China and India remain locked in a stagnant embrace when it comes to the most intractable of security dilemmas: the Sino-Indian border issue. A closer look at Chinese and Indian strategic, scientific and academic experts’ security perceptions vis-à-vis one another reveals that there is much more to the Sino-Indian security dynamic than meets the eye. Chinese and Indian strategic analysts hold divergent interests when evaluating each other’s military modernization, the former preoccupied with India’s naval development and the latter with China’s army. Technical analysts in each country share a similar level of interest in the other’s aviation and aerospace programs. Scholars exhibit a strong, if not symmetrical, level of focus on the other country’s nuclear strategy and status. Using this tripartite discourse as a baseline, this essay provides both a quantitative and qualitative analysis of each group’s perceptions to better understand Sino-Indian security relations and to propose measures within each arena to enhance mutual understanding. It shows that the Sino-Indian security dilemma cannot be simply viewed through the prism of the border anymore.

Chinese and Indian interlocutors have spent countless hours debating the border issue in the years following the Sino-Indian border conflict of 1962. The latest set of border talks between India’s National Security Adviser Shivshankar Menon and China’s State Councilor Dai Bingguo in November 2010 represented the fourteenth in a series, followed in rapid succession by Premier Wen Jiabao’s visit to India.¹

Yet, both meetings resulted in tepid pronouncements of “steady progress” when it came to the border, which markedly contrast with the tit-for-tat politics of late.² Despite years of confidence building measures (CBMs) and agreements, China and India are currently locked in a stagnant embrace when it comes to this most intractable of security dilemmas.

There is no question that the border issue assumes both a looming and lin-
gering presence in Sino-Indian relations. However, when analysts are divided into three groups—namely strategic, technical and academic—it becomes apparent that there is much more to the Sino-Indian security dynamic than meets the eye.

Chinese and Indian strategic analysts maintain a divergent approach, the former preoccupied with India’s navy and the latter with China’s army. Technical analysts in each country share a similar level of interest in the other country’s aviation and aerospace programs. Experts with a more scholarly bent exhibit a strong, if not symmetrical, level of focus on the other country’s nuclear strategy and status.

Using this tripartite discourse as a baseline, this essay provides a quantitative and qualitative analysis of each of these groups’ views to gain a better sense of the level and nature of future Sino-Indian interaction. This approach mitigates some of the generalizations and abstractions that hamper improved communication. It demonstrates that the Sino-Indian security dilemma cannot be simply viewed through the prism of the border anymore.

**Methodology**

The primary sources for this essay consist of Chinese and Indian journals and interviews that fall into three categories: strategic, technical and academic. While these groups may never be neatly defined or separated, they serve as the guiding framework for perceptual evaluation. Two comparable journals from China and India within each of the three categories were selected—six in total. These journals were then surveyed from January 1991 through December 2009.

These materials were used to statistically account for the number of times Chinese and Indian analysts made reference to the military-related systems and training of the other (e.g., India’s Su-30MKI procurement from Russia, China’s M-9/M-11 cooperation with Pakistan), as well as the various concepts relating to security intentions (e.g., Chinese views on India’s potential “Indian Ocean control,” Indian views on China and Pakistan’s “two-front” threat).

Beyond statistical evaluation and these six journals, this essay surveys a wide range of Chinese and Indian journals and books for qualitative measures of threat perception, supplementing this data with interviews and discussions with more than 120 analysts and experts within both countries. Finally, it integrates social psychology terminology to explain perceptual phenomena. Using quantitative and qualitative analysis, this essay seeks to compare and contrast Chinese and Indian analysts’ views of one another in the security sphere.
Divergence

The disparity between Chinese and Indian military and strategic analysts’ security focus relates closely to the concept of social identity. Both quantitative and qualitative analyses demonstrate that Chinese analysts largely view India as an ocean power, while the prevalent Indian view of China is as a land power.

Graph 1: Chinese Strategic Journals’ References to India’s Military Modernization

When asked which areas of Indian military modernization have surpassed or have the potential to challenge China, Chinese analysts point to India’s navy. This attention has been shifting from the simple listing of systems toward more in-depth analyses that probe the basic question of whether India can catch up to China’s navy.

In the journal *Hangjian bingqi* (Shipborne Weapons), one author demonstrates this focus on India’s rapid naval rise, stating:

India has always sought global great power status....Since the beginning of the 21st century, India has increased the speed of its development of a strong navy with global war-fighting capabilities. In the past few years, India has not
only increased its joint exercises with the strong naval countries of the United States, France, Russia, etc., it has also sped up the development and purchase of new naval equipment.  

Chart 1 shows the number of references to Indian systems and themes made by Chinese journals from 1991 to 2009. Graph 1 and chart 1 reveal just as much about how China views itself as about how it views India. India's pursuit of, and advances in, second-strike capabilities, nuclear submarines and aircraft carriers garners lengthy analysis within China, given that these are capabilities that China seeks to either acquire or improve.

While in India there has long been a tendency to include China in strategic doctrines and writings, similar writings from China have made scant reference to India. However, China's goals in naval development are increasingly being compared with those of India. In one recent example, India crept into a review of the sixtieth anniversary of the People's Liberation Army (PLA).  

These two parallel changes do not necessarily mean that Chinese analysts perceive India as a direct threat, but they are starting to take India more seriously.

**Chart 1: Chinese Strategic Journals' References to Indian Systems and Themes**

<table>
<thead>
<tr>
<th>Systems</th>
<th>Themes</th>
<th>Sources: Bingqi zhishi (Ordnance Knowledge) and Xilandai bingqi (Modern Weaponry), 1991-2009.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gorshkov Aircraft Carrier</td>
<td>Indian Ocean Control, Hegemony</td>
<td></td>
</tr>
<tr>
<td>Viraat Aircraft Carrier</td>
<td>Nuclear Triad</td>
<td></td>
</tr>
<tr>
<td>ATV Nuclear Submarine</td>
<td>Blue Water Strategy</td>
<td></td>
</tr>
<tr>
<td>Sea King Anti-Sub Helicopter</td>
<td>Military Education, Interoperability</td>
<td></td>
</tr>
<tr>
<td>Delhi Anti-Aircraft Destroyer</td>
<td>Joint Military Exercises</td>
<td></td>
</tr>
<tr>
<td>Kilo 877EKM Submarine</td>
<td>Malacca Strait, Andaman Islands</td>
<td></td>
</tr>
<tr>
<td>&quot;Talwar&quot; Frigate</td>
<td>Naval Development</td>
<td></td>
</tr>
<tr>
<td>&quot;Barak&quot; Missile</td>
<td>Nationalism, Militarism</td>
<td></td>
</tr>
<tr>
<td>&quot;Sagarika&quot; Missile</td>
<td>South China Sea</td>
<td></td>
</tr>
<tr>
<td>Tu-42 Anti-Sub Reconnaissance</td>
<td>21st Century Attack Submarine</td>
<td></td>
</tr>
</tbody>
</table>
Findings from India

Perhaps just as striking as Chinese analysts' evolving perceptions when it comes to India is the relative lack of any marked shifts in Indian strategists' accounts of China. Articles twining China and Pakistan and those featuring the "two-front" threat posed by China and Pakistan to India are littered throughout materials from 1991 to 2009.\(^\text{11}\)

As recently as December 2009, Indian Army chief general Deepak Kapoor publicly stated that the Indian army must prepare for a two-front war.\(^\text{12}\) While eliciting debate, this viewpoint has a number of corollaries under the rubric "China threat."\(^\text{13}\) As chart 2 shows, China's decades of military assistance to Pakistan continue to be viewed by a number of India's strategic analysts as part of China's strategy of keeping India bogged down in South Asia.

Graph 2: Indian Strategic Journals' References to China's Military Modernization

Overall, China's long-term threat casts a much wider shadow over India than does Pakistan's near-term threat.\(^\text{14}\) According to this conception, the scope of China's perceived challenge to India is ever-expanding, with growing coverage of China's military engagement of India's neighbors, including Bhutan, Nepal, Bangladesh, Myanmar and Sri Lanka.\(^\text{15}\)
Chart 2: Indian Strategic Journals' References to Chinese Systems and Slogans

<table>
<thead>
<tr>
<th>Systems</th>
<th>Themes</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Coop) Missile</td>
<td>Border Issue-History</td>
<td>78</td>
</tr>
<tr>
<td>(Coop) Weapon Technology</td>
<td>Disrent-Tibet</td>
<td>50</td>
</tr>
<tr>
<td>(Coop) M-11/DF-11</td>
<td>China, Pakistan Threat</td>
<td>24</td>
</tr>
<tr>
<td>(Coop) M-9/DF-15</td>
<td>Military/Civil Infrastructure Tibet</td>
<td>17</td>
</tr>
<tr>
<td>Defense Expenditure</td>
<td>Chance Conflict-Border</td>
<td>13</td>
</tr>
<tr>
<td>(Coop) Artillery</td>
<td>Expansionism, Hegemony</td>
<td>13</td>
</tr>
<tr>
<td>(Coop) Military Industry</td>
<td>Dissent-Xinjiang</td>
<td>8</td>
</tr>
<tr>
<td>(Coop) T-59 Tank</td>
<td>Separatists, Terrorists</td>
<td>8</td>
</tr>
<tr>
<td>(Coop) T-69 Tank</td>
<td>Encirclement-Kashmir</td>
<td>4</td>
</tr>
<tr>
<td>(Coop) T-90 Tank</td>
<td>Encirclement-PRC, Pakistan, US</td>
<td>3</td>
</tr>
</tbody>
</table>


Perception

Overconfidence Phenomenon and Victim Mentality

The legacy of 1962 feeds overconfidence phenomenon and victim mentality, which play integral roles in defining Sino-Indian threat perceptions. China leans toward the former, while India tilts toward the latter. China and India's history at the border ranks highest with the largest number of citations (see chart 2). This historical precedent, in the words of Major General G. D. Bakshi, was just a tactical engagement in which India suffered a traumatic and uncalled for humiliation. This battle is hardly remembered in China. However it had a very disproportionate impact on the Indian national psyche.

Not only was the border conflict a "humiliation," but a number of Indian strategist connect the 1962 loss to phenomena in military funding occurring over forty years later, arguing that it was integral to India's ongoing emphasis on investment, self-reliance and, more recently, offsets. Air Marshal Brijesh Dhar Jayal states, the Department of Defence Production in the Ministry of Defence was set up in 1962, in the aftermath of the Chinese aggression to create a self-reliant and self-sufficient indigenous defence production base.

The border issue has been elevated to the source of blame, causation and ultimate arbiter of India's military modernization. By contrast, Chinese analysts'
mention of the border tends to be largely based on a basic reportage of facts and comparatively diminished interest.\textsuperscript{21}

In the Indian Ocean, the asymmetrical dynamic between China and India, where China is the dominant force, is turned on its head. India has a more advantageous position in terms of geography, maritime capabilities and strategic partnership with the United States. Yet, China faces issues of distance, disruptions to its shipping chain and stronger regional tensions with the United States.\textsuperscript{22}

This challenges the underlying assumption of the “string of pearls” concept: that China is using various countries within South Asia as pearls within its larger strategic necklace to contain India, while ensuring its own presence in the Indian Ocean.\textsuperscript{23} A number of India’s strategic analysts, including current and former naval officers, take a more circumscribed view of China’s naval activities in private. In China, the opposite phenomenon exists, with stronger concerns expressed behind the scenes over India’s naval pursuits.

In point of fact, India’s maritime exercises with countries like the United States create a reverse string of pearls for China.\textsuperscript{24} Zhao Xiaozhuo emphasizes India’s plentiful military exchanges, stating,

In the past few years, India’s Navy has become increasingly active on the international stage, and the number of joint naval drills with each country’s Navy has significantly increased. In addition to participating in an annual joint exercise with the British Royal Navy, India’s Navy has conducted joint exercises with the United States, Russia, England, France, New Zealand and Australia, as well as with Indonesia, Oman, United Arab Emirates, Bangladesh, etc.—countries on the periphery of the Indian Ocean.

As these exercises come closer to China’s shores, the issue has become more than simply a Malacca Strait dilemma for Chinese analysts. It is extending into the South China Sea.\textsuperscript{25}

Practice

While facing perceptual imbalance at land and sea, there is one aspect in which these two divergent approaches intersect. Experience at the border can be used to inform Sino-Indian interaction at sea. Currently, there rests less asymmetry at sea than at the border, as India is in a better strategic position and the two countries have a more benign history at sea.
As China and India increase the scope of their maritime pursuits, however, they are likely to face limited resources and increasing overlap. This has already emerged in China’s efforts to build ports to stabilize, supply and secure its sea lines of communication through the Indian Ocean, in its deployment of vessels to the Gulf of Aden to engage in anti-piracy campaigns and in its search for resources.

This phenomenon fits a long-term realistic group conflict theory model, which suggests that “prejudice arises from competition between groups for scarce resources.” In the case of China and India, these resources are as tangible as their pursuit of energy security and as abstract as the level of power they are able to exert in the region.

As China and India currently focus to differing degrees on border and sea, they are less likely to face a conflict scenario. Yet this imbalanced focus means that they are hindered in their ability to prepare for future tensions through CBMs and codes of conduct.

To prevent future interest overlap from inducing tension stemming from realistic group conflict theory, it is essential to construct near term CBMs to anticipate crossover at sea. China and India already have pre-existing military cooperation upon which to build. In November 2003, an Indian fleet took part in a search and rescue operation off the coast of Shanghai. Such exercises could be further regularized, with the “hand-in-hand” anti-terrorism drills offering a model.

Relations between the two could also use greater strengthening at the Track 1.5 and Track 2 level. Chinese and Indian interaction paradoxically remains more prominent at the Track 1 level. Still, meetings are often hampered by talking points and inadequate frank discussion. Expanded cooperation through the Contact Group on Piracy off the Coast of Somalia, the Indian Ocean Naval Symposium, or a new organization entirely merits consideration.

Norms for conflict resolution must also be prioritized at these working group levels, with a determination that they be built pre-crisis rather than post-crisis. This is a reality that China faced with the De Xin Hai incident in 2009, when pirates hijacked a Chinese shipping vessel. Had there been a preexisting framework, this event could have been resolved much more quickly and effectively.

Given its geographical proximity, India could be among the countries called upon to intervene in such a crisis. Established rules of the road and sharing of official maritime policy would also reduce the tendency for media to report as official policy individual pronouncements by military personnel. It would lay the groundwork for agreements on mutual cooperation well in advance of ad hoc measures and post-crisis lament.
Graph 3: Chinese Technical Journals' References to India's Military Modernization

Sources: Binggong Keji (Ordnance Technology) and Junshi Jishu (Military Technology), 1991-2009.

Graph 4: Indian Technical Journals' References to China's Military Modernization

Lora Saalman

TECHNICAL/SCIENTIFIC ANALYSTS

Similarity

Between the technical communities of China and India there exists greater similarity in level of perception, with each group expressing a strong and sustained interest in the aviation and aerospace developments of the other.\(^{30}\)

Findings from China

Chinese analysts put a stronger focus on Indian developments in the aviation and aerospace realm than do Indian experts on China. In the early to mid-1990s, a number of Chinese technical journals featured reviews of India’s aerospace achievements and potential for becoming a “space power” (\textit{hangtian daguo}).\(^{31}\)

While Chinese scientific journals such as \textit{Daodan yu hangtian yunzai jishu} (Missiles and Space Vehicles) primarily examine engineering trends, they also contain numerous short reviews of India’s satellite, ballistic missile and launch achievements, also dating from the mid-1990s into present day.\(^{32}\) Chinese scientific and technical experts have taken note of Indian advances in remote sensing, telecommunication and launch vehicles as arenas in which India can contend with, if not has already surpassed, China.\(^{33}\)

India’s strides in reconnaissance, guidance, tracking, navigation, control, communication, early warning satellites and launch vehicles also receive attention within China, despite India’s insistence that its space program is civilian.\(^{34}\) An article in \textit{Binggong keji} (Ordnance Technology) argues, “The overall development of Indian military satellites has not been that of the majority of countries where ‘military becomes civilian,’ rather it follows ‘civilian becomes military,’ a path of combining military and civilian.”\(^{35}\)

U.S.-Indian space cooperation also makes a showing in the Chinese discourse. Removal of the Indian Space Research Organization, Bharat Dynamics Ltd. and four subsidiaries of the Defence Research and Development Organization from the U.S. Entity List promises to contribute to India’s aerospace advances, with security implications for China.\(^{36}\) However, explosion of the GSLV Mark 1 coupled with the difficulties that India has had converting launch technology into an intercontinental ballistic missile (ICBM) challenge the notion that India’s space program will rapidly and effectively crossover.\(^{37}\)

Nonetheless, when looking at chart 3, the chance for these programs to shift in the Chinese dialogue from civilian to military is not difficult to anticipate. Given the existence of the 3,000 kilometer range Agni-III, a nuclear-capable intermediate-range ballistic missile (IRBM), which according to reports has the capacity to strike Beijing, it is little wonder that it ranks highly on and will continue to factor
into China’s list of concerns.  

Similarly, while once solely viewed as a bilateral issue between India and Pakistan, there has been a shift toward discussion of India’s pursuit of a two-tiered system of Prithvi Air Defence (PAD) and Advanced Air Defence (AAD). India’s potential to conduct an anti-satellite test (ASAT) in the future further propels the chance of Chinese analysis shifting from the scientific and technical realm into the strategic.

Chart 3: Chinese Technical Journals’ References to India’s Systems and Themes

<table>
<thead>
<tr>
<th>Systems</th>
<th>Themes</th>
<th>Sources: Binggong keji (Ordnance Technology) and Junshi jishu (Military Technology).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agni Missile</td>
<td>Strategic Triad</td>
<td>9</td>
</tr>
<tr>
<td>GSLV</td>
<td>Exploration,</td>
<td>9</td>
</tr>
<tr>
<td>Su-30 MKI</td>
<td>Chandrayaan-I</td>
<td>8</td>
</tr>
<tr>
<td>C4ISR</td>
<td>Joint Exercises and</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td></td>
</tr>
<tr>
<td>Mirage-2000</td>
<td>Comprehensive Missile</td>
<td>5</td>
</tr>
<tr>
<td>PSLV</td>
<td>AAD, PAD</td>
<td>3</td>
</tr>
<tr>
<td>GPS Systems</td>
<td>Information, Space</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Warfare</td>
<td></td>
</tr>
<tr>
<td>F-16</td>
<td>China-India Border</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Deployment</td>
<td></td>
</tr>
<tr>
<td>Phalcon</td>
<td>Remote Sensing, INSAT</td>
<td>2</td>
</tr>
<tr>
<td>A-50 Reconnaissance</td>
<td>Nationalism, Militarism</td>
<td>2</td>
</tr>
</tbody>
</table>

Findings from India

While a degree of analysis in India remains levied at China’s space-related cooperation, it is far less than that in China, which refers to India’s international cooperation. Chinese journals such as Hangtian (Space Flight), Guoji hangtian (International Aerospace) and Zhongguo hangtian (Aerospace China) make frequent reference to India, yet China receives strikingly limited mention in Indian aviation and aerospace periodicals such as Vayu Aerospace and Defence Review or Agni.

Within India, discussion of China’s aerospace programs is largely limited to aircraft and missile assistance flowing outward from China, particularly into Pakistan. Chinese cooperation with Pakistan on the M-9 and M-11 missiles continues to make a strong showing in Indian periodicals from 1991 and 2010. These descriptions, however, lack the level of specificity found in Chinese accounts of Indian advances.

The belief that China is using Pakistan as a counterweight against India is
widespread in the Indian discourse, which feeds preconception bias and belief perseverence in New Delhi.\textsuperscript{41} Arun S. Vishwakarma writes, "Nuclear escalation with Pakistan can’t be considered in isolation. Pakistani nuclear weapons and posture is a proxy extension of China."\textsuperscript{42}

This type of rhetoric permeates nearly all official discussions relating to terrorism, insurgency, border conflict, nuclear and missile cooperation and proxy war. Of primary concern to Indian analysts continues to be the potential for China’s nuclear programs to enable horizontal proliferation.

**Chart 4: Indian Technical Journals’ References to China’s Systems and Themes**

<table>
<thead>
<tr>
<th>Systems</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Coop) Missiles</td>
<td>Infrastructure</td>
</tr>
<tr>
<td>ASAT Equipment and Test</td>
<td>Space Strategy</td>
</tr>
<tr>
<td>Su-27</td>
<td>(Coop) China-Pakistan</td>
</tr>
<tr>
<td>(Coop) J-10</td>
<td>Rising, Development</td>
</tr>
<tr>
<td>DF-21 Missile</td>
<td>Border Issue</td>
</tr>
<tr>
<td>DF-31/31A Missile</td>
<td>(Coop) China-South Asia</td>
</tr>
<tr>
<td>C4ISR</td>
<td>China, Pakistan Threat</td>
</tr>
<tr>
<td>AL-31 Engine</td>
<td>ASAT</td>
</tr>
<tr>
<td>J-8</td>
<td>Asymmetric War Strategy</td>
</tr>
<tr>
<td>A-50 (IL-76)</td>
<td>Expansionism, Hegemony</td>
</tr>
</tbody>
</table>


**Perceptions**

*Hostile and Instrumental Aggression*

Hostile aggression is "aggression driven by anger and performed as an end in itself," while instrumental aggression is a "means to another end."\textsuperscript{43} The former of these two concepts can also be applied to the preconception bias governing Indian views on Chinese aviation and aerospace. However, rather than denoting an aggressive act on the part of India, it instead indicates a perception of China’s intent and aggressive potential. China’s conduct at its borders and method of resolving past territorial disputes rankles in the Indian conception of current Chinese intent at its periphery.

To combat concerns over border incursions and increased infrastructure near the border, there is a periodic ramping up of threat rhetoric to justify such activities as the Indian increase of Su-30MKI fighters at the border.\textsuperscript{44} The need to demonstrate India’s ability to respond to power with power is often cited as part of the
package of rationales.

Since China's anti-satellite test in January 2007, India has been debating its response, with recent suggestions that it should pursue a similar path, citing China as the impetus and threat. Shows of strength, whether through word or deed, reflect the inherent sense of vulnerability vis-à-vis China's posture and rise.

Prior to the June 2009 announcement that India would deploy more troops at the border, Indian Air Chief Marshal Fali Homi Major stated: "China is a totally different ballgame compared to Pakistan... We know very little about the actual capabilities of China, their combat edge or how professional their military is... they are certainly a greater threat." Regardless of whether or not such statements are later retracted, they reveal entrenched and oft-repeated concepts, particularly among the Indian strategic community. They also filter their way into the Chinese dialectic.

In the space realm, China's pursuits of C4ISR are generally narrowly contextualized by Indian analysts, not under the rubric of its larger natural military modernization, but through a much more directed and aggressive lens, as applied to the Indian border and the ability to "fight a limited border war under high tech conditions," and to engage in "acupuncture warfare." Space has become the newest littoral of perceived Chinese aggression, with China's "assertiveness" as frequently referred to in the United States often amplified up to "aggressiveness" in the Indian rhetorical construct.

By contrast, Chinese assessments tend to consist primarily of instrumental lists and accounts of the kinds of technology India possesses. While describing India's wholesale improvements in electronic warfare capabilities, even such strategic articles in Xiandai bingqi (Modern Weapons) lack discussion of the application of such systems in a Sino-Indian conflict scenario.

This detached approach is apparent in such journals as Hangtian dianzi duikang (Aerospace Electronic Countermeasures) and Daodan yu hangtian yunzai jishu (Missiles and Space Vehicles), even when discussing such sensitive issues as India's pursuits of Agni ballistic missiles, missile defense and ASATs.

Chinese technical and industry-related journals also tend to take a scientific approach, particularly when describing India's Chandrayaan-1 success. Along with detachment, overconfidence phenomenon also surfaces, as reflected by such phrases as the "great power dream" (daguo meng) featuring prominently in chart 3. These characterizations intimate that India's advances are shrouded in the trappings of attempts to reach the same level that other countries, like China, have already attained.
So while India's Integrated Guided Missile Development Program (IGMDP) receives attention, it is still often couched under a subheading with "great power dream" in the title. A newer trend is that while still using such dismissive phrasing, these analyses are starting to include China in the calculations of impact caused by such systems, whereas in the past the analysis would have been confined to India and Pakistan.

As long as China retains its instrumental vantage point, the chances of a Sino-Indian space race and conflict remain limited. Most of the details within technical journals on India's achievements in satellites remain fixed in largely scientific evaluations with few strategic discussions. However, given the strong response to India's announcement of increased troop presence and greater deployment of Su-30MKIs at the border, China's instrumental approach should not be assumed to be a given.

Practice

In the technical realm, concrete measures are facilitated by a greater tendency toward specificity. China and India signed memoranda of understanding in 2002 and 2006 on space cooperation, but these have yielded few, if any, concrete results. By contrast, U.S.-India cooperation in space has been progressing rapidly. Specific measures will take time to develop given suspicions that scientific advances are vulnerable to reverse engineering. Nonetheless, as both countries effectively represent the newest generation of space powers, it would be beneficial to engage in early joint studies to determine what constitutes both air and space power. As with maritime policy, it is crucial for both sides to engage prior to the onset of a crisis.

The sharing of official aerospace strategy through mechanisms such as a space policy dialogue would create an overarching framework beneficial to arms control as a whole. Space navigation, weaponization, non-interference rules for satellites, notification of space launch and safe traffic management procedures remain ambiguous within each country's lexicon. Discussions of definitions and measures could facilitate a common purpose and help establish shared codes of conduct.

While both countries have committed themselves to the peaceful use of outer space, the definition of "peaceful use" merits further clarification. As initiatives like the Prevention of an Arms Race in Outer Space (PAROS) remain entangled in a stalemate at the Conference on Disarmament (CD), there are a number of CBMs that do not necessarily require a full-fledged treaty or multilateral regime. These include keep-out zones, missile and space-related hotlines, as well as exchanges on debris management, environmental and meteorological conditions and navigation.
Graph 5: Chinese Academic Journals’ References to India’s Military Modernization

Sources: Dansdai yatai (Journal of Contemporary Asia-Pacific Studies) and Guoji zhengzhi kexue (International Political Science), 1991-2009

Graph 6: Indian Academic Journals’ References to India’s Military Modernization

Adoption of such bilateral measures would also set an example for other space-faring nations by demonstrating that staged cooperation and CBMs can evolve from the bottom up. As large-scale multilateral treaties and regimes face opposed pressures from exceptionalism and inclusiveness, achievable means and measures of progress at the bilateral level will assume greater importance.

**ACADEMICS/SCHOLARS**

**Symmetry**

Between the Chinese and Indian academic communities there is symmetry in the level of perception, with scholars focusing on the nuclear domain, as shown in graphs 5 and 6.

**Findings from China**

Chinese academic analysts frequently argue that India’s pursuit of “great power status” (daguó diwei) and U.S.-India nuclear cooperation adversely impact the global nonproliferation regime. Yet these arguments often echo claims made among U.S. arms control experts against the deal. Instead, some of the most revealing and detailed analyses on nuclear-related issues emerge sporadically in strategic journals:

The lease of a nuclear submarine and transfer of highly enriched uranium raise a number of complex nuclear proliferation issues, particularly given the fact that although India already possesses nuclear weapons, it has never signed the ‘Nuclear Nonproliferation Treaty.’ If this ‘Akula’ nuclear submarine explicitly serves as ‘a nuclear weapon platform,’ then this type of transfer could signify the expansion of the proliferation of nuclear delivery systems...The leasing of a Russian nuclear submarine could lead to a wave of other countries attempting to acquire nuclear-powered submarine systems. India and Russia’s lease agreement on a nuclear submarine could have a major impact on the regional power balance.

The focus on Indian systems that have implications for China’s second-strike capabilities, such as lease of an Advanced Technology Vessel (ATV) nuclear submarine from Russia, and those that pose a threat to China’s major centers, such as the Agni-III missile, may be implicit in the more academic periodicals. However, they are frequently locked at the geopolitical level, offering limited understanding of where the specific strategic and technical concerns lie.

This is problematic in that a number of India’s nuclear pursuits, including second-strike capabilities sought via nuclear submarine and submarine-launched
ballistic missile development, have roles and implications that are germane to China's security. Despite this fact, a number of Chinese analysts continue to concentrate on the perceived damage caused by these programs to the nonproliferation regime, or dismiss them as part of the "China threat theory" (zhongguo weixielun). 59

There is a trend within China to concentrate on the political motivations and implications of India's nuclear modernization and to minimize the strategic import for China. While the U.S.-India nuclear deal most certainly garnered Chinese attention for its impact on balance in the region, its nuclear implications remain muddied by a lack of systematic technical and strategic review of what this means for China.

These very academics are the ones most likely to attend conferences with Indian strategic experts. Thus, their overall dismissal of India's growing importance as a force in the nuclear realm means that the foundations for future interaction and engagement remain conspicuously absent.

Chart 5: Chinese Academic Journals' References to India's Systems and Themes

<table>
<thead>
<tr>
<th>Systems</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear Equipment and Tech</td>
<td>Nuclear Strategy</td>
</tr>
<tr>
<td>Su-30 MKI</td>
<td>&quot;Great Power Dream&quot;</td>
</tr>
<tr>
<td>&quot;ATV&quot; Nuclear Submarine</td>
<td>India, Pakistan Relations</td>
</tr>
<tr>
<td>&quot;Agni&quot; Missile</td>
<td>India's China Threat Theory</td>
</tr>
<tr>
<td>&quot;Surya&quot; Missile</td>
<td>US-India Strategic Partnership</td>
</tr>
<tr>
<td>F-16</td>
<td>Expansion, Regional Hegemony</td>
</tr>
<tr>
<td>F/A-18E/F</td>
<td>Nationalism, Militarism</td>
</tr>
<tr>
<td>&quot;Typhoon&quot;</td>
<td>NPT Treaty Refusal</td>
</tr>
<tr>
<td>Mirage-2000</td>
<td>CTBT Refusal</td>
</tr>
<tr>
<td>MiG-35</td>
<td>NAM Position</td>
</tr>
</tbody>
</table>

Sources: Dongdafai yatai (Journal of Contemporary Asia-Pacific Studies) and Guoji zhengzhi kexue (International Political Science), 1991-2009

Findings from India

The Indian academic community is skewed toward a pronounced interest in China's nuclear status and program. 60 The difference is that while they are strongly vested in the discussion, the Indian strategic community also makes a stronger contribution to the debate than in China. 61

Nonetheless, this attention is still often directed at China's outward impact. chart 6 reveals Indian academic analysts' focus on China's exports to third parties,
such as Pakistan. A review of their writings reveals a stronger interest in technology and capabilities flowing out of China, rather than any direct threat posed by China.62

**Chart 6: Indian Academic Journals’ References to China’s Systems and Themes**

<table>
<thead>
<tr>
<th>Systems</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear Equipment, Technology</td>
<td>Nuclear Weapon Modernization</td>
</tr>
<tr>
<td>Su-30 MKI</td>
<td>(Coop) Nuclear Equipment</td>
</tr>
<tr>
<td>&quot;ATV&quot; Nuclear Submarine</td>
<td>(Coop) M-9, M-11</td>
</tr>
<tr>
<td>&quot;Agni&quot; Missile</td>
<td>(Coop) DF-15</td>
</tr>
<tr>
<td>&quot;Surya&quot; Missile</td>
<td>(Coop) WMD</td>
</tr>
<tr>
<td>F-16</td>
<td>(Coop) Ring Magnets</td>
</tr>
<tr>
<td>F/A-18E/F</td>
<td>(Coop) Chashma</td>
</tr>
<tr>
<td>&quot;Typhoon&quot;</td>
<td>W-88 Nuclear Warhead Design</td>
</tr>
<tr>
<td>Mirage-2000</td>
<td>(Coop) UF6</td>
</tr>
<tr>
<td>MiG-35</td>
<td>(Coop) HEU</td>
</tr>
</tbody>
</table>

**Sources:** Strategic Analysis and India Quarterly, 1991-2009.

Beyond material items, the question of status dominates Indian analyses. Underlying these discussions is a sense that India, with a strong nonproliferation record, has been denied what China, with a weak nonproliferation record, has garnered.63 Nuclear cooperation and recognition are integral to this single-minded focus on China’s nuclear weapon state (NWS) status.64

This concern was redressed to a degree by the U.S. announcement of its intent to remove over 159 Indian companies from the Entity List in 2001 and to engage in civil nuclear cooperation in 2005. U.S. president Barack Obama’s support for India’s membership in the Nuclear Suppliers Group (NSG) among other organizations in 2010 also promises to push this recognition to the next level. However, many Indian analysts remain skeptical of the durability and depth of U.S. commitment to India, particularly when it comes to nuclear issues.65

**Perceptions**

**Secondhand Bias**

In Chinese and Indian assessments of one another’s nuclear future, the role of
secondhand bias is ever present. U.S.-India nuclear cooperation has increasingly shaped Chinese efforts to engage India. Chinese scholars address the potential for this relationship to contribute to India's nuclear modernization and for it be used as a counterweight against China.

External sources, often the United States, have long substituted for direct interaction between the two sides. Within India, U.S. reporting on China—whether through official reports such as the Cox Report on China's alleged theft of W-88 nuclear warhead design, or through U.S. expert analyses of China's regional and global role—often serves as the baseline for Indian understanding of China.

For example, a number of Indian analysts have argued that the PLA is increasingly articulating a theory of limited deterrence. This claim, from Alastair Iain Johnston's work "China's New 'Old Thinking': The Concept of Limited Deterrence" is refuted by a number of Chinese analysts. Instead, they emphasize that China's small arsenal and demating of nuclear weapons and missiles precludes such a posture.

Yet these counterarguments do not filter their way into the mainstream discussion in India. Over-reliance on Western assessments often overlooks these Chinese rebuttals, stifling the debate between Chinese and Indian analysts before it has even begun.

Practice

The fact that China and India continue to disregard and, moreover, criticize one another on nuclear issues reflects classic fundamental attribution error. Both share doctrines of minimum nuclear deterrence and no-first-use (NFU), as well as long-standing support for nuclear disarmament. But this striking similarity in doctrine can be deceptive. There are a number of nuances that must be probed before assumptions are made about each other's likely reaction in the event of a crisis.

For example, Air Commodore Jasjit Singh, former director of the Institute for Defence Studies and Analyses argues, "China's military strategists do not consider the use of nuclear weapons in their own territory as violating their NFU (no-first-use) doctrine." This argument covers the potential for China to use or threaten to use nuclear weapons in a conflict over Arunachal Pradesh, over which China has not renounced its claim.

Joint comparative studies by China and India on minimum nuclear deterrence,
NFU, disarmament and other aspects of their nuclear doctrines would be useful CBMs. While such Indian experts as K. Subrahmanyam and S. Pande have suggested a trilateral agreement on no-first-test and no-first-use in the past among China, India and Pakistan, little has come from such concepts.73

To bridge the gap, U.S.-China interactions on nuclear doctrine, such as the Fifth US-China Strategic Dialogue on Strategic Nuclear Dynamics, can serve as a future model for Sino-Indian interaction.74 In the interim, this form of multi-organizational interaction could be best applied at the Track 2 level to set the foundation for engagement at Track 1.5 and eventually Track 1 levels.

Another project worth emulating would be the creation of a joint nuclear security glossary of terms as defined by Chinese and Indian experts, similar to the one created by the U.S. Committee on International Security and Arms Control (CISAC) and the Chinese Scientists Group on Arms Control (CSGAC).75 This would also set the stage for elucidating some of the nuances of nuclear doctrine that might contribute to miscalculation.

In the civilian realm, joint studies and codes of conduct on nuclear expansion, nuclear supply, uranium supply, safeguards, radioactive waste, fast breeder reactors and export controls can also serve as the basis for measures that propel the nuclear cooperation memoranda of understanding of 2006 and 2008 from rhetoric to reality.

FROM PERCEPTION TO PRACTICE

Perception means little without practice. Chinese and Indian analysts' focus on particular systems and themes merits systematic quantitative and qualitative research to determine which areas would benefit from greater exchange and CBMs.

Sino-Indian relations remain stymied by a number of asymmetries and disconnects. Sino-Indian conferences attended since 2001 have shown that Chinese experts in attendance tend to be more academic in vantage point and background. They are preoccupied with geopolitical trends, but far less focused on the technical and strategic implications of India's military advances.

In contrast, a large number of Indian experts at such meetings hail from the strategic community, often with a military background and a strong focus on the implications of China's modernization for India's security. As such, the technical and scientific import of these programs is often lacking from the discussions.

To mitigate these differences, it is necessary to increase the level of strategist-to-strategist, scientist-to-scientist and academic-to-academic interaction. Alternatively, having a representative from each group at such meetings would facilitate a more well-rounded discussion that addresses the multiple levels of issues.
faced by both sides.

To facilitate communication, the language used also requires adjustment. This is not simply a question of using Chinese or English, but rather overall mindset. Terms like “great power dream” and “China threat theory” that continue to litter Chinese analyses on India diminish India’s achievements and dismiss India’s threat perceptions. Indian analysts also underestimate the legitimate interests that China has in maintaining its sea lines of communication via the Indian Ocean.

To renew prioritization of one another’s stance and interests, establishment and sharing of official strategies on army, navy, air force, space and nuclear programs could serve as the basis for enhanced dialogue. The 2007 India-China Defence Dialogue and the 2010 meeting between Lieutenant General Ma Xiaotian, deputy chief of the general staff of the People’s Republic of China and Indian defense secretary Pradeep Kumar to discuss information sharing on the Indian Ocean should be expanded into a multilevel, regularized forum.

Furthermore, expansion of the number of Track 1.5 and Track 2 meetings would enable more frank discussion, giving participants the ability to move beyond talking points at the Track 1 level that can often dilute substantive interaction. Negotiation simulations on border, sea, air, space and nuclear issues could serve as a basis for policy prescriptions at the official level.

Regularization of direct meetings at the strategic, technical and academic level would mitigate the secondhand bias that complicates interaction and communication. Bilateral meetings could be initiated that emulate the Council for Security Cooperation in the Asia-Pacific’s (CSCAP) format, allowing for officials and military to engage in a non-official capacity.

In the near term, disjunction of focus among Chinese and Indian strategic analysts on naval and army developments is likely to forestall the chance of competition leading to conflict. Yet, divergence and lack of regularized interaction also means that there remains inadequate pre-crisis preparation. This foundation is crucial in the event that both countries’ military strategists reach increased similarity in security focus and tension.

Aviation and aerospace arenas are currently characterized by a similar degree of focus by technical analysts. Pronouncements by Indian scientists and political figures indicating that India will achieve the same feats as China, whether in terms
Lora Saalman

of space exploration or anti-satellite tests, reveal that both countries’ aerospace programs are beginning to fall into the U.S.-China action-reaction pattern. This demands greater near-term interaction to lay the necessary groundwork of CBMs to prepare for the shift from prioritization among the Chinese and Indian technical communities to the military strategists.

Academic analyses suggest that China and India share a number of symmetries in nuclear doctrine. However, China has long been dismissive of India’s nuclear status as a non-signatory to the NPT. U.S. and global efforts to bolster India’s nuclear status have made India difficult for China to ignore. Greater exchange on nuclear doctrine is essential in mitigating the impact of realistic group conflict theory and to forestall future crises in nuclear safety, security and proliferation.

Divergence, similarity and symmetry are likely to continue to coexist in Sino-Indian security relations. The ability to locate synergies and confront differences is essential to making long-term sustainable progress in a pre-crisis rather than post-crisis setting. To achieve this, systematic and comparative evaluation of the threat perceptions of China and India’s various interest groups could go a long way toward moving their security relations from the realm of perception to practice.

NOTES


2 Since 2008, the Chinese embassy in India began issuing a loose, staple visa to Indians from Indian-occupied Kashmir (IoK) and Arunachal Pradesh to demonstrate that they belong to disputed areas. In August 2010, China also refused a visa to the chief of the army’s Northern Command stationed in the IoK. Prime Minister Manmohan Singh’s early-2008 visit to Arunachal Pradesh along with provocative statements from Indian officials and media also exacerbated concerns among the Chinese.

3 Due to the large number of references and citations, each footnote will only contain a few select examples.

4 In addition to professors at universities throughout China and India, discussions were conducted with experts affiliated with the Academy of Military Sciences, National Defense University, People’s Liberation Army and People’s Liberation Navy, China Atomic Energy Institute, Northwest Nuclear Tech Institute, Beijing Institute of Physical Engineering and Computational Mathematics, National Defense Science and Technology University, China’s Nuclear Engineering Institute, China’s Physical Engineering Institute, China Aerospace Science and Industry Corporation, Chinese Academy of Social Sciences, China Reform Forum, China South Asia Studies Forum, United Service Institution, Centre for Land and Warfare Studies, Institute of Peace and Conflict Studies, Indian Air Force, Indian Navy, Institute for Defence Studies and Analyses, Observer Research Foundation, Institute of Chinese Studies, etc. Authors of open publications are quoted by name, while experts participating in closed conferences and discussions remain anonymous.


6 Social identity theory suggests that actors place themselves and others into categories, with identification with certain groups, leading to an in-group phenomenon and contrasting with another group.
leading to an out-group phenomenon; Myers (2008), 350-51.

7 The systems and terms that receive the most attention from Chinese analysts pertain to India's navy and air force developments, with the navy sustaining the lead (see graph 1). By contrast, Indian analysts' attention is trained on nearly every aspect of China's military modernization, particularly as it relates to the border (see graph 2).

8 "Yindu haijun neng ganchao zhongguo haijun ma?" [Can the Indian Navy Catch Up to China's Navy?], Jianchuan zhishi [Naval and Merchant Ships], no. 10 (October 2009), 50–61; "Xiongxin bobo de yindu haijun" [The Ambitious Indian Navy], Xiandai bingqi [Modern Weaponry], no. 6 (2000), 36–41.

9 Yin He, "Yindu xin 'Banjialuoer' quzhujian chulu ruier" [India's New 'Bangalore' Missile-Guided Destroyer will Make its Appearance], Jianchuan zhishi [Naval and Merchant Ships] 8 (August 2009), 24.


12 Subhash Kapila, "Indian Army New War Doctrine" (Paper no. 3606, South Asia Analysis Group: 15 January 2010), http://www.southasiaanalysis.org/37%5Cpapers37%5Cpaper3606.html.


This is visible in part through the proliferation of Indian journal compendia devoted to China, particularly in recent years. The Centre for Land Warfare Studies, CLAWS Journal's Summer 2010 issue serves as just one example.


20 Cheng Ruisheng, "Lun zhongyin zhanlue hezuo huoban guanxi" [On the China-India Strategic Partnership], Guoji wenti yanjiu [International Studies], no. 1 (January 2007), 13–18; Zhang Xinping and Wei Ming, "Anquan liangnan yu zhongyin guanxi" [Security Dilemmas and Sino-Indian Relations], Guoji zhengzhi yanjiu [Studies of International Politics], no. 3 (March 2004), 132–36.


22 Wan Zhongxing and Luo Xia, "Malijua haixia jushi qianxi" [Analysis of the Situation in the Malacca Strait], Guoji zhanlue yanjiu [International Strategic Studies], no. 4 (April 2004), 18–22.


24 Zhou Hui, "Mei-yin zouxiang 'junshi tongmeng'?" [Are the United States and India Headed Toward a 'Military Alliance'?], Xiandai junshi [Modern Military], no. 8 (August 2009), 26–28.
While China's intentions of possessing its own aircraft carrier may in the future alter this dynamic, worries over Indian Ocean control are not unidirectional. Kathrin Hille and Mure Dickie, "China Reveals Aircraft Carrier Plans," Financial Times, 17 December 2010, http://www.ft.com/cms/s/0/fa756e6a-09cc-11e0-8b29-00144afeabdc0.html#axzz18TsagedZ.

Myers (2008), 350.


Quantitative impressions are impacted by a dearth of available sources among the surveyed journals in the 1990s, see graphs 3 and 4. Yet, they show an overarching focus on aviation and aerospace, reinforced by follow-on research. See Lora Saalman, "Chinese Views on India and Space," (speech, James Martin Center for Nonproliferation Studies, 10 February 2011).

Sun Weiping, "Yindu jiang yanfa zaizhong 10 t de huojian" [India is Developing a Rocket with a Load Capacity of 10 Tons], Daodan yu hangtian jishu [Missiles and Space Vehicles], no. 2 (February 2007), pages unavailable; "Yindu jiasu yanzhi tongbu weixing yunzai huojian" [India is Accelerating the Development of a Synchronous Satellite Launch Vehicle], Daodan yu hangtian yunzai jishu [Missiles and Space Vehicles, no. 5 (May 1995), 76.


"Yin fashe leida zhencha weixing" [India Launches a Radar Reconnaissance Satellite], Zhongguo hangtian [Aerospace China], no. 6 (June 2009), 46.


Belief perseverance may be defined as the "persistence of one's initial conceptions, as when the basis for one's belief is discredited but an explanation of why the belief might be true survives." Myers (2008), 101–02.

Divergence, Similarity and Symmetry in Sino-Indian Threat Perceptions

43 Myers (2008), 381.


45 Many of these arguments surfaced at a New Delhi conference, which was attended by the Indian military, strategic, scientific, academic and media community. “Space, Science and Security: The Role of Regional Expert Discussion,” The Secure World Foundation, Stockholm International Peace Research Institute and The Observer Research Foundation, New Delhi (19–21 January 2011).


51 “Yindu jinyibu tuidong dandaodaodan fangyu xitong jihua” [India Plans to Further Promote Ballistic Missile Defense System], Daodan yu hangtian yunzai jishu [Missiles and Space Vehicles], no. 2 (February 2009), 11; Ma Junsheng, “Yindu ‘liehuo’ dandaodaodan tufang jishu xingneng fenxi” [An Analysis of India’s ‘Agni’ Ballistic Missile’s Penetration Technology Capabilities], Hangtian dianzi duikang [Aerospace Electronic Countermeasures], no. 6 (June 2008), 1–4.


54 Xia Liping, “Lun yindu he zhengce yu he zhanlue de tedian yu yingxiang” [On the Characteristics and Impact of India’s Nuclear Policies and Nuclear Strategy], in Junbei kongzhi yu anquan (Arms Control and Security), no. 6, (June 2007), 1–11; Zhang Li, “Mei yin minyong he hezuo: Liyi duijie yu maodun” [U.S.-India Civil Nuclear Cooperation: Intersection and Conflicts of Interests], Yafei zongheng [Asia and Africa Review], no. 3 (March 2006), 35–41.

55 The exemption granted to India at the Nuclear Suppliers Group (NSG) in 2008 serves as just one example of exceptionalism, while the stalemate at the Conference on Disarmament (CD) on space issues demonstrates the challenge of achieving consensus in a multilateral organization.

56 Zhang Li, “Meiyin minyong he hezuo: Liyi duijie yu maodun” [U.S.-India Civil Nuclear Cooperation: Intersection and Conflicts of Interests], Yafei zongheng [Asia and Africa Review], no. 3 (March 2006), 35–41.


Rajesh Kumar Mishra, “Nuclear Proliferation Challenges and India’s Response,” Strategic Analysis 31, no. 5 (September 2007), 802.


Analyses within Indian technical and strategic periodicals cite China's stationing of nuclear-capable medium and short-range missiles in Tibet. K. K. Hazari and Vijai K. Nair, “A Proposed Indian Strategic Posture,” Defence and Technology 2, no. 11 (March–April 2003), 42.


Workshop organized by China Foundation for International and Strategic Studies (CFISS), Pacific Forum Center for Strategic and International Studies (CSIS), RAND, Institute for Defense Analyses (IDA), Advanced Systems and Concepts Office (ASCO) at the Defense Threat Reduction Agency (DTRA), Beijing, 8-9 November 2010.
