly over time from a doctrine favoring defense-in-depth which they had inherited from the British Army to one that increasingly emphasized maneuver warfare by mechanized forces. "Organization theory suggests a tendency toward offensive, stagnant military doctrines, poorly integrated with the political elements of a state's grand strategy," writes Barry Posen.<sup>95</sup> That tendency has been pronounced in the Indian case.

Since 1998, the fear of nuclear escalation has meant that these organizational proclivities have collided with the reality of civilian unwillingness to authorize large-scale offensive operations. The Indian Army has adapted by attempting to find ways to essentially maintain the equipment and ethos of maneuver warfare, but calibrated for a nuclear environment. Typically offensive doctrines are associated with instability, since they frequently generate first strike advantages. In the Indian case, offensive doctrines may have reinforced stability in South Asia, since the Indian Army has developed military plans that civilians do not desire to use. As the Army continues down this acquisition path, it invests in more materiel, units, and officers tailored for a doctrine that has roots in the 1970s, in a fundamentally different strategic environment. Lt. Gen. (retd.) V. K. Kapoor lamented in 2005, “the army has been structurally stagnant for so long that the changes” needed to reform it “will have to be wide ranging, covering a large number of activities.....”<sup>96</sup> More than a decade of structural stagnation has persisted after Kapoor’s lament, and no fundamental rethinking or reorganization appears under consideration.

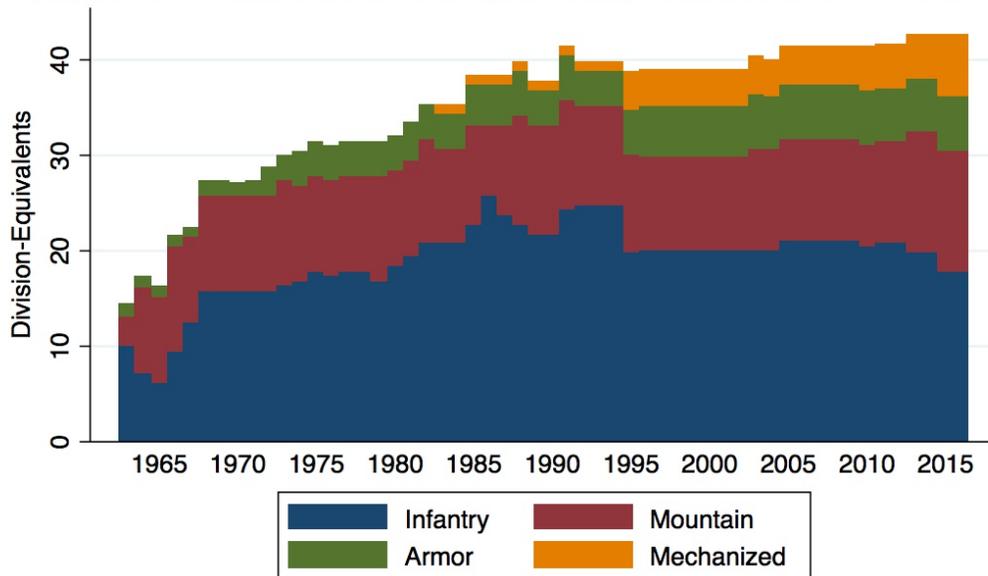
## FIGURES AND TABLES

**Figure 1: Indian Military Spending, 1956-2015**



Source: Stockholm International Peace Research Institute  
 Note: Includes paramilitary forces

**Figure 2: Composition of Indian Army Divisions, 1963-2016**



Source: IISS, Military Balance, various years  
 Note: Independent brigades counted as 1/3rd division. Airborne/commando brigades included in infantry total. Engineering and artillery brigades excluded.

**Table 1**

<b>Major Weapons System Initial Acquisitions for the Indian Army, By Decade</b>					
<b>1950s</b>	<b>1960s</b>	<b>1970s</b>	<b>1980s</b>	<b>1990s</b>	<b>2000s</b>
M-4 Sherman Tank (US)	Vijayanta/Vickers Mk.1 Tank (UK)	BTR-50 APC (USSR)	T-72 Tank (USSR)		T-90 Tank (Russia)
Centurion Tank (UK)	T-54/T-55 Tank (USSR)	BTR-60 APC (USSR)	BMP-1 IFV (USSR)		Arjun Tank (India)
AMC-13/75 Light Tank (France)	PT-76 Light Tank (USSR)	BTR-152 APC (USSR)	BMP-2 IFV (USSR)		
	OT-62 TOPAS APC (USSR)	BRDM-2 Reconnaissance AV (USSR)			
	OT-64 SKOT APC (USSR)				

Abbreviations: APC stands for armored personnel carrier, AV stands for armored vehicle, IFV stands for infantry fighting vehicle

Source: Stockholm International Peace Research Institute (SIPRI) Arms Transfer Database, accessed July 8, 2017, and International Institute for Strategic Studies, *Military Balance*, various years.

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<sup>1</sup> Lorne J. Kavic, *India's Quest for Security: Defence Policies, 1947-1965* (Berkeley: University of California Press, 1967); Timothy D. Hoyt, *Military Industry and Regional Defense Policy: India, Iraq, and Israel* (New York: Routledge, 2007), ch. 2; Chris Smith, *India's Ad Hoc Arsenal: Direction or Drift in Defence Policy* (New York: Oxford University Press, 1994); Stephen P. Cohen and Sunil Dasgupta, *Arming without Aiming: India's Military Modernization* (Washington, DC: Brookings, 2010).

<sup>2</sup> Lloyd I Rudolph and Susanne Hoeber Rudolph, "Generals and Politicians in India," *Pacific Affairs* 37, no. 1 (1964): 5-19; Stephen P. Cohen, *The Indian Army: Its Contributions to the Development of a Nation* (Delhi: Oxford University Press, 1990); Stephen Peter Rosen, *Societies and Military Power: India and Its Armies* (Ithaca, NY: Cornell University Press, 1996), esp. ch. 6; Paul Staniland, "Explaining Civil-Military Relations in Complex Political Environments: India and Pakistan in Comparative Perspective," *Security Studies* 17, no. 2 (2008): 322-62; Anit Mukherjee, "The Absent Dialogue: Civil-Military Relations and Military Effectiveness in India" (Ph.D. diss., Johns Hopkins University, 2012); Mukherjee, "Fighting Separately: Jointness and Civil-Military Relations in India," *Journal of Strategic Studies* 40, no. 1-2 (2017): 6-34; Steven I. Wilkinson, *Army and Nation: The Military and Indian Democracy since Independence* (Cambridge, MA: Harvard University Press, 2015).

<sup>3</sup> For a survey of contemporary issues, see Christopher Clary, "Military Doctrine," in *India's Emerging Strategic Challenges*, eds. Srinath Raghavan and Anit Mukherjee (forthcoming).

<sup>4</sup> Walter C. Ladwig III, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, no. 3 (2007-2008): 158-90; Ladwig, "The Challenge of Changing Indian Military Doctrine," *Seminar*, no. 599 (2009); Shashank Joshi, "India's Military Instrument: A Doctrine Stillborn," *Journal of Strategic Studies* 36, no. 4 (2013): 512-540; Christopher Clary and Vipin Narang, "Doctrine, Capabilities, and (In)Stability in South Asia," in *Deterrence Stability and Escalation Control in South Asia*, eds. Michael Krepon and Julia Thompson (Washington DC: The Stimson Center, 2013), 93-106; Ali Ahmed, *India's Doctrine Puzzle: Limiting War in South Asia* (New Delhi: Routledge, 2014).

<sup>5</sup> Barry Posen has argued that civilian intervention is more likely when fear of decisive defeat is high. *The Sources of Military Doctrine: France, Britain, and Germany between the World Wars* (Ithaca, NY: Cornell University Press, 1984), 75-8. The theory tested here, then, assumes a moderate threat environment, which is consistent with other accounts, e.g., Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton: Princeton University Press, 2014), 111-2.

<sup>6</sup> Posen, *Sources of Military Doctrine*, 34-59.

<sup>7</sup> Christopher Twomey, *The Military Lens: Doctrinal Difference and Deterrence Failure in Sino-American Relations* (Ithaca: Cornell University Press, 2010), 21-2.

<sup>8</sup> See Stephen Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991), 7-8.

<sup>9</sup> Laxman K. Behara, "India's Defence Budget 2017-18: An Analysis," *IDSA Issue Brief* (February 3, 2017).

<sup>10</sup> Mukherjee, "Absent Dialogue," 20-1.

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- <sup>11</sup> Srinath Raghavan, "Civil-Military Relations in India: The China Crisis and After," *Journal of Strategic Studies* 32, no. 1 (2009): 172.
- <sup>12</sup> Aqil Shah, *The Army and Democracy: Military Politics in Pakistan* (Cambridge, MA: Harvard University Press, 2014); Wilkinson, *Army and Nation*.
- <sup>13</sup> Stockholm International Peace Research Institute, "SIPRI Military Expenditure Database," <https://www.sipri.org/databases/milex>, accessed March 31, 2017.
- <sup>14</sup> Amit Gupta, *Building an Arsenal: The Evolution of Regional Power Force Structures* (Westport, CT: Praeger, 1997), 2.
- <sup>15</sup> General J.J. Singh, *A Soldier's General: An Autobiography* (Noida: HarperCollins India, 2012), 270; K. Subrahmanyam with Arthur Monteiro, *Shedding Shibboleths: India's Evolving Strategic Outlook* (Delhi: Wordsmiths, 2005), 63-4.
- <sup>16</sup> The title of Commander-in-Chief, Indian Army, was replaced by Chief of the Army Staff by parliamentary act in 1955.
- <sup>17</sup> Averages for all three armies exclude the incumbent army chief. Average for the U.S. Army excludes one acting chief (Palmer) who served only three months and another chief that was promoted almost immediately to the Chairman of the Joint Chiefs of Staff Position (Dempsey), but includes one chief that died in office (Abrams). Average for Russia includes one chief that died in office (Dubynin).
- <sup>18</sup> K. Subrahmanyam, "Commentary: Evolution of Defense Planning in India," in *Defense Planning in Less-Industrialized States: The Middle East and South Asia*, ed. Stephanie G. Neuman (Lexington, MA: D.C. Heath, 1984), 266.
- <sup>19</sup> Wilkinson, *Army and Nation*, 106.
- <sup>20</sup> Mukherjee, "Absent Dialogue," 295.
- <sup>21</sup> Vishal Thapar, "V. K. Singh Makes Final Bid to Derail Army Succession," *The Sunday Guardian*, April 19, 2014; Utkarsh Anand, "VK Singh Tried to Deny Me Promotion via False Charges, Malafide intent: Army Chief Dalbir Singh Suhag," *Indian Express*, August 19, 2016.
- <sup>22</sup> Posen, *Sources of Military Doctrine*, 174-5.
- <sup>23</sup> Rosen, *Winning the Next War*, 20-1.
- <sup>24</sup> Jonathan M. House, *Combined Arms Warfare in the Twentieth Century* (Lawrence: University of Kansas Press, 2001), 71.
- <sup>25</sup> Pradeep Barua, "Strategies and Doctrines of Imperial Defence: Britain and India, 1919-1945," *Journal of Imperial and Commonwealth History* 25, no. 2 (1997): 249-52.
- <sup>26</sup> The number of brigades in an Indian Army division varies. On average, three brigades per division is a reasonable estimate. Using this counting rule on International Institute for Strategic Studies, *Military Balance* data yields comparable brigade estimates from those offered for 1975 and 1984 in Directorate of Intelligence, Central Intelligence Agency, *Indian Army Modernization Efforts: Progress and Problems*, NES 85-10201, October 1985, 1.
- <sup>27</sup> Sukhwant Singh, *India's Wars Since Independence*, vol. 3, *General Trends* (New Delhi: Vikas, 1981), 5.
- <sup>28</sup> Gupta, "Determining India's Force Structure and Military Doctrine," 443.
- <sup>29</sup> Kavic, *India's Quest for Security*, 13-6.
- <sup>30</sup> Kavic, *India's Quest for Security*, 37-8; also Srinath Raghavan, *War and Peace in Modern India: A Strategic History of the Nehru Years* (Ranikhet: Permanent Black, 2010), 148.
- <sup>31</sup> Singh, *India's Wars Since Independence*, vol. 3, *General Trends*, 11.
- <sup>32</sup> Gupta, *Building an Arsenal*, 29; Kavic, *India's Quest for Security*, 95-6.

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- <sup>33</sup> Major K. C. Praval, *Indian Army after Independence* (New Delhi: Lancer International 1987), 204.
- <sup>34</sup> Praval, *Indian Army after Independence*, 218.
- <sup>35</sup> Steven A. Hoffman, *India and the China Crisis* (Berkeley: University of California Press, 1990), 62.
- <sup>36</sup> General V. R. Krishna Rao, *Prepare or Perish: A Study of National Security* (New Delhi: Lancer, 1991), 85.
- <sup>37</sup> Raghavan, *War and Peace in Modern India*, 270-8.
- <sup>38</sup> Henderson Brooks report excerpt, 38; also Praval, *Indian Army after Independence*, 239. The Henderson Brooks report has not been officially released by the Government of India, so I rely on a large excerpt from that report released by the journalist Neville Maxwell.
- <sup>39</sup> Thimayya quoted in Raghavan, *War and Peace in Modern India*, 268
- <sup>40</sup> Palit quoted in Rosen, *Societies and Military Power*, 241.
- <sup>41</sup> Henderson Brooks report, 34.
- <sup>42</sup> Raghavan, *War and Peace in Modern India*, 304.
- <sup>43</sup> “SIPRI Military Expenditure Database”; Kavic, *India’s Quest for Security*.
- <sup>44</sup> Vivek Chadha, *Even If It Ain’t Broke Yet, Do Fix It: Enhancing Effectiveness Through Military Change* (New Delhi: Institute for Defense Studies and Analyses, 2016), 34-5; Gupta, *Building an Arsenal*, 40.
- <sup>45</sup> Sumit Ganguly, *Conflict Unending: India-Pakistan Tensions since 1947* (New York: Columbia University Press, 2001), 38; Rao, *Prepare or Perish*, 128.
- <sup>46</sup> Rajesh Kadian, *India and Its Army* (New Delhi: Vision, 1990), 56.
- <sup>47</sup> John H. Gill, “India-Pakistan: Order of Battle in the 1965 War,” unpublished manuscript (Washington, D.C.: n.d.); Lt. Gen. (retd.) Harbaksh Singh, *War Despatches: Indo-Pak Conflict 1965* (New Delhi: Lancer, 1991).
- <sup>48</sup> Lt. Gen. (retd.) V. K. Sood and Pravin Sawhney, *Operation Parakram: The War Unfinished* (New Delhi: Sage, 2003), 150-1.
- <sup>49</sup> Praval, *Indian Army after Independence*, 520; Rao, *Prepare or Perish*, 126.
- <sup>50</sup> Sinha quoted in Ahmed, *India’s Doctrine Puzzle*, 42.
- <sup>51</sup> Ahmed, *India’s Doctrine Puzzle*, 42-3.
- <sup>52</sup> John H. Gill, *An Atlas of the 1971 India-Pakistan War: The Creation of Bangladesh*, Near East-South Asia Center Occasional Paper (Washington, DC: National Defense University, 2003), 16-21.
- <sup>53</sup> Christopher Clary, “Deterrence Stability and the Conventional Balance of Forces in South Asia,” in *Deterrence Stability and Escalation Control in South Asia*, eds. Michael Krepon and Julia Thompson (Washington, D.C.: The Henry L. Stimson Center, December 2013), 137.
- <sup>54</sup> Praval, *Indian Army after Independence*, 520.
- <sup>55</sup> Singh, *India’s Wars Since Independence*, vol. 3, *General Trends*, 32-3.
- <sup>56</sup> Lt. Gen. (retd.) B. N. Sarkar, “Indian Military Leadership: Past Lessons Yet to Be Imbided,” *The Times of India*, May 23, 1975.
- <sup>57</sup> Hazari quoted in Ahmed, *India’s Doctrine Puzzle*, 43.
- <sup>58</sup> CIA, *Indian Army Modernization Efforts*, 1; also see Rao, *Prepare or Perish*, 394.
- <sup>59</sup> Rao, *Prepare or Perish*, 400, 406-7.
- <sup>60</sup> Rao, *Prepare or Perish*, 248.
- <sup>61</sup> Ahmed, *India’s Doctrine Puzzle*, 42-3.
- <sup>62</sup> Chadha, *If It Ain’t Broke, Do Fix It*, 38.

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- <sup>63</sup> Interview, retired Indian Army officer, March 23, 2017.
- <sup>64</sup> Mukherjee, *The Absent Dialogue: Politicians, Bureaucrats, and the Military in India*, unpublished book manuscript.
- <sup>65</sup> Interview, retired Indian Army officer, March 23, 2017; also Inderjit Badhwar and Dilip Bobb, "General K. Sundarji: Disputed Legacy," *India Today*, May 15, 1988.
- <sup>66</sup> CIA, *Indian Army Modernization Efforts*, iii.
- <sup>67</sup> On the importance of unity among elites, see also M. Taylor Fravel, *Active Defense: The Evolution of China's Military Strategy since 1949* (Princeton: Princeton University Press, forthcoming).
- <sup>68</sup> Badhwar and Bobb, "General K. Sundarji," May 15, 1988.
- <sup>69</sup> General K. Sundarji, *Blind Men of Hindoostan: Indo-Pak Nuclear War* (New Delhi: UBS Publishers' Distributors Ltd., 1993), 45, 91; "SIPRI Military Expenditure Database."
- <sup>70</sup> Morton H. Halperin and Prascilla A. Clapp with Arnold Kanter, *Bureaucratic Politics and Foreign Policy*, 2<sup>nd</sup> ed. (Washington, DC: Brookings Institution Press, 2006), 40.
- <sup>71</sup> Interview, retired Indian Army officer, March 23, 2017.
- <sup>72</sup> S. Paul Kapur, *Dangerous Deterrent: Nuclear Weapons Proliferation and Conflict in South Asia* (Stanford, CA: Stanford University Press, 2007), 102.
- <sup>73</sup> Wilkinson, *Army and Nation*, 144.
- <sup>74</sup> Gaurav Kampani, "New Delhi's Long Nuclear Journey: How Secrecy and Institutional Roadblocks Delayed India's Weaponization," *International Security* 38, no. 4 (Spring 2014); Feroz Hassan Khan, *Eating Grass: The Making of the Pakistani Bomb* (Stanford, CA: Stanford University Press, 2012), 186.
- <sup>75</sup> For instance, K. Sundarji, "Effects of Nuclear Asymmetry on Conventional Deterrence," *Combat Papers* [Mhow] 1 (April 1981).
- <sup>76</sup> Sundarji, *Blind Men of Hindoostan: Indo-Pak Nuclear War*, 85; also see Sundarji, "Changing Military Equations in Asia: The Relevance of Nuclear Weapons," in *Bridging the Nonproliferation Divide: The United States and India*, ed. Francine R. Frankel (Lanham, MD: University Press of America, 1995), 133.
- <sup>77</sup> Ashley J. Tellis, *India: Assessing Strategy and Military Capabilities in the Year 2000* (Santa Monica, CA: RAND Corporation, 1996), 6-7.
- <sup>78</sup> Sunil Dasgupta, "The Indian Army and the Problem of Military Change," in *Security and South Asia: Ideas, Institutions and Initiatives* (New York: Routledge, 2006), 96.
- <sup>79</sup> Rao, *Prepare or Perish*, 404.
- <sup>80</sup> See General V. P. Malik, *Kargil: From Surprise to Victory* (New Delhi: HarperCollins India, 2006), 283-7.
- <sup>81</sup> Vipin Narang, "Strategies of Nuclear Proliferation: How States Pursue the Bomb," *International Security* 41, no. 3 (January 2017): 110-150; Kampani, "New Delhi's Long Nuclear Journey."
- <sup>82</sup> P. R. Chari, et al, *Four Crises and a Peace Process* (Washington, DC: Brookings, 2007), chapters 3-4; Kargil Review Committee, *From Surprise to Reckoning: The Kargil Review Committee Report* (New Delhi: Sage, 2000), 190.
- <sup>83</sup> Singh, *A Soldier's General*, 142.
- <sup>84</sup> Quoted in Gurmeet Kanwal, *Indian Army: Vision 2020* (Noida: HarperCollins India, 2008), 78-9. Kanwal attributes 1999 as the year of the doctrine, other sources state the document was from 1998.
- <sup>85</sup> Malik, *Kargil*, 126, 140, 145-7.

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<sup>86</sup> Malik did not deliver the speech in person and instead had his subordinate, Lt Gen V. G. Patankar, the Additional Director General for Perspective Planning, read it out. Patankar himself likely prepared the text. George Fernandes, “Inaugural Address,” presented to the seminar on “The Challenge of Limited War: Parameters and Options,” hosted by the Institute for Defense Studies and Analyses [IDSA], New Delhi, January 5, 2000; Gen. V. P. Malik, “Closing Address,” presented to the seminar on “The Challenge of Limited War,” hosted by IDSA, January 6, 2000; C. Raja Mohan, “Fernandes Unveils ‘Limited War’ Doctrine,” *The Hindu*, January 25, 2000; interview, retired Indian Army officer, March 23, 2017.

<sup>87</sup> Sood and Sawhney, *Operation Parakram*, 81.

<sup>88</sup> Sood and Sawhney, *Operation Parakram*, 81.

<sup>89</sup> Kanwal, *Indian Army: Vision 2020*, 307.

<sup>90</sup> Praveen Swami, “Gen. Padmanabhan Mulls Over Lessons of Operation Parakram,” *The Hindu*, February 6, 2004.

<sup>91</sup> Sandeep Unnithan, “‘We Will Cross Again,’” *India Today*, January 4, 2017; Vipin Narang and Walter Ladwig III, “Taking ‘Cold Start’ Out of the Freezer,” *The Hindu*, January 11, 2017.

<sup>92</sup> Narang and Ladwig, “Taking ‘Cold Start’ Out of the Freezer.”

<sup>93</sup> Kanwal, *Indian Army: Vision 2020*, 85, 309.

<sup>94</sup> Brig. Gurmeet Kanwal, “Strike Corps for the Mountains: Upgrading India’s Military Strategy from Dissuasion to Deterrence,” August 9, 2013, <http://www.vifindia.org/article/2013/august/09/strike-corps-for-the-mountains-upgrading-india-s-military-strategy-from-dissuasion-to-deterrence>.

<sup>95</sup> Posen, *The Sources of Military Doctrine*, 59.

<sup>96</sup> Kanwal, *Indian Army: Vision 2020*, 298-9.