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# JIPA

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*Journal of Indo-Pacific Affairs (JIPA)*

600 Chennault Circle

Maxwell AFB AL 36112-6010

email: JIPA@au.af.edu

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# The Escalatory Attraction of Limited Nuclear Employment

DR. CHRISTOPHER YEAW

## Abstract

The United States has entered a dangerous new era in which, for the first time in history, the nation is soon to face two nuclear-peer adversaries: Russia and China. In the three decades after the Soviet Union's collapse, the United States focused on a variety of national security challenges that did not include emphases on Russia and China, who, over that period, observed the American way of war and developed capabilities to counter US strengths. While achieving some success in closing the gap across a wide spectrum of military capabilities and operational realities, Russia and China determined that limited nuclear employment might be required in any conflict with the United States. They also determined that escalation to limited nuclear conflict affords a unique advantage for both states since it is an area in which the United States has neither the perceived will nor the apparent capabilities to compete. This article discusses the *escalatory attraction* of limited nuclear employment for Russia and China.

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After the fall of the Warsaw Pact in 1989 and the Soviet Union in 1991, Russia emerged in a world clearly dominated by the United States. Not only did US dominance in the Gulf War demonstrate the effectiveness of the “Second Offset,” but it also confirmed Russia’s perception of an abiding antagonism through several rounds of NATO expansion and especially the bombing of Serbia—a longtime Russian client state.<sup>1</sup> Thus, despite the early optimism of the post–Cold War years, with a welcome focus on cooperative diplomacy and historic reductions of nuclear weapons, by 2000 Russia began to increasingly rely on nuclear weapons for security and turned to inveterate opposition to the world order directed by the United States.<sup>2</sup>

The People’s Republic of China (PRC) also faced a dominant United States through at least two defining crises: the Tiananmen Square massacre (1989) and the Taiwan Strait Crisis (1996). Having observed the conventional military overmatch of the United States, the PRC embarked on a multipronged military response, which included the development of a variety of nonnuclear upgrades to its defense posture and two specific nuclear upgrade programs, thus increasing the survivability of its strategic nuclear forces. This was an effort to deter the United States until the

PRC could achieve strategic nuclear parity. Developing robust theater nuclear forces, enabling theater nuclear strikes, was also a developmental goal.<sup>3</sup>

Strategically, Moscow and Beijing made it their goal to resist the status quo for a “lightly multipolar” world order, in an effort to replace the United States with a more “heavily multipolar” world order favorable to Russia’s and China’s own interests.<sup>4</sup> To achieve this overarching goal, as separate poles in this multipolar geopolitical environment, both require a “sphere of interest” in which they hold sway over allies and neutrals, together with some degree of worldwide reach through allies and basing. And, while there may exist slight divergences in their respective economic interests, for the past two decades it was in their separate but congruent interests to align their efforts, including in the military domain.<sup>5</sup> Operationally, Russia and China need to construct near-abroad spheres of influence that are militarily uncontested. This requirement is still only aspirational, especially in light of Russia’s arduous invasion of Ukraine, and remains so until they can demonstrate the overall military capability to “seal off” these respective spheres of influence from the dominant form of warfare that the United States and its allies perfected. This includes the overwhelming aerospace blitzkrieg resulting in the rapid destruction of enemy defenses, situational awareness, and ability to command and control forces. Russia and China embarked upon strategies to cope with and even gain ascendancy over the US aerospace blitzkrieg, but both concluded that such success is far from a foregone conclusion—requiring contingency capabilities and planning.<sup>6</sup>

### Necessary but Insufficient Symmetric Responses

Nevertheless, due to the deep and abiding reluctance of nations to opt for nuclear employment, military symmetry is preferred and employed.<sup>7</sup> In space, the domain that ensures situational awareness and command and control of forces, Russia has regenerated much of its once comparatively strong infrastructure and capacity. During the 1990s, for example, Russia lost much of its space-based capacity—including early warning of ballistic missile attack. However, Moscow has reestablished and modernized Russia’s space-based intelligence, surveillance, and reconnaissance (ISR) and early warning capabilities.<sup>8</sup> China went from operating a handful of satellites in the early 1990s to almost 500 in just less than 30 years’ time, most of which support the military. Space is an increasingly contested domain with urgent needs, but the United States remains ahead and will remain so for years to come with the proper investment.<sup>9</sup>

In the areas of air and counterair, while Russia remains ahead of China in integrated air and missile defenses, China is ahead of Russia in fielding fifth-generation aircraft. While there is no commonly agreed upon definition of *fifth-generation* for

fighters, consensus elements include stealth, enhanced situational awareness, electronic warfare, advanced engine performance, and networking.<sup>10</sup> The Russian aerospace industry is struggling to produce the Su-57 fifth-generation fighter.<sup>11</sup> Meanwhile, China produced 150 J-20s and will soon produce the H-20—its new bomber.<sup>12</sup> Against large numbers of truly fifth-generation F-22s, F-35s, and fourth-plus-generation F-15EXs and Block III F-18E/Fs, Russian and Chinese air defenders will likely experience high early attrition rates in any conflict.<sup>13</sup> The United States will keep this advantage well into the future as it is already flight testing a sixth-generation fighter aircraft.

In the area of air defenses, Russia and China certainly take these capabilities very seriously and rely on them in blunting US airpower. While the integrated air defense systems (IADS) of the western Russian and Chinese coast are formidable, the operational radars that are tasked with detecting, identifying, tracking, and targeting US fifth-generation aircraft simply are not up to the task. They are subject to suppression and/or destruction at ranges well beyond their ability to detect. The numbers of fifth-generation allied aircraft and their concomitant long-range ordnance preclude any reversal of this situation for at least a decade. While it was initially expected in analysis for this article that nuclear-tipped S-300/400/500 interceptors might change this equation, research suggests that this remains remote for the foreseeable future.<sup>14</sup>

In fact, across the entire range of nonnuclear military capabilities, the United States has repeatedly and enduringly demonstrated the will and ability to establish and maintain superiority through congressional commitment (adequate funding), innovation (unparalleled research and development), and operational dominance (tactics, techniques, and procedures). Despite the “peace dividend” of the 1990s and the necessary counterterrorism focus of the past two decades, the United States manages to stay competitive across the entire range of nonnuclear conflict. Moreover, in both materiel and nonmateriel components of conventional military competition (including space and cyberspace), the United States maintains a relatively durable military advantage, even in the case of an “away game” within the aspirational spheres of influence of Russia and China. More importantly, it seems clear that US adversaries reached the same conclusion, even while attempting to rectify the situation.

### **The Competitive Attraction of Limited Nuclear Employment**

Over the past three decades, the United States has resolutely refused to compete in the area of nonstrategic nuclear weapons. This refusal is evidenced by the rapid and near complete divestment of nonstrategic nuclear weapons in the 1990s and failure to reconstitute any countervailing capabilities, even after it was clear

that Russia reversed course.<sup>15</sup> The failure of presidential administrations to advocate for recapitalization of nonstrategic nuclear weapons and congressional resistance to authorizing or funding even minimal recapitalization activities over the past two decades only underscores the desire to avoid fielding a sufficient force of credible, theater nuclear weapons—even in the face of Russian nuclear threats.<sup>16</sup> It is worth noting that it was only in light of clear Russian cheating on the Intermediate Nuclear Forces Treaty (INF) that the United States, wisely, highlighted the extent of Russian reliance on nonstrategic nuclear weapons.<sup>17</sup>

While the United States rapidly and irreversibly dismantled its nonstrategic nuclear weapons arsenal via thorough implementation of the Presidential Nuclear Initiatives of 1991 and 1992, Russia, after a promising start, abandoned the effort by the end of the 1990s.<sup>18</sup> Moscow's unilateral abandonment, indeed reversal, of this informal arms control process was not unknown by the United States. Nor was it unknown that China was focusing on nonstrategic nuclear weapons development and deployment for the past decade-and-a-half by that time, culminating with design of both low-yield tactical and enhanced radiation warheads, deployment of a large variety of dual-capable theater missile systems, and the development of a doctrine of "dual deterrence/dual operations."<sup>19</sup>

Additionally, while the United States has strictly observed a "zero-yield" interpretation of the Comprehensive Nuclear Test Ban Treaty (CTBT) since 1992, Russia and China appear to test at extremely low yields.<sup>20</sup> While it is unknown what benefits are gained through this activity, not only are there specific areas in which the United States could benefit from similar testing, but more importantly the US relinquishment of this field of military scientific inquiry dangerously underscores Washington's aversion to competition within the general area of nuclear weapons development. Indeed, at the time of the CTBT ratification hearings, Ambassador C. Paul Robinson, then-director of Sandia National Laboratories, stated bluntly, "If the United States scrupulously restricts itself to zero-yield while other nations may conduct experiments up to the threshold of international detectability, we will be at an intolerable disadvantage."<sup>21</sup>

These competitive developments accelerated after the invasions of Georgia and Ukraine in 2008 and 2014, respectively. The clear outlines of a coercive new "theory of victory," which locates limited theater nuclear employment at its core, are now in full view.<sup>22</sup> Rather than respond competitively, the United States responded repeatedly with unambiguous messages refusing to compete. Asymmetric Presidential Nuclear Initiative compliance, congressional prohibition on low-yield weapons development, cancellation of Robust Nuclear Earth Penetrator (RNEP), prohibition on even conceptual design efforts, retirement and disassembly of the W84 cruise missile warhead, the planned retirement of the B83 gravity bomb,



asymmetric adherence to a zero-yield testing policy, and myriad correlating political statements emphasized the US desire to “reduce the role of nuclear weapons” even as Russia and China did the opposite.

### **The Pursuit of Competitive Limited Nuclear Employment Capabilities**

Moscow continues to expand Russia’s reliance on nuclear weapons and will soon have a fully modernized operational force of some 8,000 nuclear warheads by the end of this decade, roughly half strategic and half nonstrategic.<sup>23</sup> Currently, Russia is more than 90-percent complete with its strategic force modernization and it is almost 80-percent complete with the modernization of its nonstrategic nuclear forces.<sup>24</sup> In its strategic modernization, Russia displays a distinct preference for building significant upload capacity into its force structure. The United States, on the contrary, eliminated multiple independent reentry vehicles (MIRV) from Minuteman IIIs, taking the entire fleet to single-reentry vehicles (RV). Russia’s newest strategic intercontinental ballistic missile (ICBM) systems, the Yars and the Sarmat, have reported maximum RV capacities of 6 and 20 RVs, respectively.<sup>25</sup> Fielded Yars are declared as single RV weapons under the New START Treaty but offer an opportunity for significant upload. In light of the fact that the two Russian nuclear production plants have a combined capacity of at least 10 times the capacity that the two US pit production plants will have by some indeterminate date in the 2030s, Russia can rapidly expand its strategic nuclear arsenal where the United States cannot.<sup>26</sup> At the expiration of New START in 2026, or anytime sooner in the event of a breakout, Russia could rapidly triple the number of operational strategic nuclear warheads. Because of much less reversible logistics constraints and the lack of warhead-production capability, it would take the United States years to even double the number of operational strategic nuclear warheads.<sup>27</sup>

Though the net balance in strategic nuclear forces significantly favors Russia, the true focus for Russian nuclear modernization is what was known during the Cold War as *long-range theater nuclear forces*. The bottom line for these systems is simple: Russia requires recourse to theater-range, ultra-low yield, nuclear systems to blunt an American-led NATO air war. Russia views such a campaign as the inevitable opening gambit of any conflict with the West.<sup>28</sup> Russia may find a way to blunt that formidable capability through the use of electronic warfare, an advanced long-range radar architecture, and highly integrated nuclear-armed IADS.<sup>29</sup> Nevertheless, purely defensive operations, even nuclear-armed operations, against a NATO aerospace blitzkrieg will rapidly be demonstrated as cata-

clysmically insufficient, and almost immediate recourse will be to deep interdiction against allied air bases across the NATO landscape to dramatically reduce the sortie rate of fifth-generation aircraft.<sup>30</sup> Russia realized this as early as 1999 and began focusing a large fraction of its defense spending on theater nuclear forces, successfully developing and fielding a variety of such platforms, including the SSC-8 ground-launched cruise missile (GLCM), the Kh-47M2 Kinzhal air-launched hypersonic missile (ALHM), the 3M-14 Kalibr land-attack cruise missile (LACM), and the P-800 Oniks antiship cruise missile (ASCM).<sup>31</sup> These systems are fielded, and Russia has built the operational plans, formulated the doctrine, and conducted the exercises to successfully execute strikes with these systems in actual combat.<sup>32</sup>

China has followed a similar path. The advent of the DF-41 heavy mobile ICBM, the JL-3 intercontinental-range submarine-launched ballistic missile (SLBM), and the H-20 heavy stealth bomber has ensured the survivability of China's strategic nuclear forces and positioned China to "sprint" to rough strategic nuclear parity with the United States over the course of the coming decade. However, what is perhaps more disconcerting is that China achieved theater nuclear superiority centered on a paced build-up of advanced theater missiles of various ranges, most of which began developmental life with an explicit nuclear mission—i.e., DF-21 and DF-26. The extent of dual-allocated theater systems is unknown. Where there is opacity in the nuclear posture of China, Western analysts are quick to downplay the threat. For example, even though every previous "stealthy" bomber in P-5 nations was accompanied by suitable air-delivered, direct-attack gravity bombs, Western analysts remain surprisingly unconvinced that China possesses a modernized nuclear gravity bomb.<sup>33</sup>

This lack of transparency into China's theater nuclear forces largely meets with Western skepticism. Such forces likely include a cruise and ballistic missile delivered by the H-6K and H-6N theater bombers, augmented by in-flight refueling, and medium-to-intermediate range ballistic missiles like the DF-15, DF-16, DF-17, DF-21, and DF-26.<sup>34</sup> Chinese theater nuclear forces may also include a dual role for the J-20 (analogous to the F-35), a dual capability for imported S-400s, a submarine-launched cruise missile, and even a nuclear role for its newest 155mm artillery. The variety of Chinese dual-capable theater systems begs the question, is China racing to achieve theater nuclear parity with Russia—not the United States?

It is argued that China is postured to defeat the United States in a conflict close to the former's own shores, but this is far from a foregone conclusion.<sup>35</sup> It is at least probable, for example, that the so-called fifth-generation J-20 will suffer defeat at the hands of US F-22s, enabling fifth-generation strike aircraft to sys-

tematically suppress or destroy Chinese IADS and blind or confuse the People's Liberation Army's (PLA) command, control, communications, and intelligence (C3I) complex. While it is debatable whether US forces can generate the required sortie rates over the much longer "Pacific-relevant" distances, it is at least a very real possibility that PLA planners must consider. The situation, then, for China is likely similar to Russia's dilemma, placing China in a position to escalate across the nuclear threshold or face defeat. This is existentially untenable for the Chinese Communist Party. Given the geography of the theater of operations, though, China would likely resort to discriminate low-yield (it remains to be seen just how low) nuclear strikes on important theater targets to forestall defeat.

The combined outcome of these great-power dynamics is that Washington finds itself in a strategic environment in which the United States will soon face two nuclear-peer adversaries positioned favorably in the net nuclear balance. Russia retains its parity in strategic nuclear weapons, with a larger and more rapid upload capacity. Russia is also near complete in its nonstrategic nuclear weapons modernization program. China's own "breathtaking nuclear breakout" came to light as previously unknown missile fields were identified, indicative of near-term strategic parity, and a surge in theater nuclear weapon development, production, and deployment.<sup>36</sup> One other indicator of this theater nuclear expansion is the massive expansion at Pingtong, China's nuclear weapons production site (roughly analogous to pit production plus Pantex in the United States), which cannot be entirely attributable to the expansion of the number of strategically deliverable warheads, notwithstanding the rapid expansion in that latter category.

### **Strategic and Operational Consequences**

In the event that Russia or China crosses the nuclear threshold into discriminate, very low-yield theater nuclear strikes, the consequences for the United States and its allies are grim. Such "light" employment would be designed to encourage US capitulation and avoid galvanizing Americans, almost assuredly striking purely military targets with extremely low collateral damage and essentially zero fallout. Such theater targets are numerous for Moscow and Beijing to choose from since US forces enjoy extensive overseas basing options and allies are likely fighting alongside the United States. Especially attractive targets are airstrips supporting fifth-generation aircraft, air and missile defense radars, logistics hubs, and command-and-control nodes. These types of targets would seriously degrade operations if struck, particularly the immediate effort to establish air dominance in a region.

The rail and road links into Ukraine that are needed for allied reinforcement of Ukrainian armor and mechanized brigades might also be immediately destroyed

by a relatively small number of ultra- and very-low yield nuclear strikes while avoiding significant civilian casualties. And as an example of the avoidance of collateral damage, the Aegis Ashore installation in Romania is separated from civilian populations sufficiently for Russia to strike it with an ultra-low or very-low-yield Kinzhal and kill essentially zero civilians. Strikes like these are designed to pressure the United States and its allies by messaging to democratic populations and their leadership that the stakes of this conflict are high enough for the rival to go nuclear, without substantial likelihood of strengthening resolve, due to the purely military nature of the casualties. The implied (or explicit) message is simple—there are hundreds more strikes like these coming. Looming over all such operations is the real threat of escalation to strategic nuclear strikes if the stakes are high enough.

If these light theater strikes fail to collapse the will to fight in the United States and its allied nations, graduated escalatory responses are possible. For example, one of Russia's known operational concepts is strategic operations for the destruction of critically important targets (SODCIT), which incorporates a mix of conventional and nuclear strikes, combined with cyber and space operations, to deliver significant damage to US infrastructure.<sup>37</sup> In this context, a useful example is a very-low-yield nuclear cruise missile strike on the weapons storage area at Whiteman AFB, Missouri, the B-2 bomber base, which would destroy the target without killing many airmen less than a mile away. Alternatively, heavier theater strikes might be executed with higher yield (single-digit kilotons), against more valuable targets (early warning radars, for example), or more widely distributed. This could be coincident with ultra- and very-low-yield nuclear strikes across many in-theater air bases.

In all these cases, about which Moscow and Beijing contemplate, the intention is to undermine the will to fight. In this phase, as in every phase of a conflict, the adversary vigorously conducts information operations against the United States, supporting all voices that call for an immediate cessation of hostilities, advocating strenuously against nuclear escalation, and questioning the value of the political objective. The pressure to seek accommodation would prove very high, particularly since the United States and its allies have very limited proportional response capability. Proportional responses that do exist almost invariably demand strikes into the homeland of the enemy, giving a “shadow of legitimacy” to potential limited nuclear strikes on the United States.

## **Recommendations**

While it may be distasteful to Americans to compete with Russia and China in nonstrategic nuclear weapons, the alternative is no longer an option if the United States intends to maintain its position in the world. Counter to the fears of many

in the disarmament community, building a capability to credibly respond to the threatened use of nonstrategic nuclear weapons will deter the very action that is feared. The ever-present concern that Moscow or Beijing might opportunistically take advantage of a limited nuclear conflict between the United States and the other state—attempting a *fait accompli* of their own—is also worth considering as the nation thinks its way through how to lead the free world in a tripolar era.

It should be clear from the analysis provided here that the US strategic nuclear modernization program must be executed without further delay. Repeated Russian threats to use nuclear weapons against NATO and Ukraine only underscore the erosion of a nuclear taboo that saw few nuclear threats over the past five decades. President Vladimir Putin is certainly leaving many Americans to wonder whether the “apocalypse insurance” afforded by the nation’s strategic forces is now expired. Modernization of the nuclear triad is the floor of nuclear posture adjustment, not the ceiling.

The 2018 *Nuclear Posture Review* rightly concluded that not only would the W76-2 low-yield SLBM warhead be required as a force posture adjustment but also that the nation should pursue a sea-launched cruise missile with a nuclear warhead (SLCM-N). The W76-2 provides a survivable, penetrable, and prompt response option, but it suffers from two limitations. First, it was fielded in very small numbers. Second, the single low-yield option may not be sufficiently low for some cases where a very- or ultra-low-yield option is required. The SLCM-N alleviates the constraints imposed by these limitations, by allowing for adaptability and scalability in numbers and yield options. Unfortunately, the Biden administration cancelled the SLCM-N in May 2022. Putin’s repeated nuclear threats are certainly reason to reconsider this decision, and it is heartening to see funding restored by Congress in a rare bipartisan consensus.

Additional capabilities and nonmateriel solutions are also required. These include developing new strategic approaches to adversary nuclear doctrine.<sup>38</sup> The Biden administration is developing *integrated deterrence* for this purpose. Although highly improbable, successful arms control efforts with Moscow and Beijing that include nonstrategic nuclear weapons would be one approach to limiting the threat.<sup>39</sup> Given the criticality of the perceived value of nonstrategic nuclear weapons, Russia and China are unlikely to divest themselves of these capabilities, which would require the United States to field its own arsenal as a way to drive its adversaries to the negotiating table—similar to President Ronald Reagan’s effort that led to the INF Treaty.

Additional US countervailing capabilities might include symmetric and asymmetric options. An example of a symmetric countervailing capability is nuclear-armed, mobile, ground-launched, continental-range hypersonic missiles. The nu-

clear warhead might even be of the variable-yield, “clip-in” type that were briefly pursued by the United States in the 1980s.<sup>40</sup> Asymmetric countervailing capabilities almost certainly are kinetic, since nonkinetically induced effects, while operationally significant, generally do not carry the same psychologically escalatory effects. Several options exist, including some that are space-based, but they all face significant political hurdles and possibly even greater technological ones.

In either countervailing case, symmetric or asymmetric (but kinetic), the primary goal is to bolster deterrence. Moscow and Beijing must be convinced that there is no advantage to escalating across the nuclear threshold. Such a shift in perspective could diminish the attraction of limited nuclear employment. Without recourse to some means of escalating past the United States, Russia and China would then also be deterred from even beginning down the path to conflict. Of course, should deterrence fail, the United States would be well positioned to contain the conflict to nonnuclear modes and levels of escalation, since there would be no strategic or operational advantages for adversaries to gain using nonstrategic nuclear weapons. Moreover, by gaining countervailing capabilities the United States also gains arms control leverage. Fielding such capabilities, as done in the 1980s with the Pershing II and the GLCM, would potentially open the door to a multilateral arms control treaty that captures all nuclear warheads.

Finally, research and development of US warhead technologies require an accelerated modernization of the National Nuclear Security Administration lab infrastructure. Considering China’s massive expansion of its nuclear forces and Russian and Chinese limited nuclear employment plans, US inferiority in nonstrategic nuclear weapons will only become more pronounced in the decade ahead, if left unchecked. In the end, the United States needs to demonstrate its commitment to eliminating the advantages that a nuclear-armed peer might gain in employing nonstrategic nuclear weapons in a very limited and selective manner. Until that day, an attraction toward limited nuclear employment persists that Americans can expect Russia and China to assiduously attempt to exploit. ♣

#### **Dr. Christopher Yeaw**

Dr. Christopher Yeaw is Associate Executive Director for Strategic Deterrence and Nuclear Programs at the National Strategic Research Institute (NSRI) at the University of Nebraska, US Strategic Command’s University Affiliated Research Center. Immediately prior to his appointment at NSRI, Dr. Yeaw was the National Nuclear Security Administration’s Senior Policy Advisor for Defense Programs, having served as the Department of Energy’s lead official in the development and rollout of the 2018 *Nuclear Posture Review*. Formerly, he was the founder and director of the Center for Assurance, Deterrence, Escalation, and Nonproliferation Science & Education (CADENSE), a nuclear-weapons think tank at the Louisiana Tech Research Institute. From 2010 to 2015, Dr. Yeaw served as the first Chief Scientist of Air Force Global Strike Command (AFGSC), which was established in 2009 to organize, train, equip, operate, secure, and maintain all US intercontinental ballistic missile and nuclear-capable bomber forces. He earned his PhD in nuclear engineering and engineering physics from the University of Wisconsin at Madison in 1995.

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# India and Freedom of Navigation

## Maritime Power and Control of the Sea

DR. PATRICK BRATTON

### Abstract

India retains a policy that restricts freedom of navigation in what it considers its territorial waters; at the same time, India has taken a vocal stance on the importance of freedom of the sea and the international rules-based order. While maintaining both positions seems contradictory, it should be seen as an aspect of *mare clausum* and India wanting to control its territorial waters. This article traces the historical origins of this view and India's current maritime policies. While most commentators assume India's position will eventually converge with that of the United States, this is unlikely to occur. The United States needs to start planning for an operational environment more marked by *mare clausum*, where not only adversaries but also allies and partners have restriction on the freedom of navigation.

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In April 2021, the US Navy conducted a freedom of navigation operation (FONOP) inside India's exclusive economic zone (EEZ), sparking an outcry among Indian commentators. Some speculated this was a deliberate provocation, since it took place during the fiftieth anniversary of the USS *Enterprise* entering the Bay of Bengal during the 1971 India–Pakistan War.<sup>1</sup> This incident highlights an important divergence in how the Washington and New Delhi see some aspects of the rules-based international order in an era when the United States and India are building a strategic partnership and are concerned about freedom of navigation.

It is common to speak of India being a natural security partner of the United States and its allies, not only for geopolitical reasons but also for shared values and interests. The renewal of the Quadrilateral Security Dialogue (Quad) partnership of the United States, Japan, Australia, and India—which is often seen as an alliance of Indo-Pacific democracies—underlines this perception.<sup>2</sup> However, New Delhi and Washington seem to have divergent views on this critical piece of the rules-based international order.<sup>3</sup>

Contemporary commentators either call upon nations like India to “ensure their domestic oceans-policy reflects collective strategic interest in a liberal order

of the oceans”<sup>4</sup> or ask for the United States and India to come to a convergence or compromise on their respective positions.<sup>5</sup> However, it is useful not to take for granted that maritime powers support freedom of navigation in the same way the United Kingdom and United States have evolved to do. Many states have restrictions similar to India’s, and we could see increasing acceptance of restrictions on freedom of navigations in the future.

### **Mare Clausum, Mare Liberum, and Freedom of Navigation**

The dominant perspective of international maritime law tends to reflect the preferences of the maritime powers, in particular the question of access to the seas. International law of the sea emerged during a debate in the early modern era over whether the seas could be administered as sovereign territory (*mare clausum*), or if they constituted a global commons (*mare liberum*).<sup>6</sup> It is important to note that the contemporary perspective that “freedom of the seas” is the norm and has been for a long time is misleading. As law of the sea emerged during the first age of Western imperialism in the sixteenth through eighteenth centuries, most great powers sought to control the seas and exclude rivals from what they considered their land domain.<sup>7</sup>

Maritime powers like Spain and Portugal sought to control the seas like the land. They sought to administer and restrict their waters—and markets.<sup>8</sup> As European powers expanded into the Americas, Africa, and Asia, they brought this norm with them. The Portuguese established a regime of administering maritime trade in the Indian Ocean through superior naval forces and a system of customs, taxes, and requiring licenses for vessels.<sup>9</sup> Even Britain initially followed the closed sea approach, with the British author John Seldon actually coining the term *mare clausum*.

Later, Hugo Grotius and others articulated the alternative of *mare liberum*, but the major powers resisted the idea in their multipolar struggle for dominance. It was only in the nineteenth century that the British Empire—once it set itself up as the maritime hegemon—sought to enforce a policy of freedom of the seas. After Britain’s decline as a global power, the United States continued this policy of promoting the freedom of the seas. There is an often-overlooked connection between a dominant power establishing and promoting freedom of the seas, and a more balanced system of powers who seek to limit freedom of navigation in their own seas. As Daniel P. O’Connell wrote, “When... great powers have been in decline or have been unable to impose their wills upon smaller States, or when an equilibrium of power has been attained between a multiplicity of States, the emphasis has lain upon the protection and reservation of maritime resources, and consequently upon the assertion of local authority over the sea.”<sup>10</sup> The influence

of the changing balance of power is important to understand the diverging views of the postimperial era and also today's multipolar environment.

## **Understanding India's Stance on Sovereignty and Maritime Law**

Following independence, India's political leaders focused on sovereignty and internal development. As part of this perspective, freedom of navigation—in relation to foreign warships—was something to be limited to help secure India from foreign powers. Recently, a growing sense of “maritime consciousness” has emerged in India that stems from various sources, ranging from naval officers to political commentators and political-economic initiatives.

For India, sovereignty has a natural connection to maritime issues because Western powers dominated and colonized Asia through control of the sea. Indian historian KM Panikkar termed this age the “Vasco de Gama Epoch,” after the first European explorer to sail into the Indian Ocean in the 1490s. Western maritime power was the key to the establishment of European empires in Asia, and therefore, it was the principal reason Asian states lost their sovereignty.<sup>11</sup> In 2007, Minister for External Affairs Pranab Mukherjee echoed Panikkar, “The realization that this gross neglect of maritime security eventually led to the colonization of the subcontinent and the consequent loss of India's very independence for nearly three centuries should make a repetition of this strategic error utterly unaffordable.”<sup>12</sup>

Many postcolonial nations like India saw the world divided between the large industrial powers on the one hand, which had navies and wanted freedom of navigation to protect the global commons and to project power, and the developing nations on the other hand, which sought to limit access to waters off their territory to guard against power projection and to secure economic resources in and under those waters.<sup>13</sup> With decolonization, more and more new states joined the international system and sought to challenge the existing norms. O'Connell observed that the arrangement of states shifts to have more actors the greater the push for *mare clausum* becomes. The developing world sought to shift the norms of the oceans regime away from valuing freedom of the seas and narrow coastal jurisdiction, giving greater economic rights to ocean space off the territorial waters of states beyond the customary three-mile limit and restricting freedom of navigation into territorial waters—and later EEZs.<sup>14</sup> As Robert Keohane and Joseph Nye note, “The situation after 1967 was not merely one of ‘cheating on the regime,’ but of pressure for an alternative regime.”<sup>15</sup> As James Kraska notes, “The relative ascent of the Third World South and Russia . . . presages a reformation of international law, including well-settled tenets of the law of the sea. In particular,

the emerging powers are renewing a push for expanded coastal state authority, jurisdiction, and even sovereignty, in the EEZ.”<sup>16</sup>

The issues of freedom of navigation and innocent passage were contentious. The maritime powers maintained that any waters beyond territorial waters were considered part of the high seas or international waters. Hence, all states enjoyed freedom of navigation through them. Depending on the state, this freedom of navigation has included the “innocent passage” of warships through territorial waters and EEZs and the right of ships, even warships, to pass through territorial waters without the need for prior notification as long as those warships did not engage in hostile acts and were directly transiting from one point to another.<sup>17</sup> Many developing coastal states, including Bangladesh, Pakistan, China, and India, supported curtailing the right of innocent passage in their territorial waters and even their EEZs.<sup>18</sup>

India sought to limit extraregional powers from having military forces in the Indian Ocean region (IOR), often referred to as India’s Monroe Doctrine.<sup>19</sup> As India defeated Pakistan in the 1971 India-Pakistan War, the Nixon administration sent the carrier USS *Enterprise* from the Pacific to the Bay of Bengal as a token show of force that seemed like a return to imperial gunboat diplomacy. Later, the US presence on Diego Garcia, the Soviet invasion of Afghanistan in 1979, and the Carter Doctrine all seemed to indicate to Indian political leaders that South Asia would be a new front of the Cold War.<sup>20</sup> Even in recent years, New Delhi has maintained its objections to US surveying and intelligence collection vessels off India’s coast and made official protests in 2001, 2004, and 2007.<sup>21</sup> As Indian naval officials are often fond of observing, India is listed as a country in which the United States conducts FONOPs to challenge “excessive maritime claims.”<sup>22</sup>

India required foreign warships to provide prior notification and ask for approval before they entered Indian territorial waters.<sup>23</sup> Because the first United Nations Convention on the Law of the Sea (UNCLOS) refused to include this restriction, India did not ratify the four Geneva Conventions on the Law of the Sea (that made up UNCLOS I) in the 1960s.<sup>24</sup> Similarly, India tried to limit the access of external military powers into the IOR, as evidenced by its proposal in 1971 for an Indian Ocean Zone of Peace (IOZP).<sup>25</sup>

In the years leading up to UNCLOS III, India passed the Maritime Zones Act of 1976, “which formally required all foreign warships to give prior notification when passing through the territorial waters of India, even when undertaking innocent passage.”<sup>26</sup> New Delhi’s position, as codified in the 1976 Maritime Zones Act, is that “Foreign warships including submarines and other underwater vehicles may enter or pass through the territorial waters after giving prior notice to the Central Government: Provided that submarines and other underwater vehicles shall navigate on the surface and show their flag while passing through such waters.”<sup>27</sup>

As Iskander Rehman notes, parts of the Maritime Zones Act also seem to indicate an Indian intention to limit outside access to India's EEZ through "designated areas" of its EEZ, which contradicts UNCLOS's definition of *freedom of navigation*.<sup>28</sup> Moreover, it is important to note that while India signed UNCLOS in 1982, it was not ratified by India until 1995, and that was only with adding the following declaration to it:

The Government of India reserves the right to make at the appropriate time the declarations provided for in articles 287 and 298, concerning the settlement of disputes;

The Government of the Republic of India understands that the provisions of the Convention do not authorize other States to carry out in the exclusive economic zone and on the continental shelf, military exercises or maneuvers, in particular those involving the use of weapons or explosives without the consent of the coastal State.<sup>29</sup>

### **India's Return as a Great Maritime Power**

For the past two decades, many domestic and international observers see India as a rising great power and a strategic partner for the United States.<sup>30</sup> This perspective also views maritime issues as increasingly important given India's economic and energy needs. Now Indian elites have drawn upon India's often forgotten maritime past to fashion a narrative of an India that is returning to its former position as a great maritime power, as it was during the Chola Empire.<sup>31</sup>

There are several drivers for this change. First, when India opened itself to the global economy, it naturally became more dependent on global trade and external energy sources. This dependence has highlighted the importance of maritime security and sea lines of communication (SLOC).<sup>32</sup>

Second, China has replaced Pakistan as India's major security challenge. Along with Pakistan, China has been India's major security concern—dating back to at least the disastrous border war of 1962. India and China share a disputed border, and by most measures, China's military capabilities and terrain hold India at a disadvantage along that border. China has also maintained a strong quasi-alliance with Pakistan and given its ally robust military assistance.<sup>33</sup> From an Indian perspective, this relationship is to "keep India" down, locked in its region in a rivalry with a weaker state, while China can expand its influence into the IOR.<sup>34</sup>

India is concerned with Beijing's expanding naval and economic links with many of India's neighbors like Pakistan, Bangladesh, Sri Lanka, and Myanmar through China's Belt and Road Initiative (BRI).<sup>35</sup> These circumstances give India

an incentive to maintaining the norms of freedom of navigation, as understood by Western maritime powers, or friendly passage of warships through EEZs in Southeast and Northeast Asia, particularly in the South China Sea. A China that controls the South China Sea is a China that can control the Straits of Malacca and can securely project power into the Indian Ocean. As maritime affairs analyst Abhijit Singh warns, “More importantly, India must be aware that a consolidation of Chinese maritime power in Southeast Asia has a direct bearing on the People’s Liberation Army Navy’s (PLAN) power projection plans in the Indian Ocean.”<sup>36</sup>

The idea of India returning as a great maritime power has been a consistent and growing theme for governments under both major political parties: the Indian National Congress and the Bharatiya Janata Party.<sup>37</sup> In 2007, then–Minister for External Affairs Pranab Mukherjee spoke in the following terms: “Fortunately, after almost a millennia of inward and landward focus, we are once again turning our gaze outward and seawards, which is the natural direction of view for a nation seeking to reestablish itself not simply as a continental power, but even more so as a ‘maritime’ power—and, consequently, as one that is of significance on the global stage.”<sup>38</sup> Later in the same speech, he addressed the special, moral role of India in upholding international norms:

India, with its growing capabilities and confidence, and its history of benign and active international engagement, is ready to contribute its maritime might to ensure such a positive outcome . . . as a mature and responsible maritime power, we are contributing actively to capacity building and operational coordination to address threats . . . We see the Indian Navy and the Indian Coast Guard as major stabilising forces in this great movement of energy across the Indian Ocean, not just for India, but for the world at large.<sup>39</sup>

The Modi government has emphasized maritime themes in several of its initiatives like the Security And Growth for All in the Region (SAGAR, also “sea” in Hindi), Blue Revolution, Neighborhood First, and Act East.<sup>40</sup> In 2015, Prime Minister Narendra Modi launched the SAGAR initiative, and he visited a succession of IOR countries, laying out his “maritime vision” and the Blue Revolution.<sup>41</sup> Perhaps the most high-profile example of this was India’s chairing of the UN Security Council’s (UNSC) open debate on maritime security in August 2021.<sup>42</sup> Significantly this was the first time an Indian prime minister chaired an open UNSC debate.<sup>43</sup>

In many of Modi’s speeches at international meetings, he attempts to strike a balance between India’s special role as an ancient civilization and the new India, which is enmeshed in the international order.<sup>44</sup> His Shangri-La Dialogue speech



in 2018 is perhaps the best example. It consists of the following elements: (1) India is an ancient civilization, one of the world's leading powers, and it is returning to its leading role; (2) India in the past was a great maritime power with strong links with not only the IOR but also Southeast Asia; and (3) India is a responsible state that champions the norms and rules of the international system. First, Modi mentions India's historical links to Southeast Asia:

Singapore is our springboard to ASEAN [the Association of Southeast Asian Nations]. It has been, for centuries, a gateway for India to the East. For over two thousand years, the winds of monsoons, the currents of seas and the force of human aspirations have built timeless links between India and this region. It was cast in peace and friendship, religion and culture, art and commerce, language and literature. These human links have lasted, even as the tides of politics and trade saw their ebb and flow. Over the past three decades, we have re-claimed that heritage to restore our role and relationships in the region. For India, no region now receives as much attention as this. And, for good reasons. Oceans had an important place in Indian thinking since pre-Vedic times.

Modi goes on to stress the importance of the rules-based system:

We believe that our common prosperity and security require us to evolve, through dialogue, a common rules-based order for the region. And, it must equally apply to all individually as well as to the global commons. . . . We will promote a democratic and rules-based international order, in which all nations, small and large, thrive as equal and sovereign. We will work with others to keep our seas, space and airways free and open; our nations secure from terrorism; and our cyber space free from disruption and conflict.<sup>45</sup>

This shift to see India as a great maritime power has resulted in new policy statements and concrete actions related to maritime disputes, the rules-based order, and India's role in Indo-Pacific security. Several examples illustrate this new perspective: (1) the 2014 Hague decision on the India–Bangladesh maritime dispute; (2) Indian comments on freedom of navigation in the Indo-Pacific, especially the South China Sea; (3) a growing appreciation for the utility of sea power for Indian foreign and security policy as seen in the SAGAR policy; and (4) the density of international security arrangements and relationships with other Asian states and the United States.

India and Bangladesh had a long-standing maritime dispute in the Bay of Bengal. Bangladesh brought the dispute to the UN under UNCLOS, and India accepted the case being brought to the tribunal. In 2014, the UN tribunal found in

favor of Bangladesh. Rather than contest this decision, Modi's government accepted it and held it up as a positive example of how powers should settle disputes.<sup>46</sup> Many have seen this as a signal to Beijing and China's opposition to arbitration of disputes in the South China Sea.<sup>47</sup>

Following a 2011 incident, where a Chinese vessel confronted an Indian naval vessel in what the Indians consider international waters (i.e., within Vietnam's EEZ), the Indian Ministry of External Affairs issued the following statement: "India supports freedom of navigation in international waters, including in the South China Sea, and the right of passage in accordance with accepted principles of international law. These principles should be respected by all."<sup>48</sup>

These comments were reiterated by other government officials. In 2016, the Ministry of External Affairs stated, "Sea lanes of communication passing through the South China Sea are critical for peace, stability, prosperity and development. . . . As a State Party to the UNCLOS, India urges all parties to show utmost respect for the UNCLOS, which establishes the international legal order of the seas and oceans."<sup>49</sup> In a similar vein, Minister of State V.K. Singh clarified,

Government's position on this issue is very clear. India supports freedom of navigation and over flight, and unimpeded commerce, based on the principles of international law, as reflected notably in the UNCLOS. India believes that States should resolve disputes through peaceful means without threat or use of force and exercise self-restraint in the conduct of activities that could complicate or escalate disputes affecting peace and stability.<sup>50</sup>

This is a position was then reflected in joint statements with the United States. For example, Prime Minister Modi and President Barack Obama stated in a joint statement released in 2015, "We affirm the importance of safeguarding maritime security and ensuring freedom of navigation and over flight throughout the region, especially in the South China Sea."<sup>51</sup> Then former Indian Naval Chief D.K. Joshi stated that freedom of navigation is India's primary concern in the South China Sea and that India would be willing to use force to protect its interests.<sup>52</sup>

The place of the navy in Indian security and thinking about security has steadily improved. For most of India's history, territorial disputes have been the primary security concern for New Delhi. Increasingly, India has found the navy useful for securing Indian interests in the IOR, improving security ties with the rest of Asia, and protecting Indian economic growth. In 2004, India selected the Andaman Islands for its first tri-service theater command, the Andaman and Nicobar Command (ANC).<sup>53</sup> This command has proven critical for improving outreach and security ties with Southeast Asia through the Milan exercise and other initiatives.

The percentage of the defense budget allocated for the navy has also been increasing; its budget in 2022 increased by 44.53 percent.<sup>54</sup>

In the past 20 years, particularly the last five years, India has undertaken unprecedented outreach to and engagement with the United States and many East and Southeast Asian nations. It started bilateral and eventually multilateral military exercises with the United States and US allies. It also started its own military engagement like the Milan exercises with Southeast Asia, and regular exercises with France, Singapore, and others.<sup>55</sup> Perhaps the most concrete example of the shift in New Delhi's views has been the series of major security agreements between the United States and India like the Logistics Exchange Memorandum of Agreement (LETMOA) and Communications Compatibility and Security Agreement (COMCASA) and India's role in the renewed Quad. As Tanvi Maden titled her insightful article, "India Is Not Sitting on the Geopolitical Fence," New Delhi has sent some costly signals that while India values its autonomy, the contemporary environment means closer cooperation with the United States and its Indo-Pacific allies.<sup>56</sup>

This stance is also articulated in the 2015 *Indian Maritime Security Strategy*, which stresses the importance of India's relations with its maritime neighbors and its role in that neighborhood, including the fact that these relations are based on mutual respect for international laws and norms and the desire for cooperative, inclusive development.<sup>57</sup> The document goes on to stress the importance of SLOCs and choke points that pose a danger to them, in a fashion similar to what Panikkar wrote in the 1940s.<sup>58</sup> It also has a section on maritime territories and disputes, which stresses India's adherence to international law and norms in responsibly settling its maritime disputes:

India shares maritime boundaries with seven countries and has settled the boundaries with all, except Pakistan, in accordance with international laws and norms. . . . India has also welcomed the judgement of the Arbitration Tribunal settling the maritime boundary with Bangladesh in 2014 . . . Resolution of jurisdiction promotes peace, by reduction in the scope for disputes, and facilitates maritime governance, investments in maritime economic activities, legitimate use of the seas, and cooperation for maritime security. Strengthening relations with maritime neighbors requires mutual respect for the common principles of international law and the tenets of *Panchsheel*. These principles and tenets have been consistently supported by India, including in the maritime domain.<sup>59</sup>

This last passage perhaps best illustrates the complexities of India's maritime policy, as it simultaneously calls for all countries to adhere to international laws

and norms and stresses the postcolonial concept of *Panchsheel*—or the Five Principles of Peaceful Co-existence. While New Delhi demonstrates solidarity with Southeast Asian nations and the United States over China's stance in the South China Sea, India still maintains its perspectives as a postcolonial state. India has not changed its existing maritime laws and policy, even as it has shifted its diplomatic rhetoric and its strategic outreach.

## Conclusion

India's own laws restricting freedom of navigation in its own waters remain active, even if there is a major shift in New Delhi's diplomatic statements and actions on freedom of navigation in the greater Indo-Pacific region. The conventional argument is that these are a holdover of India's postcolonial past. Within the view is an assumption that as an aspiring maritime power that is increasingly aligned with the United States, India will eventually shift from being a coastal state that values *mare clausum* to a maritime state that values *mare liberum*. As James Kraska argued a decade ago, "With the growth of India more generally, New Delhi is moving from an insular and localized view of the oceans toward a liberal and global perspective."<sup>60</sup> Kraska laid out a stark alternative for what he termed the "swing states" like India, Brazil, and Turkey: "These key countries can either promote a liberal order of the ocean based on shared or inclusive legal regimes or instead cling to an exclusive maritime vision that is out of sync with the law of the sea."<sup>61</sup> Given that it is often only the United States that maintains this particular stance on freedom of navigation and conducting these FONOPs, India and other nations could take the position that it is more the United States that is out of sync than themselves. As Kraska notes, "The United States, for example, is alone in the world in maintaining a freedom of navigation program that routinely challenges excessive coastal state maritime claims."<sup>62</sup>

However, in history, many great maritime powers sought to close off parts of the sea to others, particularly when there was no dominant maritime hegemon, and the various maritime powers were rivals. Spain, Portugal and even Great Britain, maintained a closed seas approach for several hundred years before Great Britain adopted its policy on freedom of the seas in the nineteenth century.<sup>63</sup> It can be argued that it was only when Great Britain, and then the United States, established themselves as the dominant power and that they decided to uphold freedom of the seas as their preferred maritime regime that *mare liberum* gained traction. Given the contemporary diversification of power in the international system, it seems likely that states will continue to prefer navigation restrictions in seas that they view as under their control. India is not the only state that promotes restrictions on the freedom of navigation in seas viewed as territorial waters. In-

stead, many coastal states share this position, and it could become the new normal. As Kraska puts it, “The ideas of restriction and control—‘management’—have gained greater currency in global governance.”<sup>64</sup> These restrictions are more likely to be the new norm, instead of new powers shifting their positions to be closer to the American one. We are moving toward a mixed maritime future that will have more elements of a *mare clausum* than the *mare liberum* that has prevailed for the past two centuries. Rising maritime states like India will continue to have restrictions on what they consider their own waters, rather than inevitability moving toward the US perspective. As O’Connell noted decades ago, “The Third Law of the Sea Conference has reflected a trend towards intensifying coastal State control over shipping in the territorial sea, so that innocent passage is likely to become less a right than a privilege.”<sup>65</sup> 🌐

#### **Dr. Patrick Bratton**

Dr. Bratton is an associate professor of national security studies at the US Army War College. He is the head of the South Asia Regional Studies Program and works on Indian foreign policy and maritime issues.

#### **Notes**

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8. O’Connell, *The International Law of the Sea*, 18–19; and William Bernstein, *A Splendid Exchange: How Trade Shaped the World* (New York: Grove Press, 2008), 257–58.
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10. O’Connell, *The International Law of the Sea*, 1.
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1996 by Admiral Kailash Kohli, then Commander of the Western Fleet; see David Scott, "India's 'Grand Strategy' for the Indian Ocean: Mahanian Visions," *Asia-Pacific Review* 13, no. 2 (2006), 98.

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15. Keohane and Nye, *Power and Interdependence*, 83.

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17. Nong Hong, *UNCLOS and Ocean Dispute Settlement: Law and Politics in the South China Sea* (New York: Routledge, 2012), 78–82; and James Kraska and Raul Pedrozo, *International Maritime Security Law* (Leiden: Martinus Nijhoff Publishers, 2013), 218–19. However, passage is *innocent* as long as it is not prejudicial to the peace, good order, or security of the coastal state. There are warship activities that are prohibited, and generally speaking, foreign warships only transit through territorial waters under exceptional circumstances. My thanks to Al Lord on this point.

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27. Government of India, "The Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976" 25 August 1976, <http://nbaindia.org/>. See also, Rehman, *India, China, and Differing Conceptions*, 9.

28. Rehman, *India, China, and Differing Conceptions*, 4. In his study of the interaction between Indian state law and international law, Patel finds the same contradiction between the Maritime Act and India's ratification of UNCLOS, *The State Practice of India and the Development of International Law*, 72–73.

29. UN, "Declarations and Statements: Oceans and Law of the Sea," <http://www.un.org/>. India's declaration made upon ratification gets at the tensions in the definitions of *marine research* (which can be regulated by the EEZ-owning state) and *hydrographic surveys* and *military surveys* (which cannot be regulated by the EEZ-owning state). My thanks to Al Lord on this point. For more background, see Patel, *The State Practice of India*, 89. This was repeated by the Indian Ministry of External Affairs in response to the April 2021 US Navy FONOPs, see "Passage of USS John Paul Jones through India's EEZ," MEA Media Center, 9 April 2021, <https://mea.gov.in/>.

30. For example, C. Raja Mohan, *Crossing the Rubicon: The Shaping of India's New Foreign Policy* (New York: Palgrave Macmillan, 2004), xii–xxii; Shashi Tharoor, *Pax Indica: India and the World of the 21st Century* (New Delhi: Penguin, 2012): 4–26; and Harsh V. Pant, *Contemporary Debates in Indian Foreign and Security Policy: India Negotiates Its Rise in the International System* (New York: Palgrave MacMillan, 2008), 1–16. For outside observers, see Stephen P. Cohen, *India: Emerging Power* (Washington, DC: Brookings Institution, 2001); Teresita C. Schaffer and Howard B. Schaffer, *India at the Global High Table: The Quest for Regional Primacy and Strategic Autonomy* (Washington, DC: Brookings Institution, 2016); David Malone, *Does the Elephant Dance?: Contemporary Indian Foreign Policy* (Oxford: Oxford University Press, 2011); Baldev Raj Nayar and T. V. Paul, *India in the World Order: Searching for Major Power Status* (New York: Cambridge University Press, 2003); and Amrita Narlikar, "Peculiar Chauvinism or Strategic Calculation?: Explaining the Negotiating Strategy of Rising India," *International Affairs* 82, no. 1 (January 2006): 59–76.

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64. Kraska, *Maritime Power and the Law of the Sea*, 11.
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# Opportunities for a US–India Strategic Partnership in Nanoelectronics

DR. SOHINI BHATTACHARYYA

DR. SOUMYABRATA ROY

DR. MICHAEL E. MCCONNEY

DR. NICHOLAS GLAVIN

DR. AJIT ROY

DR. PULICKEL AJAYAN

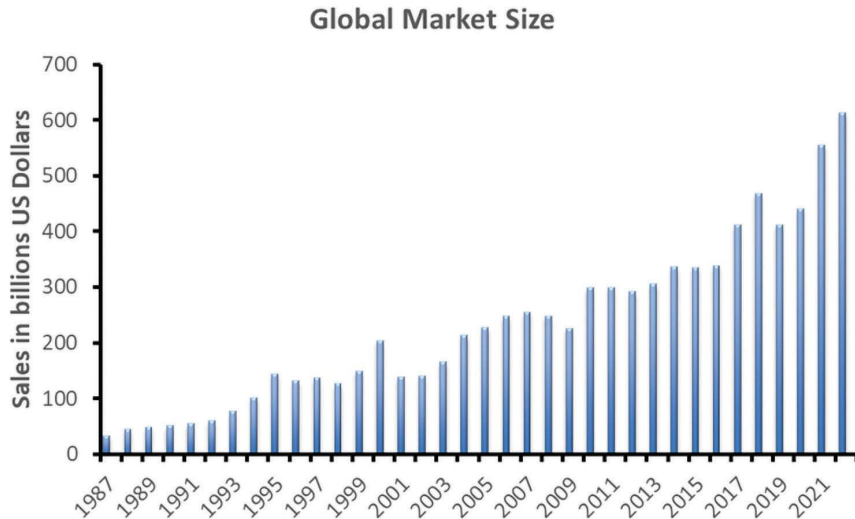
## Abstract

The acute global chip shortage that disrupted the military supply chain highlighted the need for the United States to be independent in terms of semiconductor manufacturing and chip design. This need is further intensified as China threatens the sovereignty of Taiwan, the chip-manufacturing powerhouse of the world. The recently passed CHIPS Act instills much-needed lifeblood into the semiconductor industry with renewed funding for growth and innovation, although the United States needs to find strategic partner countries to keep up with the new production capacities. India, a long-standing defense and strategic partner of the United States, can be vital in this regard with its large pool of science and technology manpower and international chip-design expertise. In this article, we establish the pressing need for partnership with India in areas such as chip manufacturing and translational new nanoelectronics research. A strong US–India partnership will help strengthen a fractured global supply chain and propel global stability in a military-critical area.

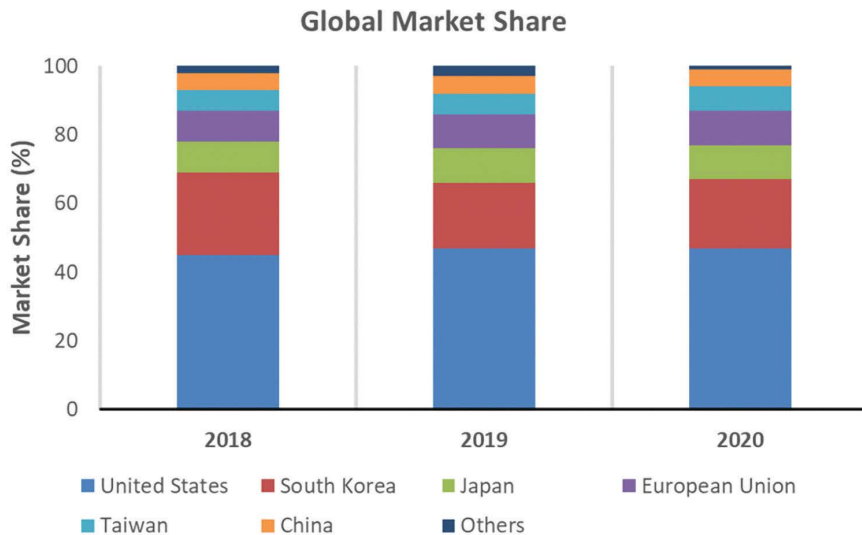
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Semiconductor chips are the lifeblood of modern society, with more than 100 billion of these nano-sized chips in active use around the world daily. The beginning phase of the COVID-19 pandemic in 2020 created a discernable gap in the supply-and-demand chain of semiconductor chips, leading to a worldwide chip shortage. This shortage fundamentally disrupted the normal functioning of a wide range of industries from defense applications to automobiles to consumer electronics. While global lockdowns during the pandemic slowed chip production, under-investment in the primarily Asian 8-inch chip-manufacturing plants also contributed substantially to the squeeze, with colossal escalation in the demand for 5G phones and laptops.<sup>1</sup> To top it off, a massive fire severely damaged Japan's Renesas Electronics Corporation's factories, which is a major supplier of automobile chips, and the Texas winter storm in 2021 shutdown operations of some of the only manufacturing units in the United States.<sup>2</sup> Port shutdowns in Asia during COVID further added

to the woes, with 90 percent of the world’s electronics being transported through China’s Yantian Port. As the global economy gradually opens up with signs of a declining pandemic, the backlogs and bottlenecks of supply and transportation may cause the chip shortage to persist well into 2023.<sup>3</sup>

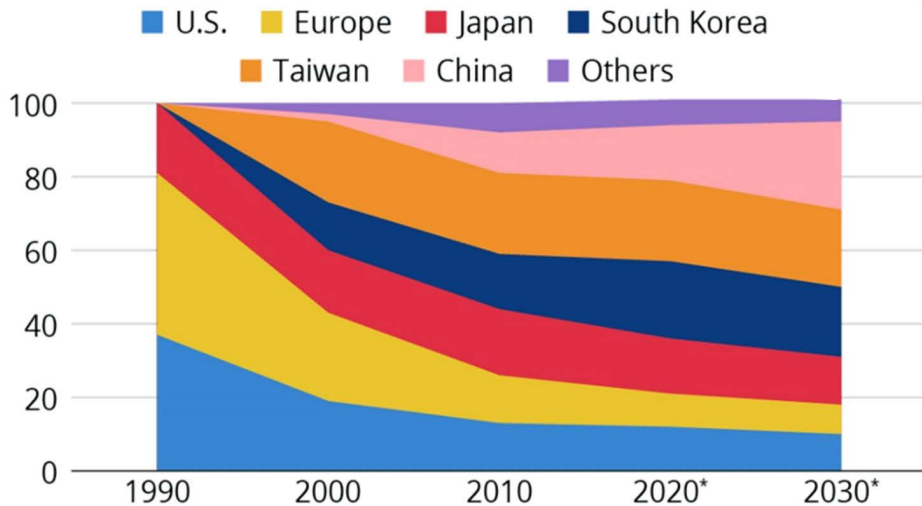


**Figure 1. The escalating global market size of the semiconductor industry between 1987–2021.** (Statista.com)



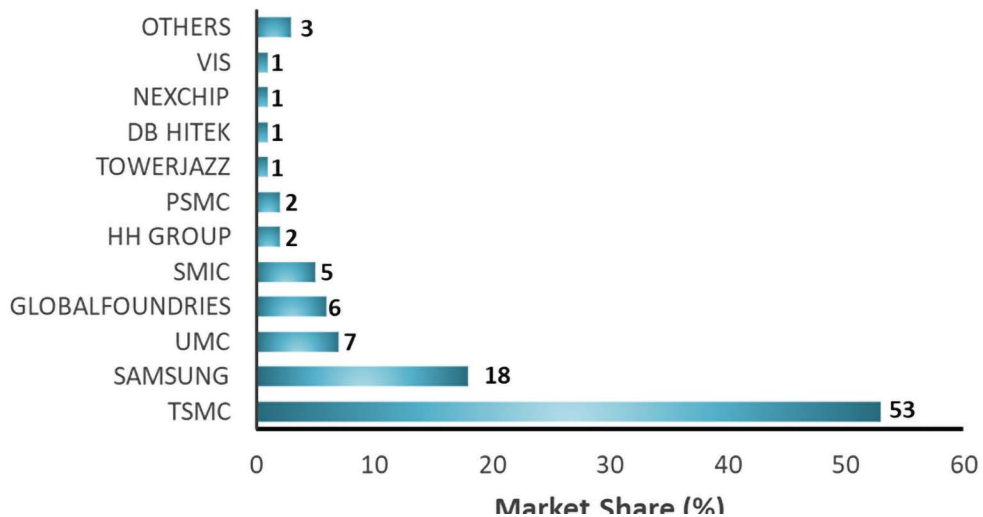
**Figure 2. Region wise global market share of semiconductor sales.** (Statista.com)

The US military alone requires approximately 1.9 million chips annually for communication, weapons, and other defense equipment.<sup>4</sup> The commercial shortage of chips also has spilled over to affect the military supply chain and has specially impacted the startups and smaller defense suppliers.<sup>5</sup> Additionally, the fact that most of the chips in use are imported is a matter of concern since the scope of the Defense Production Act and the ability to prioritize military needs above others is rather limited.<sup>6</sup> The military and aerospace semiconductor market is expected to grow by USD 3.89 billion between 2020 and 2025, as predicted by market forecast consultant Tecnavio. Moreover, the latest technology in automobile and telecommunications industries has started to use specific semiconductor devices that were earlier used only in military and aerospace applications, further fueling the scarcity. For example, gallium arsenide- and gallium nitride-based chips used in radiofrequency integrated and monolithic microwave integrated military communications, space capabilities, or active electronically scanned antenna (AESA) are required for the production of 5G electronics.<sup>7</sup> The sudden scarcity of chips has also affected the global light vehicle production, with major automobile corporations and smart gadget leaders scaling down their productions significantly.<sup>8</sup> The situation worsens as all the corporations panic-buy to stock up chips, causing squeezed capacity and driving up costs of even the cheapest microchip components.<sup>9</sup> The production of semiconductors, termed as “the new oil” by economist Rory Green, are almost entirely controlled by Taiwan, China, and South Korea (figs. 1–4).<sup>10</sup> Additionally, South Korea and Taiwan are heavily reliant on China for their economic growth. The strained relationship with China and restrictive sanctions on trade relationships with China have further heightened apprehensions regarding chip supply. Although semiconductor chips were an American invention, there has been a sharp decline in the number of US manufacturers creating them, from 37 percent of the chips being produced globally in 1990 to merely 12 percent in 2020 (fig. 3).<sup>11</sup> In contrast, US companies accounted for 47 percent of global chip sales in 2020 (fig. 2).<sup>12</sup> Currently, US chip companies rely almost exclusively on Asian contractors for advanced processes, and the US share of global capacity is predicted to drop to 10 percent by 2030, while Asia’s will climb to 83 percent.<sup>13</sup> The absolute necessity to gain global economic leadership in the current scenario is to gain independence in terms of manufacturing and production of semiconductors. This is especially true in the present situation where China is threatening the sovereignty of Taiwan, the chip powerhouse of the world.



**Figure 3. Region wise global manufacturer market share.** (Statista.com)

### Global Manufacturer Market Share



**Figure 4. Companies leading the global manufacturer market share.** (Statista.com)

### Need for Partnership

The US government has recently taken several steps to bridge this gap, prevent such shortages in the future, and cater to the huge domestic and international markets. The recently passed USD 53 billion CHIPS Act is one of the

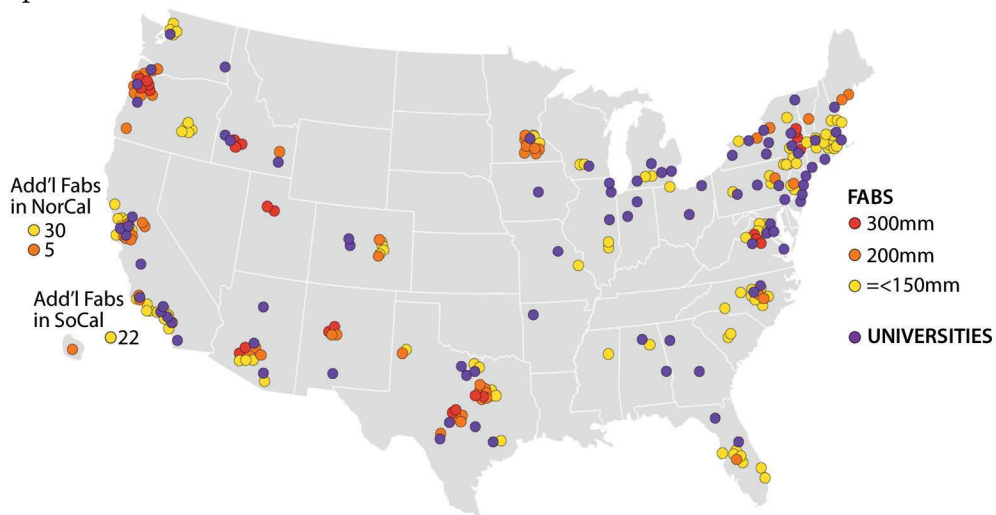
most positive steps in this direction, offering 40-percent investment tax credits to companies manufacturing semiconductors in the United States.<sup>14</sup> Additionally, the act also authorizes the defense ecosystem to conduct research, workforce training, testing, and evaluation for chip-related projects. It also appeals to the government to act as a default customer for the domestic semiconductor industry.<sup>15</sup> However, while this funding may renew the interest in domestic chip-making, adding in numbers to the 75 odd chip-manufacturing units already present (fig. 5), the United States lacks the workforce to maintain this capacity. More than 40 percent of the highly skilled workers in the US semiconductor industry were born in foreign countries, and the number of foreign-born students in the relevant graduate programs has tripled since 1990.<sup>16</sup> However, the current immigration policy is a deterrent to retaining this talent pool. Moreover, the US education system is not producing enough domestic graduates with the appropriate skill sets to join this workforce. Since 2000, the share of foreign-born workers in the science, technology, engineering, and mathematics (STEM) workforce has increased by 40 percent from 1.2 million in 2000 (16.4 percent in STEM workforce) to 2.5 million in 2019 (23.1 percent of STEM workforce). Additionally, these foreign-born STEM workers often have higher levels of educational qualifications than domestic workers. A recent report by the American Immigration Council noted that while 67.3 percent of US-born STEM workers had at least a bachelor's degree, the percentage of the same was 86.5 percent among immigrant STEM workers in 2019. Additionally, almost half (49.3 percent) of immigrant STEM workers hold advanced degrees as compared to 21.8 percent of US-born STEM workers.<sup>17</sup> An older report had also shown how the majority of the immigrant STEM workers are PhD holders, many of whom have obtained their doctoral degrees from US universities.<sup>18</sup> The number of American students enrolled in semiconductor-related graduate programs (~90,000) has not increased since 1990, while the number of international students has nearly tripled from 50,000 to 140,000. About 40 percent of the highly skilled workers working in the US semiconductor industry were born abroad, the majority of whom are from India, followed by China. And, 87 percent of the total semiconductor-related patents awarded to top US universities in 2011 had at least one foreign-born inventor. Between 2000–2010, the United States saw a net influx of 100,000 electrical engineering patent holders, while India and China saw a net outflux.<sup>19</sup> However, not being able to retain this talent owing to immigration and other issues becomes a loss on the part of the United States, while other competing countries gain immensely from this situation. For example, the Taiwan Semiconductor Manufacturing Company (TSMC) was founded and staffed mainly by returnees trained in the United

States. China also seeks to attract semiconductor talent from abroad, and although significant outflow of talent from the United States to China has not been observed yet, even a small number of skilled returnees can help further accelerate China's already booming semiconductor manufacturing industry.<sup>20</sup> As the pandemic slowed down immigration processes and created huge backlogs, the dearth of domestic skill sets and expertise became even more glaring. For example, a chip foundry being built in Arizona by TSMC is straining to employ enough engineers to operate and, as a result, has been delayed by months.<sup>21</sup> A study by Eightfold AI notes that to become self-sufficient in chip fabrication, the United States must recruit engineers and technicians for at least 300,000 additional fabrication jobs, a number that will be impossible to achieve at the current state of higher education in STEM among US citizens or under the restrictions of current immigration policies.<sup>22</sup> A defined partnership in this aspect with a foreign country with a highly motivated workforce can be a solution to this problem by creating a common platform for knowledge and resource sharing. Such a partnership may also enable easy recruitment of experts who can work remotely from the parent country or be hosted as short-term visitors to the United States to train and share expertise with the local workforce. Outsourcing of the workload to different locations in the partner country after building appropriate facilities is also an option that can be explored.

### **Why India?**

India, with its huge human resource and a rich history of excellent technical education, is expected to become an important partner in enhancing and collaborating in the semiconductor manufacturing landscape. The United States and India have a long history of cooperation, which was further strengthened by the New Framework for the US–India Defense Relationship in 2005. The second Defense Technology and Trade Initiative Industry Collaboration Forum (DITF) Virtual Expo was held in November 2021 and co-chaired by US Deputy Assistant Secretary of Defense for Industrial Policy Jesse Salazar and Anurag Bajpai, Joint Secretary (Defence Industries), India, in partnership with US–India Strategic Partnership Forum (USISPF) and the Society of Indian Defence Manufacturers (SIDM). This forum, which represents the basis of the US–India Defense Technology and Trade Initiative (DTTI), aims to strengthen industrial cooperation between the United States and India by identifying opportunities and areas to jointly research, develop, and produce war-fighting capabilities.<sup>23</sup> Earlier this year, the fourth Ministerial Dialogue was held, during which US Secretary of Defense Lloyd J. Austin III and Secretary of State Antony J. Blinken hosted their Indian counterparts, Defense Minister Rajnath Singh and Minister of External Affairs S. Jaishankar, and dis-

cussed increased cooperation toward “technological innovation and cooperation in emerging defense domains, including space and cyberspace.”<sup>24</sup> The Air Force Research Laboratory (AFRL) nano team has also taken up a recent initiative in exploring nano manufacturing opportunities in partnership with India as a collaborative effort between AFRL, Rice University, and the Indian Institute of Technology Kanpur (IIT–Kanpur).<sup>25</sup> In 2020, Rice University opened a collaborative center at IIT–Kanpur for joint research in the areas of sustainable energy, alternative fuels, and nanomaterials. This center was the first of its kind where a US university will have a physical presence within an Indian campus. Rice is also looking toward signing memoranda of understanding with a few other Indian institutes. All these have nurtured an environment for collaborative research and long-term strategic partnership that can be beneficial to both countries.

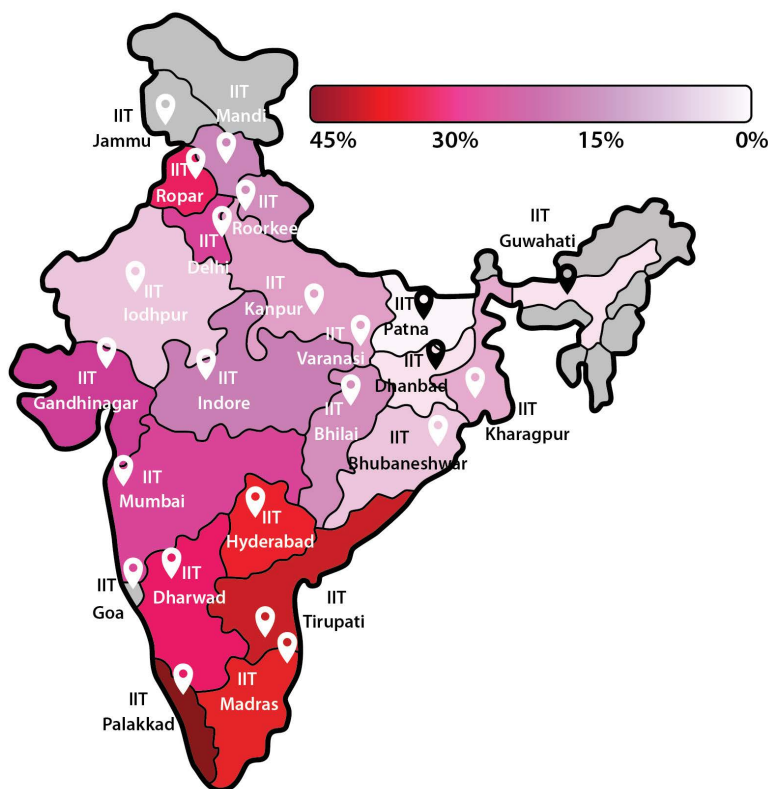


**Figure 5. Distribution of different chip manufacture units over USA, including universities, with their capacities.** Constructed using data from SEMI World Fab Projections, “World Fab Forecast,” November 2021, <https://www.semi.org/>; and SEMI World Fab Projections, “American Semiconductor Academy Initiative,” November 2021, <https://www.semi.org/>.

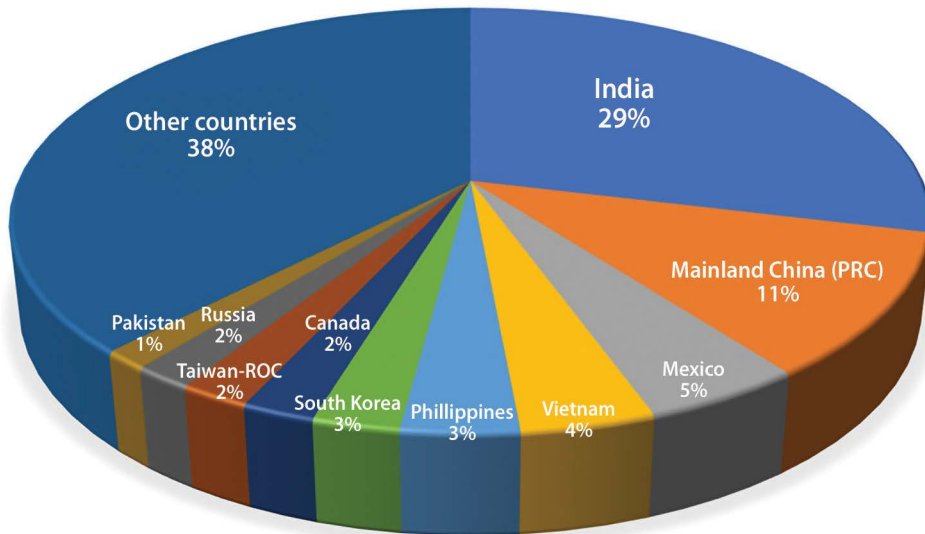
India, a chip-design powerhouse, is facing a similar situation in chip supply, as 100 percent of the chips used are imported, primarily from China. Several thousand engineers in India, employed by premier design companies with major presences in the Indian market, work on chip design and very large-scale integration. However, post-design, all these chips are fabricated in Taiwan, China, or South Korea. In 2019, India spent an estimated USD 21 billion on semiconductor imports, 37 percent of which was from China.<sup>26</sup> India has a long tradition of annually producing a large number of highly qualified engineers and science graduates, and the total number of engineering undergraduates in the major streams like computer science,



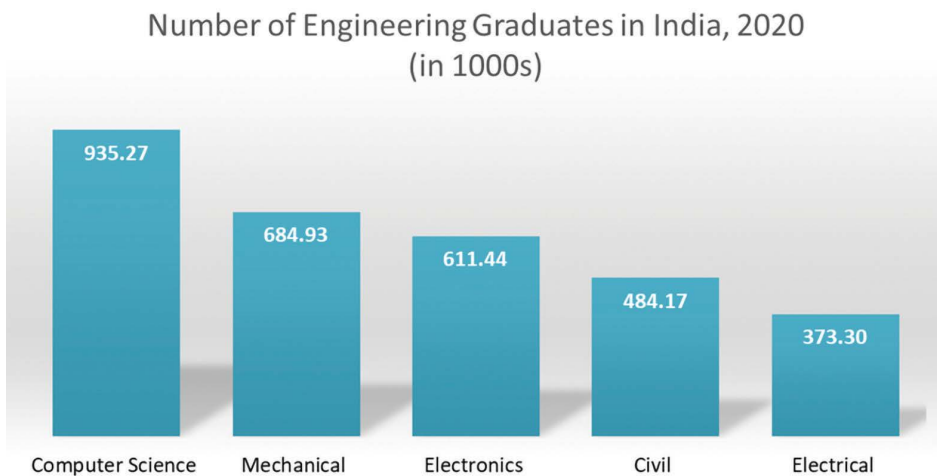
electrical, and electronics engineering in 2020 was more than 3 million (fig. 8). Moreover, 19 percent of the total school-leaving students in India opted for technical courses, including sciences and engineering, according to the Indian National Statistical Service 75th Round Report (2017–18). This percentage is even higher in the southern Indian states, reaching 45 percent (fig. 6).<sup>27</sup> India has a total of 23 Indian Institute of Technologies campuses and 31 National Institutes of Technologies campuses, which are present in almost every state, giving students access to technical education (fig. 6). To a significant degree, this explains why Indians comprise 29 percent of the foreign-born STEM workers in the United States, accounting for one in every four individuals in these streams (fig. 7). What the United States lacks in human resources can be easily made up by highly qualified scientists and engineers from India. Also, many of the IITs work in close collaboration with US universities, which can be leveraged for resource and knowledge sharing.



**Figure 6. Percentage of students opting for technical courses in India after school in each state.** Gray indicates the unavailability of data. The location of the IITs in each Indian state has also been marked. Constructed using data of Ministry of Statistics and Program Implementation, Government of India, “Social Consumption: Education,” in Unit Level data & Report on NSS 75th Round for Schedule 25.2, (July 2017–June 2018), <http://164.100.161.63/>.



**Figure 7. Percentage of foreign-born STEM workers in USA from different countries.** Constructed using data from Statista.com.



**Figure 8. Number of engineering graduates in India in different disciplines in 2020.** Constructed using data from Annual Report of American Immigration Council, 2021, <https://www.americanimmigrationcouncil.org/>.

The acute chip shortage has had severe adverse effects on the smart-gadget market of India, which is the second-largest smartphone manufacturer in the world.<sup>28</sup> Tense Sino-Indian relations have further raised apprehensions regarding sourcing chips easily.<sup>29</sup> Historically, India had sought to develop its own semiconductor fabrication system since the inception of the state-owned Semiconductor

Complex Ltd. in 1984.<sup>30</sup> However, a series of unfortunate events have hindered progress in that sector. In a parallel to the CHIPS Act in the United States, since 2013, the Government of India has lifted the import duties on all components of semiconductor manufacturing. Additionally, New Delhi offers incentives in the form of tax concessions, interest-free loans, and subsidies to anyone seeking to build a fabrication unit to boost domestic manufacturing of chips. Hence both countries have a common ground of interest in developing semiconductor manufacturing to cater to their domestic markets as well as to supply the global market, which makes the partnership an important step in achieving this goal swiftly.

### **Areas of Partnership**

There are various areas of semiconductor and nano manufacturing that need immediate attention to maintain an unhindered military supply chain. All these areas will flourish when done in partnership with a country with the necessary resources, complimentary to those of the United States.

#### ***Chip Manufacturing***

One of the most difficult feats to achieve in this context is the establishment of chip-manufacturing units to gain independence in terms of chip supply. At present, an entry-level chip factory that can produce 50,000 wafers a month, requiring a USD 12–15 billion investment and two to three years of establishment time. However, more capital is required to upgrade the equipment involved (including lithography, testing and evaluation, and cleanroom facilities), which becomes obsolete in the global market in roughly five years or less. The capital expenditure required for a semiconductor industry has an escalating annual growth rate, with that for 2021 being 34 percent.<sup>31</sup> Sustenance of conventional plants demands an annual profit of ~20 percent of initial investment with a 90-percent yield.<sup>32</sup> To maintain this profit model, global leaders like TSMC rely on large volumes and numbers to recoup cost. This again is a difficult task to achieve in an entry-level fabrication unit. Manufacture of a single silicon (Si) chip takes up to three months and involves the use of high-quality cleanrooms and extremely sophisticated machinery. The access to chip-making equipment has always remained a hurdle and was one of the focal points of the Pentagon's Sematech Program in the 1980s. Advanced Semiconductor Materials Lithography (ASML), Netherlands, is the only company in the world with the extreme ultraviolet lithography machines required to produce the most advanced microprocessors with geometries less than 10 nm. Typically, the handful of US companies in business manufacture machinery for producing chips with much larger geometries.<sup>33</sup> A newly established

entry-level chip-fabrication unit will be especially difficult to sustain because once the current shortage of chips is mitigated, due to the scale of production, it will be almost impossible to provide chips at the same cost as global giants like TSMC. Additionally, as mentioned in the previous section, the United States majorly lacks the human resources necessary to maintain a highly productive chip-manufacturing facility. However, while the numbers and resources may be too hefty for a single country to invest in, it will be a much easier task done in partnership, in terms of achieving the scale required to compete globally. Since recent government policies of India and the United States have emphasized the need for domestic fabrication, with support in terms of tax exemptions, resources and monetary incentives, this partnership can become extremely fruitful in achieving the targets for both countries. In this aspect, India's greatest strength will be its large pool of human resource with high levels of technical education, while the US contribution will be its excellent infrastructural facilities.

### ***Scalable Production of Novel Nanoelectronic Materials and Semiconductors***

While it is important to invest in the establishment of an entirely new fabrication unit for semiconductor chips, it will probably be far more beneficial to invest in new and upcoming materials and processes that have the potential to replace the conventional silicon chip in the near future. The victory march of silicon over the world of electronics and technology began about 60 years ago, with the large-scale use of the Czochralski or floating zone methods to fabricate large, defect-free single crystals of silicon.<sup>34</sup> However, the recent global chip shortage,<sup>35</sup> coupled with silicon technology gradually approaching its performance limits,<sup>36</sup> has led to the exploration of nanoelectronic applications based on promising new 2D materials. While graphene is definitely one of the forerunners in this category, the absence of a natural energy band gap limits its applications in electric switches, sensors, and optoelectronic devices. However, alternative 2D materials—like transition material dichalcogenides (TMD)—with a sizable band gap have been showing great promise in filling the gaps in applications that cannot be bridged by conventional silicon-based semiconductors or graphene.<sup>37</sup> One of the major challenges in this aspect is the growth of single crystalline structures of TMDs for unhindered optoelectronic applications. Although the high-quality samples obtained by mechanical exfoliation with dimensions ranging from a few to a hundred nanometers may be sufficient to study the intrinsic properties of this material, they are not good enough for industrial applications.<sup>38</sup> To succeed in the electronics industry, the primary requirement is the formation of high-quality

large-area single crystalline films. The mixture of grain sizes and presence of grain boundaries lowers the efficiency of performances of devices based on polycrystalline 2D materials, as compared to single crystalline materials, which makes the development of wafer-scale single crystalline (WSSC) 2D materials extremely important. Many recent developments in the synthesis of WSSC 2D TMDs have opened new vistas toward new electronic devices. Additionally, while engineers continue to make advancements with transistor technologies at the latest process nodes, interconnects within these structures are still struggling to keep pace. This is particularly true for nodes beyond 2 nm. The dual damascene procedure has been in use for a while, and unwanted resistance-capacitance delay issues will become even more pressing beyond 3 nm.<sup>39</sup> However, since the advancement of interconnect technology is crucial for transistor development, it is inherent to chip scaling. Hence, a nextgeneration, cost-effective interconnect scheme beyond 2 nm is of utmost importance for chip scaling. Methods like hybrid metallization, semi-damascene, supervias, or graphene interconnects are all technologies and material that are currently in research and development and require far more development for industrial scale production. Investing in the abovementioned problems and technological developments now is extremely important to become global leaders in the field in the future. There are several promising new 2D materials that have the potential of becoming steppingstones for future technology, and endeavors to refine them for industrial and defense applications now can be crucial for the future ahead.

Investing in the development of an industrial scale, roll-to-roll nanomanufacturing process for the unconventional fabrication of electronic devices for targeted applications is also an important step. As discussed before, typically the fabrication of silicon chips is highly demanding in terms of specialized equipment and cleanrooms. To lower the cost and complication toward their fabrication, it is important to investigate alternative methods for nanofabrication and eliminate the extensive use of specialized, high-cost cleanrooms and fabrication techniques required by traditional chip manufacturers. This would significantly diminish infrastructural and financial capital demands while still producing large quantities of semiconductor devices for regular use. Unconventional semiconductor manufacturing, such as molecular printing and roll-to-roll manufacturing, which has very few requirements in terms of specialized clean rooms and fabrication techniques, is an attractive approach that can be very lucrative to India and the United States. It diminishes the infrastructural and financial capital demands to a great extent, while producing large quantities of chips fit for regular use. Moreover, the reduction in use of cleanrooms for such unconventional fabrication can reduce health hazards to the professionals and potentially decrease the huge carbon foot-

print associated with chip manufacturing. Academia has already attempted to replicate minienvironments to conduct semiconductor fabs to reduce cost and environmental hazards.<sup>40</sup> Similarly, patterning and stenciling have also emerged as alternative cleanroom-free fabrication techniques.<sup>41</sup> Flexible hybrid electronics that uses chips other than silicon wafers—for example, ceramics, glass, plastic, polyimide, polymers, polysilicon, stainless steel and textiles, fabricated using different printing, patterning and ink-writing techniques—have also started gaining prominence.<sup>42</sup> Probing and developing such procedures can definitely reduce the capital required for manufacturing units and would help in establishing more such plants globally. Hence creating a concise knowledge base in this area can also factor into the agenda of forging a better partnership.

### ***Nano/Flexible Electronics Devices***

The demand for thin-film and conformable electronics, sensors, and wearable devices is ever increasing. Sensors of higher selectivity and sensitivity, and electronics of conformal form factors, are in demand for defense and commercial systems. A focus on scalable growth processes of emergent materials such as TMD, graphene, nanodiamonds, and their hybrids and heterostructures, which are attractive for expanded operational domain and tailored functionality for electronics, will be extremely beneficial for the future of military- and defense-related devices. Device performance testing related to defense-specific applications (harsh environment—temperature, moisture, durability) can be pursued in collaboration with the defense research agencies of the United States and India.

### ***Energy Storage/Conversion Devices***

The development of scalable manufacturing approaches for low-cost manufacturing of energy storage and conversion units, including thin-film batteries, supercapacitors, and fuel cells can also be another primary interest of this partnership. The manufacturing processes developed should also be tailored to suit these energy storage/conversion devices. Lithium-ion batteries (LiB) are crucial for the day-to-day functioning of the modern world. LiB production is also one of the industries that is heavily reliant on China to maintain its supply chain. The chip shortage highlights how the locational concentration of such an important industry can have severe detrimental effects on the entire world if the supply chain is disrupted. It is extremely important to be independent in terms of LiBs lest a similar shortage happen in the future. Globally, the use of LiBs is projected to increase almost threefold from 250 million units in 1998 to 700 million units in 2030.<sup>43</sup> The United States has been looking for a positive shift toward electric

vehicles, with the Departments of Transportation and Energy recently announcing USD 5 billion for the construction of a national network of electric vehicle-charging stations.<sup>44</sup> This will significantly increase the LiB usage in the United States. The LiB usage in India is also expected to grow at a compound annual growth rate of 1 percent to more than USD 4.80 billion by 2026.<sup>45</sup> The manufacturing processes developed jointly should also satisfy the pressing needs for flexible and thin-film batteries and comply with the low-footprint energy requirements for forward-based operations, and more. Emphasis will focus on identifying alternatives to rare earth materials for fabrication of energy devices. The large-scale manufacture of printable renewable energy devices for their widespread commercialization should also be a goal of this partnership.

The exponential increase in LiB demand has culminated in the dual problems of LiB waste management on one hand and supply of critical component materials (e.g., cobalt, nickel, graphite, lithium, and manganese) for LiBs on the other. The current trends in mobile and stationary LiBs usage projects the demand for graphite, lithium, and cobalt to increase by almost 500 percent by 2050, and a shortage of nickel is estimated to arise within the next 5–6 years.<sup>46</sup> These crucial materials have merely finite reserves in the earth's crust, many of which lie in potentially conflicted regions and war zones. For example, more than 51 percent of lithium reserves lie in Chile, 47 percent of manganese reserves lie in South Africa and Ukraine, and 55 percent of the graphite reserves lie in Russia and China. One of the most critical elements for LiBs is cobalt, which makes up to 15 percent by weight of the cathode mass of a LiB. This is also one of the most at-risk elements, since almost 60 percent of the global reserves of cobalt lies in the Democratic Republic of Congo, another country that is heavily reliant on China for its economic growth. Additionally, the cobalt mines in Congo (many of them controlled by Chinese agencies) has been flagged for their extremely poor and hazardous working environment, exploitation of child labor, and disregard for worker rights.<sup>47</sup> Although several attempts are being made at the development of batteries with low to no cobalt content, these efforts are yet to match up with the commercial performance levels. Hence recycling of LiB systems is crucial in e-waste management while establishing circular economy by recovering the active materials, diminishing the need for extensive mining. The most commonly prevalent methods to recover the active materials of LiBs include pyrometallurgy,<sup>48</sup> hydrometallurgy,<sup>49</sup> bioleaching,<sup>50</sup> or mechanical methods,<sup>51</sup> although these methods require thorough research and fine-tuning to become scalable and economically viable. Another critical aspect of LiB recycling is also to secure a supply line of used batteries through the judicious segregation and transportation of e-waste. Since India and the United States have very little reserves of the materials required for LiBs, a partnership should definitely be explored for

the collection of spent batteries and their subsequent recycling to recover the active materials.

### **Expected Outcomes**

A unified approach to deal with the chip shortage and supply-chain monopoly is the need of the hour. While the recently passed CHIPS Act pumps new life into semiconductor research in the form of substantial capital investment, the United States struggles to recruit enough engineers and technicians to meet the needed capacity. On the other hand, India, with its excellent technical knowledge base, lacks major capital investment in semiconductor research and hence the required infrastructure, except for some private players. Using the technical know-how and human resource pool of India and the infrastructure and technology of the United States looks promising for the development of a joint venture. In this context, a collaborative center between the defense agencies and academic institutions of both countries may be favorable for the research and development of promising new materials with applications in electronics and their translation into defense applications. The huge financial and environmental concerns associated with chip manufacturing may be alleviated in part by investing in research and development of unconventional fabrication of semiconductors, involving materials other than Si wafers or different cleanroom-free techniques. In addition to semiconductor manufacturing, investment in the energy sectors, especially that of battery development, may be useful in order prevent such shortages in the future. Both countries stand to gain significantly from this initiative directly and indirectly. The direct outcome will obviously be building up a self-reliant semiconductor economy, with a head start in new materials or technologies that have the potential to dominate the market in the future. The indirect gains for India will be the ability to train and use the cutting-edge research facilities and infrastructure of the labs in the United States, while dividend for the United States will be the ability to procure a steady technically sound workforce to keep up with the increased production capacities. Overall, this can be an extremely fruitful partnership for both countries that can propel them to the forefront of semiconductor industry in the near future. ☯

#### **Dr. Sohini Bhattacharyya**

Dr. Bhattacharyya is a Rice Academy Postdoctoral Fellow in Ajayan group at the department of Materials Science and NanoEngineering, Rice University. She earned her PhD under the guidance of Prof. Tapas K. Maji at Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, on post-synthetic modification of metal-organic frameworks. Prior to this, she obtained her bachelor's degree in chemistry from Presidency College, Kolkata, and master's degree in materials sciences from Chemistry and Physics of Materials Unit, JNCASR, Bangalore. Her current research interests include exploring green and sustainable methods for recycling lithium-ion batteries. She was a recipient of the prestigious Innovation in Science Pursuit for Inspired Research (INSPIRE) Fellowship from the Department of Science and Technology, Government of India.



**Dr. Soumyabrata Roy**

Dr. Roy is currently a research scientist in Ajayan group at the department of Materials Science and NanoEngineering, Rice University. He received his PhD in chemical science from Jawaharlal Nehru Centre for Advanced Scientific Research, India, in the group of Sebastian C. Peter, after completing his master's in chemistry from IIT, Kharagpur. His current research interests are focused on developing advanced materials and integrated processes for energy conversion, catalysis, and greenhouse gases (CO<sub>2</sub> and CH<sub>4</sub>) capture and utilization. He was a recipient of the prestigious Inspire Fellowship, Department of Science and Technology, Government of India, and Royal Society of Chemistry Commonwealth grants.

**Dr. Michael E. McConney**

Dr. McConney is senior materials engineer and lead of the Agile Electronic Materials and Processing Team (AEMPT) in the Materials and Manufacturing Directorate at Air Force Research Laboratory (AFRL). He received his BSE in chemical engineering from the University of Iowa in 2004 and his PhD in Polymer Materials Engineering from Georgia Tech in 2009. He started working at AFRL in 2009 as a National Research Council Post-Doctoral Fellow. He was the recipient of the AFRL Early Career Award. He has more than 90 publications with more than 4,500 citations in research that spans many areas including photonics, electronics, liquid crystals, microwave magnetic materials, surface science, scanning probe microscopy, responsive materials, and sensing.

**Dr. Nicholas Glavin**

Dr. Glavin is a senior materials engineer in the Materials and Manufacturing Directorate at the Air Force Research Laboratory (AFRL). He received his PhD in mechanical engineering from Purdue University in 2016 after completing his MS and BS in chemical engineering from the University of Dayton in 2012 and 2010, respectively. His research at the AFRL is primarily focused on industrially-relevant processes to enable two-dimensional nanomaterials and III-V electronic materials for applications in electronics and sensors. He is the recipient of several awards including the AFRL Early Career Award, the Air Force John L. McClucas Basic Research Award Honorable Mention, and the American Vacuum Society Paul Holloway Young Investigator Award.

**Dr. Ajit Roy**

Dr. Roy is a computational group leader at the Materials and Manufacturing Directorate at the Air Force Research Laboratory (AFRL) with years of leadership experience in materials innovations and development in structural, thermal, and electronic materials. He has published widely in the fields of integrating multiscale computational methods to materials processing for accelerated materials development and technology transition. He has pioneered carbon foam technology and nano-porous carbon as multifunctional materials for coatings, heat exchangers, flexible electronics, and battery electrodes. His durable thermal interface concept has transitioned to commercial production. He is recognized with American Society for Composites (ASC) Outstanding Research Award and Fellow of AFRL, American Institute of Aeronautics and Astronautics, American Society of Mechanical Engineers, and ASC, and serves on journal editorial boards, national and international review panels, awards and executive committees in professional societies, and advisory committees.

**Dr. Pulickel M. Ajayan**

Dr. Ajayan is a pioneer in the area of nanotechnology, having published more than 1,200 journal papers. His work covers diverse areas of nanomaterials including nanoparticles, nanotubes, diamond, 2D materials, nanocomposite, energy storage materials, and 3D printing. He is the Benjamin M. and Mary Greenwood Anderson professor of Engineering at Rice University and the founding chair of the Department of Materials Science and NanoEngineering. He is the recipient of several awards such as the Spiers Memorial Award, Materials Research Society Medal, Alexander von Humboldt-Helmoltz Senior Award, and Lifetime Nanotechnology Award from the Houston Technology Center. He received Docteur Honoris Causa from the Universite Catholique de Louvain, Belgium, and distinguished alumni recognition from his alma mater, Banaras Hindu University and the Materials Science Department at Northwestern University.

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# Contending with a Rising China

## A Comparative Study of Middle-Power Strategies in the Indo-Pacific

MAJ ANDREW M. CAMPBELL, USAF

### Abstract

As China and the United States standoff in strategic competition, many observers predict that middle powers will play a pivotal role in determining the Indo-Pacific's future. This research attempts to shed light on attributes that define the foreign policy behaviors of middle powers vis-à-vis China. It bridges qualitative and quantitative methods in examining the economic, defense, and political characteristics of Australia, the Philippines, and Indonesia, in particular. The research suggests that for the Indo-Pacific, it is advantageous for middle powers to coalesce multilaterally as doing so not only minimizes economic vulnerabilities but also presents China with a united political front that advances fair and equitable policies in the region. Additionally, middle powers are more likely to embrace the West in pursuit of a stronger military arsenal and improved military capabilities should diplomacy fall short.

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The rise of China commands attention in a globalized system. The embrace of neoliberal policy agendas through international constructs has brought forth an era of rapid industrialization and development around the world, of which China has been one of the greatest benefactors. Without question, China's power has grown to surpass its counterparts in the Indo-Pacific in recent decades. With its growing power, Beijing has discovered that China can shape world politics and desires to transform the existing international order into a framework that suits the ideals of the Chinese Communist Party and extends the notion of China as the "Middle Kingdom."

Opposed to the disruptive nature of China's rise is the United States. These two great powers compete for leadership in shaping a new regional order. Caught amid the two are the *middle powers*: countries with capabilities that cannot individually match those of great powers yet can still shape outcomes by working through alliances or coalitions. The middle powers of the Indo-Pacific are likely to accept an international system that preserves middle-power agency, engenders economic growth and development, guarantees political autonomy,

and reduces the prospect of military conflict. At the same time, middle powers are uneager to find themselves aligned with the losing side of an “inevitable conflict”—as portrayed by Thucydides’ Trap.<sup>1</sup> As China and the United States standoff in strategic competition, many observers project that middle powers will play a pivotal role in determining the Indo-Pacific’s future. Understanding the attributes that affect middle-power foreign policies will be a key determinant in shaping regional outcomes.

This research attempts to shed light on attributes that define the foreign policy behaviors of middle powers vis-à-vis China. A dissection of the policy tactics by which China asserts dominance across the region reveals elements of economics, defense, and politics. Through these lenses, scholars can make a comprehensive comparison between middle powers that highlights situational similarities and differences in their relationships with China. In this evaluation, Australia, the Philippines, and Indonesia are the focus. These three middle powers exhibit many similarities in their ties with China yet pursue different policy strategies that ultimately lead to very different outcomes. Australia and Indonesia display an ability to resist Chinese influence while the Philippines does not.

A thorough examination of the attributes that contribute to successful middle-power strategies reveals that of the three nations: (a) Australia has gained the most economically through trade and investment, (b) Australia has the strongest defense posture for confronting China in a military standoff, and (c) Australia has achieved success primarily through a foreign policy strategy of balancing against China. Indonesia has also achieved considerable success but has done so through a strategic hedging strategy. In contrast, the Philippines has shifted between strategies of balancing and hedging, with little to no development to show for it.

Australia’s success stems from effective military capabilities, strong security ties with the United States, and proactive use of institutional balancing. These facets allow Australia to be more critical of China’s actions with demonstrably less risk of a Chinese response. The Philippines and Indonesia have refrained from embracing this policy avenue in the past decade and in doing so have exposed themselves to greater military risk. However, they can still safeguard their futures by investing in military capabilities that deny China from their territorial waters, while joining other middle powers in multilateral institutions that exclude China and thereby leverage China into cooperation through a form of collective action.

## **Comparative Method and Country Selection**

One strategy for bridging the gap between international relations (IR) theory and quantitative research is to shed light on how countries exert influence over one another. In the case of China, Beijing wields power through a combination of economic, military, and political means. From this basis, each component of power can be dissected for further interpretation.

This article uses a comparative method to analyze the effectiveness of foreign policy strategies enacted by Australia, the Philippines, and Indonesia. Without an established quantitative methodology for distinguishing hard- and soft-power relationships among countries, John Stuart Mill's *method of agreement* and *method of difference* were used to draw similarities and differences between countries—providing a basis for causal inference. The causal inferences determined in this article, while not as robust as other established quantitative methods, provide a baseline for policy comparison that furthers existing qualitative analysis.<sup>2</sup> The inferences made also highlight new avenues of research and open the door for more rigorous quantitative approaches for analyzing Indo-Pacific IR.

The goal in selecting the three specific middle powers for this study was to isolate countries that share many characteristics but implement different strategies. Australia, the Philippines, and Indonesia are similar in that they are democratic maritime states that have strong economic ties with China. They also possess rich mineral deposits, large fossil fuel reserves, and other natural resources. Meanwhile, they seek to expand their advanced manufacturing capabilities to climb the hierarchy of global value chains. They are also different than some other countries in the region, choosing not to adopt strategies of bandwagoning like Myanmar, Laos, or Cambodia.<sup>3</sup> A comparison among Australia, the Philippines, and Indonesia can provide ample evidence for which strategies are most effective at preserving middle-power autonomy while also guaranteeing economic and security advantages.

In determining the variables for such a comparison, it is important to first distinguish how China exerts influence over middle powers. As previously described, China combines the use of hard and soft power to exploit economic and military vulnerabilities, while simultaneously attempting to curtail political confrontation. Therefore, one must extricate data that highlights the economic, defense, and political relationships middle powers have with China.

## **Timeframe**

Data for this study was collected from 2010 through 2019. This timeframe is advantageous for several reasons. First, it excludes most of the influences of the Asian Financial Crisis (AFC) of 1997–1998 and the Global Financial Crisis (GFC) of 2008–2009—times of extraordinary economic and political change. It also omits the effects from the COVID-19 pandemic. During the COVID-19 outbreak, levels of global trade, international travel, and intergovernmental cooperation rapidly declined or ceased altogether. Data from these periods are likely to be incomplete, inaccurate, and therefore potentially misleading. Second, 2010 through 2019 was a period of rapid economic growth for middle and small powers in the region. This was also coupled with growing economic ties with China—exemplified by the adoption of the Association of Southeast Asian Nations (ASEAN)–China Free Trade Area (ACFTA), President Xi Jinping’s announcement of China’s Belt and Road Initiative (BRI), and the start of an ongoing US–China tariff war.<sup>4</sup> Third, the same period is marked by aggressive Chinese expansionism in the South China Sea (SCS), frequent use of Chinese economic coercion against middle powers, and the re-establishment of the Quadrilateral Security Dialogue (Quad) in 2017—a strategic security alignment between Australia, Japan, India, and the United States.<sup>5</sup> These aspects make the decade of 2010 through 2019 promising for analyzing the effects of middle-power strategies and their abilities to withstand growing Chinese influence.

## **Economy**

States can apply economic leverage in a variety of ways. China has exhibited a preference for weaponizing trade relationships and using BRI investments to influence the political behaviors of other countries.<sup>6</sup> For Australia, the Philippines, and Indonesia, China stands as the leading trade partner by a vast margin, whereas these three countries individually only comprise a small fraction of China’s overall trade. At times, Beijing has exploited this trade share disparity toward Australia and the Philippines. However, Indonesia has not incurred the same fate as its neighbors.<sup>7</sup> Quite the opposite, Indonesia has received enormous levels of infrastructure investment.<sup>8</sup> These relational outcomes are important in distinguishing trends for analysis.

To determine the degree that Australia, the Philippines, and Indonesia are economically dependent on China, publicly available economic data were collected from each country’s respective online trade and central bank databases. This information was then cross-referenced with data collected from World Bank and International Monetary Fund (IMF) databases to ascertain an overall



level of dependence. The data compiled consisted of total value of exports and imports, value of exports and imports with China, trade balance information, foreign direct investment (FDI) from China, and foreign reserves with respect to the Chinese renminbi. Economic relationships were categorized into (1) reliance on trade with China; (2) China's reliance on trade with either Australia, the Philippines, or Indonesia; (3) reliance on FDI from China; and (4) fiscal reliance on China.

To determine one country's reliance on trade with another, nominal trade data were collected from the World Integrated Trade Solution (WITS) by the World Bank. Specifically, the values of 2019 exports and imports were combined and subsequently divided by the value of GDP. For determining a reliance on FDI, the value of FDI received from China was compared to that of the United States. The reliability of the government-released economic data from China is typically scrutinized as unreliable.<sup>9</sup> Therefore, FDI data for China was collected from the China Global Investment Tracker, published by the American Enterprise Institute—a comprehensive examination of Chinese FDI abroad. US FDI data were collected from the Bureau of Economic Analysis (BEA). With sufficient data collected, each attribute was calculated for, if necessary, and then graded qualitatively along four tiers: *high*, *moderate*, *low*, and *negligible*.

In distinguishing a difference between each tier of trade reliance, the AFC was used as a premise for evaluation. The AFC is perceived as one of the most impactful economic events that has occurred in East Asia—more so than the GFC, which also had a significant effect on Asian markets.<sup>10</sup> The economies of South Korea, Indonesia, Malaysia, and Thailand were devastated by the AFC. One common outcome for each country was the subsequent impact to GDP, with each country combating an annualized negative growth of 5 percent or more. In particular, Indonesia faced a 13.1-percent plunge in its GDP<sup>11</sup>—triggering a political collapse and restructure known as the *Reformasi* era.<sup>12</sup> Based on the experiences of these countries, it can be ascertained that a 5-percent drop in GDP could once again trigger recession-like scenarios for middle powers in the region. Therefore, if a country was evaluated as having a *high* economic dependence, its relations with China represent a proportion of 5 percent or greater of national GDP. A *moderate* dependence was categorized as a situation in between 2.5 and 5 percent. Moderate dependence was determined with Lithuania in mind—a recent example of a country, with 2.5-percent GDP reliance on China, which was able to withstand Chinese economic coercion.<sup>13</sup> A *low* amount would represent an amount between 0.5 and 2.5 percent, and a *negligible* amount would be an amount less than 0.5 percent. Readers can review the variables and attributes, along with the respective sources, in Appendix A. For evaluating FDI data, inflows were com-

pared qualitatively based on the relative aggregate amounts from China versus the US during 2010–2019, and the annualized proportion in relation to GDP.

Monetary access has been used as a coercive measure by some countries—notably, Western powers.<sup>14</sup> Central bank reserve currency holding information was gathered for each country to determine the vulnerability associated with such risk. Reserve currency holdings of the Chinese renminbi were evaluated across each country to determine the financial risk China could leverage. This risk was evaluated along the same percentage basis as trade reliance on GDP, as monetary risk would impart a comparable economic impact.

## Defense

In terms of defense, many countries in the Indo-Pacific region prefer to balance economic ties with China with security reassurances provided by the United States. These states implement such balancing in various ways, depending on each country's hedging strategy.<sup>15</sup> Some countries elect to implement hedging strategies more than others. To that end, the region as a whole showed increased levels of military expenditures after 2009. Observers view this as an effort to modernize military arsenals to resist Chinese maritime assertiveness.<sup>16</sup> There are numerous accounts of armed disputes in the SCS between China and ASEAN member states in the past decade.<sup>17</sup> However, material capabilities must also be weighed with the ability to utilize assets operationally and alongside allied or partner nations.

To gauge the defense dynamics between China and Indo-Pacific middle powers, a proper account of military capabilities and formal relationships with great powers is needed. Defense attributes were categorized into (1) ability to maintain border sovereignty, (2) level of security cooperation with the United States, and (3) the level of security cooperation with China.

Intrinsic to the ability to maintain border sovereignty are capabilities associated with deploying naval personnel and assets to territorial waters, as to deny access to China's forces. These characteristics were drawn from the Lowy Institute's Asia Power Index—a comprehensive analysis of relative power in the Indo-Pacific that tracks and measures indicators across eight specific themes.<sup>18</sup> Additionally, these military characteristics are measured contextually alongside competing territorial claims and reported incidents with China. Based on these inputs, this article evaluates each country qualitatively on the scale of *high*, *moderate*, *low*, and *negligible*.

Military relationships with the United States also pose a threat to Chinese expansionism. A middle power's alignment with a great power limits China's willingness to escalate military confrontation. Security cooperation can be

predicated on defense treaties or other formal agreements. Australia and the Philippines have formal defense arrangements with the United States outlined by treaty, whereas Indonesia does not.<sup>19</sup> Nonetheless, defense partnerships are frequently less formalized and take the form of combined training exercises and military acquisitions.<sup>20</sup> To determine the extent of security cooperation Australia, the Philippines, and Indonesia had from 2010 to 2019, arms purchase records were obtained from the Stockholm International Peace Research Institute (SIPRI). This information was reviewed in tandem with treaty data and military training exercise data retrieved from the Asia Power Index to determine an overall evaluation. Again, these attributes were evaluated on the tiers of *high*, *moderate*, and *low* based on effective military interoperability through similar equipment, combined training, and an expectation of collective defense should conflict erupt. A country presumed to join the United States in conflict in full capacity would be evaluated as *high*; a country presumed to join in limited capacity would be considered *moderate*; a country presumed to join in little to no capacity would be viewed as *low*. The same evaluation was made for security cooperation relationships with China.

## **Politics**

China shows a predisposition for reacting adversely to direct forms of political confrontation and attempts of multilateral cooperation by other countries. China's sensitivity to outcries of expansionism in the SCS, criticism of human rights violations in Xinjiang, or acknowledgment of Taiwan as a sovereign state, is seemingly correlated with severe economic coercion. Australia and the Philippines have both been the targets of Chinese economic coercion.<sup>21</sup> In contrast, when Indonesia downplayed a maritime dispute in the Natuna Sea in 2014, China refrained from using economic coercion.<sup>22</sup> An attempt to understand the disparities in Beijing's reactions was made by dissecting political behaviors into fundamental political attributes.

The political attributes assessed were (1) portrayal of ambiguous political signals, (2) capability for institutional balancing, and (3) level of democracy. These political attributes are indicative of strategies pertaining to hedging, balancing, and bandwagoning. Specifically, ambiguity is commonly associated with hedging and is indicative of a country's hedging strategy, whereas institutional balancing is less ambiguous and is an attempt at diminishing a great power's influence. Political attributes associated with bandwagoning, in the instance of a rising China, come with authoritarian nuances. China's ambitions and economic pursuits have proven effective at promoting autocratic consolidation in the region.<sup>23</sup> Specifically, Cambodia, Laos, and Myanmar frequently align politically with China and are considered reliant

both economically and militarily—suggesting that they are bandwagoners.<sup>24</sup> With authoritarianism as a correlated pretense for bandwagoning, the level of democracy is suggestive of an inversely proportional relationship with bandwagoning.

This article assesses the portrayal of political ambiguity by analyzing qualitative assessments made by hedging scholars to determine levels of strategic ambiguity and comparing these with political favorability with the United States and China and favorability from their general publics. The rationale for this is to compare ambiguity alongside relationships. A *high* evaluation was characterized by nonpolar tendencies between the United States and China. For example, moderate scores in all aspects of favorability and criticism of the United States and China would result in a *high*. In contrast, a *low* evaluation was characterized by polarized tendencies of favorability or criticism to one particular great power.

Favorability was determined by gathering data from Pew Research Center's Global Attitude dataset responses and conducting a Likert scale analysis based on weighted average.<sup>25</sup> Responses were weighted 1 to 5 points based on the level of favorability. For example, a "very unfavorable" response would receive 1 point, whereas a "very favorable" response would receive 5 points. This weighted average was evaluated corresponding to the following method: a score greater than or equal to 3.50 would constitute as *high*; less than 3.50 but greater than or equal to 2.50 would constitute as *moderate*; less than 2.50 but greater than or equal to 1.50 would constitute as *low*; and less than 1.50 would constitute as *negligible*.

This article measures institutional balancing by retrieving the Intergovernmental Organizations (IGO) dataset from the Correlates of War (COW) Project—an effort to facilitate the use of reliable quantitative data in IR. Data was examined to determine overall IGO membership and multilateral framework membership with respect to China and the United States. This was then categorized into inclusive and exclusive components. These numbers were qualitatively evaluated to highlight shortfalls in multilateral framework participation. A *high* assessment encompasses the ability to deter or resist Chinese influence and therefore a higher participation in multilateral frameworks that exclude China and a higher participation in multilateral frameworks that include China and the United States.

With a lack of scholarly literature that links institutional participation and balancing, this article forms a baseline through shared opinions by scholars and political experts. A middle power that has successfully employed institutional balancing in recent years is Australia, which has led the way in some multilateral initiatives and has used "a complex blend of traditional middle-power multilateralism and peace-building initiatives" that force China to accept a US presence in the Indo-Pacific.<sup>26</sup> Using Australia as a middle-power example for institutional balancing, its quantity of inclusive and exclusive multilateral frameworks were

constituted as top measures for *high* evaluations and categories for lower measures were divided up into thirds from this baseline.

Bilateralism affords great powers the ability to assert more efficient control over smaller powers.<sup>27</sup> In the past, China has been able to leverage bilateral agreements to pit affiliated countries against each other. For example, China has used infrastructure investments as a way of dissuading Cambodia, Laos, and Myanmar from voting in support of a Declaration on the Code of Conduct for the Parties in the South China Sea. Their lack of consensus has limited ASEAN's efforts toward establishing a legally binding agreement with Beijing in the region, giving China the ability to continue SCS expansion.<sup>28</sup> Multilateral engagement by middle powers ultimately poses a threat to Chinese influence as it provides an opportunity to establish a united front in opposition to Chinese foreign policies through institutional balancing. A country's ability to implement institutional balancing, therefore, plays a role in deterring Chinese aggression.

Bandwagoning involves aligning with a threatening power to avoid being attacked by it. For some countries in Southeast Asia, this has come at the detriment of autonomy.<sup>29</sup> This erosion of autonomy and overall autocratic consolidation can be attributed to the failure of party politics, political polarization, strength of civil society, institutional and governmental accountability mechanisms, cultural foundations, middle-class representation, and external influence.<sup>30</sup> The Varieties of Democracy Institute (V-Dem) attempts to incorporate many of these aspects into its analysis of world governments through the institute's Liberal Democracy Index (LDI). Using reports to assess 2019 indices, this article evaluated the LDI to ascertain a country's vulnerability to autocratic consolidation and simultaneously its willingness to bandwagon with China. For perspective, China scored a 0.05, whereas the United States scored a 0.70. The difference between these two great powers was divided into thirds, with tiers for *high*, *moderate*, and *low* inclusive to each third. Additionally, the levels of domestic favorability of the United States and China, as assessed as a measure of political ambiguity, were also taken into consideration. Autocratic tendencies combined with an acceptance of Chinese influence or animosity toward the United States could lead a country's leaders to bandwagon with China.

## **Research Findings**

As outlined above, data were categorized and evaluated for Australia, the Philippines, and Indonesia. Table 1 consolidates the research findings into the categories of economics, defense, and politics. The results are depicted for side-by-side comparison among countries. For a detailed examination of sources and how each variable was evaluated, refer to Appendix A.

**Table 1. Comparative Study Findings**

Attributes	Australia	Philippines	Indonesia
<b>Economics:</b>			
Reliance on Trade with China	high	high	high
China's Reliance on Trade with Country X	negligible	negligible	negligible
Reliance on FDI from China	low	low	low
Fiscal Reliance on China	moderate	low	low
<b>Defense:</b>			
Ability to Maintain Border Sovereignty	high	low	moderate
Level of Security Cooperation with US	high	moderate	low
Level of Security Cooperation with China	low	low	moderate
<b>Politics:</b>			
Portrayal of Ambiguous Political Signals	low	moderate	high
Capability for Institutional Balancing	high	low	low
Vulnerability to Autocratic Consolidation	low	high	moderate

### *Economic Attributes*

The economies of Australia, the Philippines, and Indonesia all exhibit a *high* reliance on trade with China, while China shows a reciprocal reliance on trade that is *negligible*. In terms of GDP, each country would be prone to substantial economic shock in the event of prolonged economic coercion. Should China choose to cut off economic ties with any of the three countries, the results have the capacity to impact GDP on a scale similar to that of the AFC. At the same time, the impact to China's economy would be minimal.

This is noteworthy because China has shown a willingness to cut off economic ties with trade partners recently—specifically, against Lithuania and Australia.<sup>31</sup> However, in the case of Australia and for a variety of reasons, coercive effects were mostly short-lived—resulting in relatively little overall economic impact to Australia.<sup>32</sup> Nonetheless, not all economic coercion should be considered short term. Europe and the United States have shown their willingness to exert long-term economic coercion against Russia following its invasion of Ukraine—suggesting long-term economic coercion can be implemented if opposing sides become entrenched.<sup>33</sup>

In terms of FDI, all three countries receive high levels of FDI from China. However, the staggering amounts put forth by the United States offsets such investments. In particular, Australia receives substantial FDI from the United States, which highlights the economic benefits of aligning with the United States.

Less impactful is the measure of foreign debt allocations. In 2019, only Australia had significant reserve holdings in China's currency, the renminbi, and this was at 5 percent. Overall, the Chinese renminbi makes up less than 3 percent of the world's

composition of reserves.<sup>34</sup> For many countries, the renminbi is deemed riskier as a reserve currency than the US dollar or Euro.<sup>35</sup> This is attributed to a lack of financial market transparency and political deficiencies that allow for potential currency manipulation.<sup>36</sup> With limited renminbi holdings worldwide, China is less able to apply economic pressure in the manner the United States or European Union (EU) can by controlling access to international reserves and bank transfer systems.<sup>37</sup> Australia's 5-percent stake in the renminbi might be viewed as rather high when compared to other countries, but it allows its central bank to diversify without exposing its economy to too much risk. However, if more countries elect to take on a greater share of renminbi in the future, the relative strength of the renminbi will rise and ultimately give China more economic sway.

### ***Defense Attributes***

Of the three countries, Australia has the strongest ability to maintain border sovereignty at sea. Australia's operational military capabilities allow it to openly confront China in conventional naval warfare more than any other country in the region. With zero reported incidents with China, some may argue that Australia does not compete with maritime claims with China and therefore would not have any. However, this assumption would be wrong because of Australia's dire need for maintaining open waterways in the region, as portrayed by its continuous monitoring in the SCS through Operation Gateway.<sup>38</sup>

Indonesia and the Philippines score as *moderate* and *low*, respectively. This follows suit with developments in the SCS since 2010. China has made attempts to survey the sea floor in pursuit of oil and gas reserves in the Natuna Sea, while trying to dissuade Indonesian development there. While Jakarta has not prevented China from accessing Indonesia's exclusive economic zone (EEZ) and scanning its sea floor, Jakarta has successfully maintained a military presence in the Natuna Sea and has increasingly developed Indonesia's resources. This has not been the case for the Philippines. China has used economic coercion and hard military power to annex portions of the Scarborough Shoal and Spratly Islands. In some instances, China has gone as far as island-building and installing military outposts that include runways and missile defense systems.<sup>39</sup> This has ultimately denied the Philippines its United Nations Convention on the Law of the Sea (UNCLOS)-justified access to its own natural resources.

In terms of security cooperation, all three countries exhibit *low* levels of cooperation with China. Nonetheless, Indonesia's behavior in cooperating with China is the most remarkable of the three due to Jakarta's strategic hedging agenda and would be expected to match security cooperation efforts with the United States. Indonesia's defense partnership with the United States is comparatively much greater, yet still as-

essed as *low* during the observed period. One possible explanation for this is that Indonesia perceives economic and military policies along the same spectrum, in which stronger economic ties with China are equated with stronger military ties with the United States. In contrast, Australia exhibits *high* levels because of its continued strong ties with the United States through all aspects of security cooperation.

The Philippines is situated between Australia and Indonesia with respect to security cooperation. With limited military capabilities to deny China access to the Philippines' EEZ, Manila incrementally strengthened its formal cooperation agreements with the United States. In 2014, Manila reaffirmed a nonbinding 1951 Mutual Defense Treaty with the Enhanced Defense Cooperation Agreement (EDCA). However, swings in foreign policy with President Rodrigo Duterte's attempts at economic rapprochement with China seemed to undermine US–Philippines defense arrangements. An eventual return to the United States for security guarantees was made in 2019 when US Secretary of State Michael Pompeo reasserted a US commitment to Philippine defense.<sup>40</sup> For these reasons, the Philippines exhibits a *moderate* level of security cooperation with the United States. It is important to note that for all three countries the data for combined training exercises are limited to years between 2013 and 2017. Without an overall tally of exercises throughout 2010 through 2019 or a year-over-year trend, the data lack enough fidelity for interpretation and evaluation. A more definitive dataset of specific training exercises and participant countries would have better met the intent of this study.

### ***Political Attributes***

Australia, the Philippines, and Indonesia showcase different political approaches to coping with a rising China. In terms of strategic hedging, Indonesia exhibits the *highest* propensity for ambiguity in its foreign policy. The Philippines scores a *moderate* for large policy swings between China and the United States. Australia displays *low* ambiguity, as its alignment with the United States has been very clear.

Indonesia's mostly *moderate* assessments in terms of ambiguity suggest that Jakarta seeks to fill the role of honest broker in the region. Indonesia's overall demeanor is in line with its long-adopted foreign policy of “*bebas aktif*,” which translates to a “free and active”—a pursuit of independent and proactive outward policies first introduced in 1948.<sup>41</sup> Indonesia has shown *high* political favorability toward China by downplaying disputes in the Natuna Sea, committing to ACFTA, and showing a continued willingness to incorporate China into multilateral discussion.<sup>42</sup> Indonesia also joined Malaysia in signing a comprehensive strategic partnership with China in 2013—committing to making progress in security cooperation.<sup>43</sup> Concurrently, Indonesia's relationship with the United States greatly improved under the Obama administration with a memorandum of understanding for maritime



cooperation and an elevated status as a “strategic partner” to show for it.<sup>44</sup> This back and forth of alignment behaviors frustrates both great powers, forcing them to tempt Indonesia with incentives. From China, this typically comes in the form of infrastructure investment, such as the Jakarta–Bandung high speed rail project.<sup>45</sup> From the United States, this typically comes in the form of security benefits.<sup>46</sup>

The Philippines portrays *moderate* levels of political ambiguity, signified by dramatic swings in foreign policy. President Benigno Aquino’s balancing policy toward China, brought forth by SCS contestations, led to public confrontation through the Permanent Court of Arbitration at The Hague and an eventual ruling against China in 2016. In a dramatic shift, President Duterte pivoted the Philippines toward a policy of economic rapprochement with China.<sup>47</sup> However, this rapprochement has had limited success, as the Philippines has received some of the lowest amounts of BRI funding in relation to its ASEAN counterparts.<sup>48</sup> Additionally, Duterte’s war on drugs drew criticism by the United States for human rights violations—straining the Philippines’ relationship with its top security partner. Meanwhile, the US continued support of the Philippines through the EDCA and Pompeo’s recommitment to mutual defense.<sup>49</sup> The unpredictability in Philippine foreign policy is characteristic of hedging. However, the confrontational and public manner in which it is implemented has driven away Chinese economic incentives. As a result, the Philippines has found itself torn between two great powers with little development to show for it when compared to Indonesia.

Australia’s *low* ambiguity does little to hinder development. Embraced by Western powers, Australia has received massive amounts of FDI and has exhibited a steadily growing economy during throughout the 2010–2019 period.<sup>50</sup> These ties have also allowed Canberra to take a hard stance against China by criticizing Beijing’s actions to undermine a rules-based order in the region.<sup>51</sup> Australia’s overall behaviors are typical of a country pursuant of a balancing strategy.

Institutional balancing is one of the most effective policy tools that middle powers can effectively implement against a rising China. Australia shows a *high* capability for doing so by its participation in inclusive multilateral frameworks with both the United States and China, coupled with multilateral frameworks that exclude either party. This bodes well for leveraging middle-power ideals and encouraging great powers to conform to regional efforts. Nonetheless, Australia’s membership in the Quad and other security frameworks concerned with China’s rise allow Australia to maintain a great deal of autonomy. The Philippines and Indonesia have been less willing to frustrate China as their access to exclusive multilateral frameworks was *moderate* and *low*, respectively. The Philippines was able to gain international support through The Hague’s ruling, although this re-

sulted in little overall benefit for the country as Duterte's rapprochement with China stifled substantiated commitments from the West.<sup>52</sup>

In terms of vulnerability toward autocratic consolidation, the Philippines was assessed as *moderate*, whereas Australia and Indonesia were assessed as *low*. Of the three, the Philippines was the likeliest to encounter a democratic backslide and eventual autocratic consolidation. Readers can assess each country's LDI in Appendix A. For perspective, Myanmar, Laos, and Cambodia each scored an LDI of 0.246, 0.095, and 0.088, respectively—highlighting a link in the region between autocratic tendencies and bandwagoning with China. Favorability of China was *moderate* for all three countries in this study, suggesting that this input was less influential than anticipated.

### Analysis of Findings

From 2010 through 2019, the countries of Australia, the Philippines, and Indonesia showcased a range of foreign policy strategies toward China. For all three, their economies were highly reliant on trade and specifically trade with China, whereas China was not dependent on any of them individually. Where their foreign policies differ are in the areas of defense and politics.

The examined capabilities and actions of Australia demonstrate a strategy of balancing against China. Strong military and political ties with the United States give Australia the fortitude to criticize China on the world stage and withstand acts of economic coercion. This assertion can be observed in Prime Minister Malcolm Turnbull's warnings to China of "pushing the envelope" in 2015 and his further criticism in 2017 in which he accused China of disrupting the rules-based structure in the region.<sup>53</sup> One of Australia's most blatant balancing actions was in restarting the Quad in 2017 with Japan, India, and the United States—a clear message to China of alignment with the West.<sup>54</sup> Still, Canberra was able to reap significant economic and security guarantees without compromising Australia's autonomy.

As a result of successful hedging strategies, Indonesia has been the benefactor of many massive Chinese infrastructure investments. As of 2017, Indonesia had received over USD 171 billion in BRI investments from China—the most of any ASEAN member nation.<sup>55</sup> Indonesia has also been able to leverage hedging to attract investments from the United States and US-aligned countries, such as Japan and even Australia.<sup>56</sup> Indonesia's behavior typifies the conventional model of a hedging state.

In comparison, the Philippines has received the least amount of BRI investment of the 10 ASEAN states—totaling only USD 9.4 billion.<sup>57</sup> Additionally, Manila has been the target of severe economic and military coercion by China. In a successful attempt to force the Philippines to give up control of the Scarborough Shoal, China employed a successful combination of military pressure and economic sanctions in the form of tariffs, steep reductions in tourism, and other un-

official barriers to trade.<sup>58</sup> Without sufficient support from the United States, the Philippines was forced to give up access to the Scarborough Shoal along with the nearby oil, gas, and fishing resources.<sup>59</sup>

The dramatic difference in experiences between Indonesia and the Philippines highlights how precarious China's rise can be for middle powers. In pursuit of hedging strategies, both countries elected to restrain defense spending to roughly 1 percent of GDP.<sup>60</sup> This has allowed Jakarta and Manila to put other budgetary needs ahead of military modernization and defense operating expenditures. However, a weak military can expose countries to hard-power influence that can be especially exploited by great powers such as China. In the case of the Philippines, an inconsistent and more confrontational approach to hedging constrained Manila's success.

Jakarta's approach to hedging was more consistent and less confrontational. As a result, Indonesia's reaped greater economic and security guarantees between China and the United States. Jakarta sacrificed more of Indonesia's autonomy by electing to downplay its disputes with China but, in turn, saw significant economic benefits. Of the two strategies, hedging proves to be a riskier proposition prone to political miscalculations and can result in vastly different outcomes. Furthermore, hedging capitalizes on a state's vulnerabilities that can, if a great power so chooses, be exploited for strategic power plays.

## **Recent Developments**

Since 2019, the dynamic in the SCS has changed. Economies are still reeling from the COVID-19 pandemic, while a conflict between Russia and Ukraine has spurred inflation around the globe.<sup>61</sup> Across the Indo-Pacific region, governments have experienced democratic degradation.<sup>62</sup> Also, territorial disputes continue to fuel nationalist animosity in the SCS.<sup>63</sup> Many countries in the region have significantly increased their defense expenditures and have unveiled plans for modernizing their military arsenals. The Indo-Pacific is now more precarious than ever, and the stakes with China are becoming increasingly prone to strategic miscalculation. Australia's recent experience with Chinese economic coercion is one such example.

Following the global outbreak of COVID-19, Australia led a coalition of countries to investigate China over the origins of the disease. Beijing quickly retaliated with extreme measures, employing tariffs and boycotts on large swathes of Australian exports. While the impact to Australia's economy was minimal due to Australian businesses effectively being able to divert trade elsewhere through global markets, the Morrison government did not take this event lightly. In June 2020, Australia announced a 40-percent increase in military spending from its previous budget.<sup>64</sup> Then, in September 2020, Australia, the United Kingdom, and the United States announced the formation of AUKUS—a commitment to

deepen diplomatic and security ties, viewed by many as an effort to curb the advancement of China's military expansionism in the Indo-Pacific.<sup>65</sup> A year later, it was announced in a joint statement that the United States and United Kingdom would be sharing their nuclear-powered submarine technology with the Royal Australian Navy for greater "interoperability, commonality, and mutual benefit."<sup>66</sup> In the two years since, reports of standoffs and precarious encounters involving Chinese and Australian military forces have only become more frequent.<sup>67</sup>

Philippine government officials have endorsed the AUKUS arrangement and increased security cooperation with the trio in hopes that doing so will restore the balance of power in the region. Duterte himself even lauded AUKUS during the 9th US-ASEAN Summit in October 2021.<sup>68</sup> While it remains unclear whether newly elected President Marcos will continue along the path Duterte set forth, the Philippines has expressed an affinity toward balancing in recent years that is also shared by Indonesia.

For Jakarta, tensions in the Natuna Sea have only escalated since 2019. Beijing has become more aggressive in asserting China's claims. Its actions encompass a four-month-long standoff with Indonesian Coast Guard forces there, a demand that Indonesia cease drilling for oil and gas in its UNCLOS-defined EEZ, and protests against Garuda Shield, Indonesia's annual exercise with the United States.<sup>69</sup> In response, Indonesia defied China's demands, broadened Garuda Shield to include eight other countries, and embarked on a rapid quest of military modernization and expansion.<sup>70</sup> Indonesian Defense Minister Prabowo Subianto's pledge of USD 125 billion toward naval and air force purchases over five years is an about-face for Indonesia's defense policy, which has primarily centered around antiterrorism for the past few decades. Indonesia's most recent policy actions suggest that Jakarta has departed its foreign policy strategy of hedging in favor of balancing.

Additionally, the unveiling of the Indo-Pacific Economic Framework (IPEF) in mid-2022 seemingly adds to the notion of balancing. The IPEF is a newly founded, US-led coalition with 12 Indo-Pacific partners that includes Australia, the Philippines, and Indonesia, with an aim of targeting trade and supply-chain vulnerabilities, committing efforts toward renewable technologies, and emphasizing international rule of law.<sup>71</sup> The IPEF looks to counter China's BRI as it provides Indo-Pacific countries with an alternative for economic development assistance. The G-7 has also pledged USD 600 billion by 2027 through the Partnership for Global Infrastructure and Investment.<sup>72</sup>

More recently, at the G-20 Summit in Bali, Indonesia, in November 2022, the world witnessed a concerted effort to encourage investment in developing countries—with the intent of bolstering the "resilience of global supply chains."<sup>73</sup> One of the first countries to substantiate this effort was Canada—launching an ambitious

*Indo-Pacific Strategy* with a goal of investing nearly USD 2.3 billion over five years. At the Bali summit, G-20 leaders were also able to effectively pressure the leaders of Russia and China into supporting the summit's joint statement despite conflict with their respective strategic goals by (1) condemning Russia's invasion of Ukraine and (2) encouraging economic development in a manner that diminishes China's economic leverage in regions such as the Indo-Pacific. Additionally, these commitments to investment come at a time when China's economy has been significantly hindered by a real estate collapse and President Xi's Zero-COVID policy.<sup>74</sup> This example suggests that economic multilateralism that includes middle powers can be an effective tool to counter China's aggression in wider contexts.

Recent policy decisions by the Philippines and Indonesia substantiate Australia's comparative success in its relationships with China. Specifically, their hedging strategies are now more indicative of balancing behaviors as they have embraced multilateralism and increased defense spending. Furthermore, recent policy developments and achievements through the AUKUS, the Quad, the G-7, the G-20, and the IPEF justify the importance of economic diversification and merit of institutional balancing.

## **Conclusion**

Australia, the Philippines, and Indonesia offer different strategies for coping with a rising China. For Australia, this has meant aligning with the United States and balancing against China. For Indonesia, this has meant pursuing nonalignment and maintaining ambiguity through hedging. The cost of not committing to either strategy is portrayed through the limited success of Philippines—where minimal economic security is realized for the sacrifice of territorial and political sovereignty.

Middle powers in the region will be looking to reduce their vulnerabilities as a way of protecting their sovereignty and autonomy. Australia, the Philippines, and Indonesia can each benefit from reducing their economic ties with China through diversification but must do so in a manner that does not risk their relationships with China altogether. Australia's experience with Chinese economic coercion in 2020 presents an example from which other middle powers can learn.

Australia's ability to withstand economic sanctions proved to countries around the world that Chinese economic coercion can be combated through collective action among states. Since Australia's bout with China, Lithuania has also stood up to China and experienced the full burden of economic retaliation. In return, the entire EU stood by Lithuania's side, along with the United States, Australia, the United Kingdom, Japan, Canada, and Taiwan.<sup>75</sup> This approach of multilateral support in combating the effects of Chinese economic coercion has persuaded other middle and smaller powers to forge economic coalitions.

An economic coalition that subverts bilateral influence and guarantees economic security through mutual support can shield middle powers from China's might-makes-right foreign policies. It can also open the door for trade diversification that limits exposure to one particular country—in this case, China. Instilling a standard of solidarity, similar to that of the EU, would also heighten the impact to China's economy should Beijing elect to enact coercive measures against one country.

As the economies in the region are highly dependent on trade, trade relationships should be restructured with the predominant focus of reducing economic dependence with China. The IPEF may prove to be the best conduit for this type of change. For example, the IPEF could provide the region with a framework that reduces the dependence on cheap Chinese labor. India and Indonesia, both IPEF members, boast large labor forces that provide an alternative to China. These two nations' populations are the second- and fourth-largest in the world, respectively. With labor costs similar to that of China, both India and Indonesia can invite companies with the prospect of offshoring and diversifying regional dependence away from China.<sup>76</sup> This is just one of the many ways the IPEF can be used to wean the region from Chinese economic dependence.

The G-20 Summit in Bali is a prominent example of institutional balancing. A joint statement that not only condemns Russia's war in Ukraine but also commits developed economies to investing in developing regions, especially when China's economy is showing signs of faltering can be considered an achievement by middle powers and the West. This victory, while relatively small, may inspire middle powers to pursue institutional balancing further through other multilateral avenues.

For the Indo-Pacific, it is advantageous for middle powers to coalesce multilaterally, as doing so not only minimizes economic vulnerabilities but also challenges China with a united political front for advancing fair and equitable policies in the region. It is imperative that middle powers not only "enmesh" China into regional politics through inclusive forms of multilateralism but also threaten to reject Beijing through exclusive forms of multilateralism when China disrupts peaceful regional discourse.

However, there are times when diplomacy fails. In these instances, the guarantee of military strength is a necessity. This article presents a multimodal approach to quantifying and analyzing Indo-Pacific IR that distinguishes differences and commonalities among Australia, the Philippines, and Indonesia so that the importance of recent developments can be assessed with sufficient context. This research should provide a clear message to Indo-Pacific middle powers that hedging will only work until China escalates matters militarily. In which case, having the wherewithal to deny China access to territorial waters and having strong alliances are paramount in preserving a country's sovereignty and autonomy.

It is clear that Indo-Pacific states are losing patience with China's strong-armed approach to foreign policy. Middle powers in the region are now more willing to embrace multilateralism, as doing so presents a viable solution for countering China's aggressive actions. As illustrated by recent policy decisions by Australia, the Philippines, and Indonesia, the Indo-Pacific is shifting toward economic diversification and institutional balancing facilitated by multilateral frameworks. Indo-Pacific middle powers are increasingly likely to embrace the West in pursuit of stronger military capacity and greater intermilitary operability. The days of strategic hedging in the Indo-Pacific may soon be over, as middle powers learn to contend with a rising China. 🌐

#### **Maj Andrew M. Campbell, USAF**

Major Campbell is a Foreign Area Officer (FAO) in the US Air Force, specializing in the Indo-Pacific region, and primarily the country of Indonesia. He is a graduate of the US Air Force Academy, where he majored in aeronautical engineering, with an emphasis in jet propulsion. He has experience in flying both the C-130H and C-17A, flying missions to 12 different countries in the Indo-Pacific theater. Through his selection into the FAO program, he has achieved an MA in global affairs from George Mason University and is training for duties to become the next security cooperation officer at the US Embassy in Canberra, Australia.

## **Appendix A: List of Variables and Attributes**

### **List of Variables**

Variable	Description	Equation
GDP	gross domestic product of Country X	
$E_C$	value of Country X's exports to China	
$I_C$	value of Country X's imports from China	
$E_{TOTAL}$	value of Country X's total exports	
$I_{TOTAL}$	value of Country X's total imports	
$T_C$	nominal trade with China	$T_C = E_C + I_C$
$R_C$	reliance on trade with China, contribution of trade versus GDP	$R_C = T_C / GDP$
$R_X$	China's reliance on trade with Country X, contribution of trade versus China GDP	$R_X = T_C / GDP_C$
$T_{TOTAL}$	nominal trade, overall	$T_{TOTAL} = E_{TOTAL} + I_{TOTAL}$
$R_{TOTAL}$	reliance on trade overall, contribution of trade overall to GDP	$R_{TOTAL} = T_{TOTAL} / GDP$
$TS_C$	trade share of China proportional to Country X's overall trade	$TS_C = T_C / T_{TOTAL}$
VF	very favorable, questionnaire response	
SF	somewhat favorable, questionnaire response	
SU	somewhat unfavorable, questionnaire response	
VU	very unfavorable, questionnaire response	
$A_w$	weighted average	

**Economic Attributes**

<b>Economic:</b>	<b>Australia</b>	<b>Philippines</b>	<b>Indonesia</b>	<b>Source</b>
Reliance on Trade with China	high	high	high	
Nominal Trade with China, $T_{TOTAL}$	\$159.9B	\$36.6B	\$72.9B	WITS <sup>a</sup>
GDP Reliance on Trade Overall, $R_{TOTAL}$	33%	19%	22%	WITS <sup>a</sup>
GDP Reliance on Trade with China, $R_C$	12%	10%	7%	WITS <sup>a</sup>
China's Reliance on Trade with Country X	negligible	negligible	negligible	
China's GDP Reliance on Trade with Country X, $R_X$	0.34%	0.08%	0.15%	WITS <sup>a</sup>
Reliance on FDI from China	low	low	low	
FDI From China (2010-2019)	\$70.95B	\$5.25B	\$25.78B	CGIT <sup>b</sup>
FDI From US (2010-2019)	\$1.59T	\$53B	\$146B	BEA <sup>c</sup>
Fiscal Reliance on China	moderate	low	low	
Foreign Debt allocated to CNY	5.00% <sup>4</sup>	0.43% <sup>5</sup>	0.06% <sup>6</sup>	See notes d, e, and f

Notes:

- a. World Integrated Trade Solution (WITS) by the World Bank, <https://wits.worldbank.org/>
- b. China Global Investment Tracker (CGIT) by the American Enterprise Institute, <https://www.aei.org/>
- c. US Bureau of Economic Analysis (BEA), <https://www.bea.gov/>
- d. Reserve Bank of Australia Annual Report 2019, <https://www.rba.gov.au/>
- e. 2022 data; ratio of CNY reserves to total reserve holdings; no data found from 2019; Central Bank of the Philippines (BSP), <https://www.bsp.gov.ph/>
- f. 2019 Data, Indonesian Ministry of Investment (BKPM), <https://nswi.bkpm.go.id/>



## Defense Attributes

Defense:	Australia	Philippines	Indonesia	Source
Ability to Maintain Border Sovereignty	high	low	moderate	
Reported Incidents with China (2010-2019)	0 <sup>a</sup>	18	6	CSIS <sup>b</sup>
Area Denial Capability <sup>c</sup> (2019)	84	6	35	Lowy Institute <sup>d</sup>
Naval Deployment Capability <sup>e</sup> (2019)	83	19	42	Lowy Institute <sup>f</sup>
Conflicting Territorial Claims with China	No <sup>g</sup>	Yes	Yes	Lowy Institute <sup>h</sup>
Level of Security Cooperation with US	high	moderate	low	
Formal Defense Arrangement	Yes	Yes	No	Lowy Institute <sup>i</sup>
Arms Purchases (2010-2019)	8001M	299M	803M	SIPRI <sup>j</sup>
Combined Training Exercises (2013-2017)	55	27	27	Lowy Institute <sup>k,l</sup>
Level of Security Cooperation with China	low	low	low	
Formal Defense Arrangement	No	No	No	Lowy Institute <sup>i</sup>
Arms Purchases (2010-2019)	0M	0M	323M	SIPRI <sup>j</sup>
Combined Training Exercises (2013-2017)	9	7	16	Lowy Institute <sup>k,l</sup>

Notes:

- a. No reported data found
- b. Center for Strategic and International Studies (CSIS), <https://csis-ilab.github.io/>
- c. Area Denial Capability factors in air defense, antinaval, intelligence, surveillance, reconnaissance, and targeting capabilities.
- d. Area Denial Capability, Lowy Institute Asia Power Index, <https://power.lowyinstitute.org/>
- e. Naval Deployment Capability factors in the ability of the navy to deploy with speed and for a sustained period in the event of a major maritime military confrontation.
- f. Naval Deployment Capability, Lowy Institute Asia Power Index, <https://power.lowyinstitute.org/>
- g. While China has not claimed any portion of Australia's EEZ, China's growing military presence in the SCS threatens international rule of law. Australia regularly conducts maritime surveillance flights in the region, to the dismay of China, through Operation Gateway, yet does not actively participate in US-led Freedom of Navigation Operations.<sup>77</sup>
- h. Australia's South China Sea Challenges, Lowy Institute, <https://www.lowyinstitute.org/>

- i. Regional Military Alliances, Lowy Institute Asia Power Index, <https://power.lowyinstitute.org/>
- j. Arms Transfers Dataset, Stockholm International Peace Research Institute, <https://www.sipri.org/>
- k. Joint Training (Allies), 2013-2017 dataset, Lowy Institute Asia Power Index, <https://power.lowyinstitute.org/>
- l. Joint Training (Non-Allies), 2013-2017 dataset, Lowy Institute Asia Power Index, <https://power.lowyinstitute.org/>

### Political Attributes

Political:	Australia	Philippines	Indonesia	Source
Portrayal of Ambiguous Political Signals	low	moderate	high	
Consensus of Ambiguity from Literature	low	moderate	high	Multiple <sup>a</sup>
Political Favorability of China	low	moderate	high	Multiple <sup>a</sup>
Public Favorability of China	moderate	moderate	moderate	
Weighted Average, $A_w$ (2019)	2.63	2.67	2.92	Pew <sup>b</sup>
Political Favorability of the US	low	moderate	moderate	Multiple <sup>a</sup>
Public Favorability of US	moderate	high	moderate	
Weighted Average, $A_w$ (2019)	2.98	3.82	3.10	Pew <sup>b</sup>
Capability for Institutional Balancing	high	low	low	
Overall IGO <sup>c</sup> Membership	81	72	75	COW <sup>d</sup>
Inclusive Multilateral Frameworks	high	high	High	
With China	57	57	57	COW <sup>d</sup>
With US	58	42	41	COW <sup>d</sup>
With China and US	45	37	37	COW <sup>d</sup>
Exclusive Multilateral Frameworks	high	low	low	
Excludes China, includes US	13	5	4	COW <sup>d</sup>
Excludes US, includes China	12	20	20	COW <sup>d</sup>
Excludes China and US	11	9	13	COW <sup>d</sup>
Vulnerability to Autocratic Consolidation	low	high	moderate	
Liberal Democracy Index (2019)	0.789	0.286	0.494	V-Dem <sup>c</sup>
Favorability of China	moderate	moderate	moderate	
Weighted Average, $A_w$ (2019)	2.63	2.67	2.92	Pew <sup>b</sup>

Notes:

- a. Endnote 75
- b. Spring 2019 Global Attitudes Dataset (Questions 8a/8b), Pew Research Center, <https://www.pewresearch.org/>
- c. Intergovernmental Organization (IGO)

- d. Intergovernmental Organizations (v3) dataset, filtered for 2010-2019, Correlates of War (COW), <https://correlatesofwar.org/>
- e. Democracy Report 2020 (contains 2019 data), Varieties of Democracy, <https://www.v-dem.net/>

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# The Dragon and the Tides

## Using Theory, History, and Conventional Naval Strategies to Guide America's Understanding of China's Maritime Hegemonic Aspirations in the Indo-Pacific

ANDREW ERSKINE

### Abstract

To capture the growing great-power competition and potential confrontation in the Indo-Pacific, this article seeks to uncover how current Sino-US naval and maritime policies are being guided. Specifically, this article examines the theoretical, historical, and conventional nature of naval and maritime strategies employed by the United States, China, and other great powers to understand how these two great regional actors have developed notions of maritime hegemony and to shed light on how their strategies will steer the Indo-Pacific's orderly architecture. It is also imperative to highlight that the analysis presented in this article is conducted through a high degree of abstraction. The goal is to provide intellectually and normatively provoking research, thereby offering policy and military officers a framework to guide operational thinking about the rapidly shifting naval and maritime dynamic in the Indo-Pacific.

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When thinking of hegemony in the Indo-Pacific, it is hard to ignore the near-complete military and diplomatic dominance of the United States. With its post-World War II status-quo position, complete with its own Pacific Fleet, naval installations in Pearl Harbor, Hawaii; and Yokosuka, Japan, and the integrated US Indo-Pacific Command (INDOPACOM) with its subordinate unified commands in Yokota Air Base, Japan; and Camp Humphreys and Camp H.M. Smith, South Korea, America's sustained regional dominance has been the strategic objective for past US presidential administrations. Specifically, the three past US presidential administrations of Barack Obama, Donald Trump, and now Joe Biden have intensified Washington's regional hegemonic position by garnering greater like-minded partners in the region to establish formal systems of collaboration—particularly the Quadrilateral Security Dialogue (Quad) and the Australia-United Kingdom-United States Trilateral Security Pact (AUKUS)—while also attempting to regain a favorable military projection in the region.

However, for the first time, an emerging peer-state with the resources, military capabilities, and political intentions to contest the region's status quo naval and maritime dynamic is challenging America's Indo-Pacific hegemony. The observation that America's Indo-Pacific hegemony is threatened for the first time since its World War II victory in the Pacific is difficult to comprehend. For one, many historians and defense analysts argue that during the Cold War the Soviet Union challenged US naval and maritime hegemony by developing strategic ballistic missile submarine (SSBN) forces and reworking its coastal navy into a blue-water navy.<sup>1</sup>

However, this perspective negates the Moscow's prioritization regarding Soviet territorial and political possessions in Eastern Europe and sound deterrence policies to ensure its partial dominance of an ideologically divided world order. Moreover, Soviet geosecurity thinking during the Cold War was about using its SSBNs as a purely defensive force, not as a revisionist instrument to militarily overturn US hegemony in the Pacific. Unlike the Cold War, China's economic and military rise as an aspiring regional hegemon and global great power is actively displacing America's Indo-Pacific hegemony. Moreover, the shift in the regional hierarchical system to multipolarity and the relative decline of American military, economic, and diplomatic hyperpower status illustrates the preeminence of growing Sino-US hegemonic tensions.

### **Political Theories for Hegemony**

We can observe the growing great-power struggle for naval and maritime dominance in the Indo-Pacific through multiple theoretical perspectives. For this article's intentions, however, the most prominent theories that can shine insightful information to guide a US naval and maritime response is hegemonic stability theory (HST) and power transition theory (PTT). In particular, these theories have specific implications for naval and maritime dynamics as researchers can incorporate them into traditional and distinct notions of a great power being a maritime power and the correlation to regional hegemonic posturing.

According to HST, peace, or a peaceful geopolitical setting, occurs when there is one dominant state actor in an international system.<sup>2</sup> Due to the international system's anarchic structure, implying a lack of a supreme power that can instantly and explicitly prevent or stop forms of interstate violence, state actors need to enhance their power to ensure their survival and continuity, often resulting in localized or broader struggles for military, economic, and diplomatic authority over neighboring states. To minimize wars or security dilemmas caused by states questioning or worrying about the intentions of neighboring nations, HST puts forth the need for a hegemon that can implement coercive and noncoercive strategies through employment of overwhelming power and capabilities to lead, control,



and influence an international system's military, economic, and diplomatic architecture while also ensuring that the international system is mutually beneficial to near-peer or peer states.<sup>3</sup>

When a hegemon is unable, unwilling, and incapable of coercing or persuading other states into compliance or submission, competition and confrontation emerge in the international system. Typically, peer-states will observe the decline of a hegemon as an opportunity to gain advantageous geosecurity and geoeconomic positions to elevate their status as a great power or will seek to overtake the declining hegemon and become the new hegemonic actor of a system—using its new geopolitical status, military, and economic strength to shift the system's architecture in its favor.

Frequently these hegemonic transitions lead to war—commonly referred to as the *Thucydides' Trap*—where hegemonic aspirants face off against the status-quo hegemon.<sup>4</sup> The post-World War II period has shown that hegemonic transitions can also occur through passive ventures. These passive transitions from one hegemon to another can only occur if both aspirant and status-quo hegemons have interchangeable political systems and shared international values and norms—this was best captured during the hegemonic shift from the *Pax Britannica* to *Pax Americana*.

Another theoretical perspective that can guide Sino-US naval and maritime strategies for hegemony in the Indo-Pacific is A. F. K. Organski's PTT. Although associating elements of realism and power politics into its methodology, PTT offers a unique perspective into the dynamic settings of an international system, particularly one that envisions strategies of collaboration and competition through a hierarchical structure. At its core, PTT provides tools that guide and measure structural changes in a hierarchy's system, looking at the latter's power distribution between top-tier and lower-tier powers.<sup>5</sup>

Suppose a hierarchical structure's distribution of power is unbalanced. In that case, the system will take a *vertical* design in its interstate collaboration and competition dynamic, meaning that the hegemonic power has unchecked and near-complete control over military, economic, and political matters. Moreover, this scenario implies that there are more lower-tier states—classified as small, minor, and middle powers—than top-tier states, which inhabit the major, great, and hyper classifications of power. In a *horizontal* design, the power distribution remains hierarchical. However, there are more varying dynamics between the lower-tier and top-tier powers—often having multiple states inhabit the upper echelon of power classification.<sup>6</sup> Moreover, in this design, there is greater emphasis placed on hegemonic satisfaction.

When either a vertical or horizontal system is inhabited by overwhelmingly like-minded allies and partners, a hegemon's rule is sought after and reinforced as

there are more advantageous geosecurity and geoeconomic factors for lower, middle, and top-tier powers to continue adhering to the rules and norms placed by the hegemonic state. If the system is inhabited by discontented and revisionist powers, potentially aspiring hegemons, then there is a higher likelihood for status-quo hegemonies to be challenged and deposed through great-power war or a coalition of powers.<sup>7</sup>

Within a naval and maritime strategy, attaining or preserving hegemony is a primary concern. Throughout history, hegemons were traditionally geographically located on peninsulas or were island states, resulting in them having superior naval and, in the modern context, aerial military forces.<sup>8</sup> Due to the geographical boundaries, a peninsula or island hegemon could afford to have a limited standing land army due to the natural barriers afforded by a sea or ocean, thereby permitting hegemons to invest and supplement their military forces with naval and aerial capabilities. In turn, naval and aerial forces offer more definite defense and security deterrence due to their ability to efficiently and rapidly project forces against a perceived challenger. Additionally, hegemonic powers from these geographical settings have more means to accomplish and advance their objectives, either economically or militarily, as waterways and sea lanes provide routes that are harder to block, oppose, and capture while also projecting a hegemon's hard-power capabilities further afield from their state's territory, making potential armed conflict less devastating to the hegemon's civilian, agricultural, and industrial bases.

Hegemony also plays a central role in shaping and guiding Sino-US naval and maritime strategy as both great powers focus squarely on the Indo-Pacific region. Unlike the Cold War, where America and its rival, the Soviet Union, focused on global ideological and conventional global hegemony, the emerging Sino-US tensions are predominantly over the Indo-Pacific as the next great geopolitical theater of global affairs and its normative and institutional hierarchical nature. Although senior US defense, security, and political officials like to extend Sino-US tensions over a belligerent and overtly revisionist China that desires the complete overturn of the global rules-based international order and, by default, Washington's hegemony over it, the naval and maritime strategies of China are focused quite studiously on regional matters of Sino-centric sovereignty, security, and economic preeminence.<sup>9</sup>

A fortified reason for China's staunch perspective is due to where the Indo-Pacific region lies within the overall structure of the emerging multipolar order. Specifically, Asia has 60 percent of the world's population, seven of the world's most-populous countries,<sup>10</sup> 65 percent of the world's oceans, and 25 percent of the world's landmass.<sup>11</sup> Moreover, the region's vital shipping lanes pass through small channels, particularly the Straits of Malacca, Sunda Strait, and Lombok

Strait, which connect the South China Sea (SCS) to the Indian Ocean. Strategically, whoever controls or regulates these waterways can impede or proliferate the flow of capital goods. Due to these factors, whoever can attain hegemony over these channels and waterways will be at the center of the global economic engine of future geoeconomics.

With such strong strategic value, there have been contested opinions of how impactful the Indo-Pacific region will be in influencing the global rules-based order in the coming decades. Just as European hegemony gave way to a Westphalian system of balance-of-power politics and a liberal-orientated rules-based order, hegemony in the Indo-Pacific may very well reinforce the status quo of a Western system of rules, values, and norms, or it may instigate a new Asiatic form of hegemony that will reintroduce a tributary system that was once at the heart of East Asian geopolitics—one where China was also the hegemonic center of power or “Middle Kingdom.”<sup>12</sup>

### **Naval Combat Theories**

Theories of hegemony are not the only factor guiding Sino-US naval and maritime strategy. More than ever before naval theories and strategies for maritime superiority are coming into play. With the continual advancement in technological capabilities in the form of hypersonic missiles, multigenerational aircraft, large optionally manned surface vehicles (LUSV), medium unmanned surface vehicles, and extra-large unmanned undersea vehicles (XLUUV), decision makers must reexamine and adapt conventional naval strategies to a distinct regional dynamic of power.

Throughout history, maritime powers have used their ability and geographical locations to expand and project their dominance into regional and global theaters by having the most superior naval presence and vessels. In classical Greece, Athens used its robust navy to achieve victory by annihilating an enemy's fleet, thereby attaining unchecked command of the seas.<sup>13</sup> From antiquity to the early modern period, maritime powers have used their dominant navies, alongside their merchant fleets, to pursue and protect their interests.<sup>14</sup>

Although technology advanced and new naval vessels emerged in the late nineteenth and early twentieth centuries, maritime warfare remained relatively unchanged. Indeed, the same tactic of destroying an enemy's fleet used by Athens 2,500 years prior gained further traction among naval officers theorizing the need to eliminate an enemy's capital ships—the most important vessels in a naval fleet, which often were the largest and most-prized possessions.<sup>15</sup> Captured best by American naval theorist Alfred Thayer Mahan, who provided his name to the “Mahanian concept of sea warfare,” for a maritime power to win a decisive battle

and a war, a state's navy must seek out and destroy an enemy's capital ships in one grand battle, thereby preserving the status quo of naval power or altering the balance to one's favor.<sup>16</sup>

While Mahan's theory maintains relevance in naval academies in the United States and worldwide, other influential naval strategies developed in the late nineteenth century from the British experience of maritime hegemony. For instance, Spencer Wilkinson, the first Chichele professor of military history at Oxford University, argued that maritime power should be used in collaboration with continental power. Wilkinson argued that Britain should have incorporated its naval supremacy with land power during peace and war to maintain its great-power status, along with expanding British defensive treaties that could act as a safeguard to build mutual interests among peer-states.<sup>17</sup>

The notion of *cooperative hegemony* also developed from such exchanges and brought forth the idea of an Anglo-American *maritime entente*. Supported by the Royal Navy's Rear Admiral Sir Charles Beresford, such a common course of action would have seen the United States and Great Britain—with the latter's Commonwealth nations—use their combined maritime power as a “heavy sword” in the international system, thereby becoming shared arbiters of common maritime laws, norms, and values that would advance the two nations' common geosecurity and geoeconomic interests. British royal engineer, Major General T. Bernard Collinson echoed the idea for a *maritime entente* by suggesting that Britain build definite defensive systems with Asiatic and European maritime powers to safeguard the British Empire and the balance-of-power institution that anchored the Westphalian system of European hegemony.<sup>18</sup>

However, maritime power and oceanic hegemony were periodical signs of being a regional or global great power. According to Halford John Mackinder, the famous nineteenth-century British geographer and academic, the “Columbian epoch” that permitted European powers to dominate the world through sea power—as defined by Mahan—eroded during the latter half of the nineteenth century. In an article that built off his remarks to a Royal Geographical Society conference, Mackinder argued that navies and shipping would decline with the technological advancement of transcontinental railway networks. With these new access points traversing land, Mackinder pointed to the enhanced strategic mobility of land powers to conquer essential areas that would amplify their access and retention of resources, making them more impervious to the effectiveness of maritime powers that initiated blockages.<sup>19</sup>

History also demonstrates the inconsistent nature of naval and maritime strategies for powers that seek hegemony. Followers of Mahan's theory often feel vindicated by the US victory in the Pacific theater in World War II, as US naval

power was successful against Imperial Japan. Due in part to America's use of carrier fleets equipped with aircraft, the United States was successful in attaining victory in key battles in the Pacific—the Battle of Midway and the Battle of the Coral Sea in 1942 and the Battle of the Philippine Sea in 1944.<sup>20</sup> However, in the Atlantic theater, neither carriers nor battleships were the *prima facie* of naval warfare. Quite the opposite, the Atlantic witnessed small battles of destroyers, escorts, and antisubmarine aircraft—guided by new advancements in radar through the Magnetron No.12 equipped to Allied aircraft or ships. Through these two unconventional features, the Allies went on to defeat the Nazi U-boat threat and close the Mid-Atlantic gap.<sup>21</sup>

### **China's Maritime Strategy**

A conundrum between China's historical and contemporary experiences also steers Beijing's maritime strategy. When looking at past statements by former Chinese presidents and past general-secretaries of the Chinese Communist Party (CCP), there are extensive references to China's "century of humiliation" caused by European powers defeat of China in the Opium Wars of the mid- to late 1800s; Imperial Japan acquiring Chinese territories in 1919 through the Treaty of Versailles; the Japanese invasion and conquest of Manchuria and the Second Sino-Japanese War from 1937–1945; and the annexation of Xinjiang by the Soviets in 1934.<sup>22</sup> A commonality among these events was the perceived notion of China being bullied and humiliated by Western and foreign powers. The growing great-power competition with the United States and its like-minded partners is perceived in Beijing as yet another indication of China's continued struggle against foreign interference.

It is also helpful to point out that most of China's military defeats in the century of humiliation were the results of the country having a weak navy that faced multiple failures in maritime warfare, as historian Edward L. Dreyer argues, coupled with high-levels of governmental corruption and weak administrative outlooks.<sup>23</sup> China also suffered from a hegemonic hangover prior to the extraregional engagement by European powers in the SCS during the 1800s. At its hegemonic height, China was overconfident in its hegemonic standing to coerce and persuade top-tier powers it deemed inferior. In a growingly globalized world, Chinese hubris resulted failure to modernize and incorporate new technological advancements, thereby rendering China unable to compete against the advanced European powers. Furthermore, the Qing dynasty's sprawling kingdom compelled Chinese military and political leaders to observe itself as primarily a continental power with a critical but negligible maritime periphery. Such an outlook resulted in China concentrating its economic resources on upholding vast and expensive standing armies.

Hoping to learn from the lessons of history and avoid derailing President Xi Jinping's "Chinese Dream," the CCP and the People's Liberation Army Navy (PLAN) have laid out an ambitious maritime strategy.<sup>24</sup> According to the CCP's 2019 Defense White Paper—*China's National Defense in the New Era*—the fundamental objective of China's regional engagement is to deter and resist neighboring and extraregional aggression by safeguarding national sovereignty, unity, territorial integrity, and security, along with safeguarding the nation's maritime rights and interests against encroachment, infiltration, sabotage, or harassment.<sup>25</sup> To ensure that these objectives are met, China has publicly declared the islands in the SCS, Taiwan, and the Senkaku Islands—the latter of which Beijing calls the Diaoyu Islands—as inalienable parts of mainland China while also extending the PLAN's presence into the waters and airspace of the East China Sea (ECS), SCS, and the Western Pacific through combat and security patrols and white-hull diplomacy.<sup>26</sup>

Despite its use in defense and security circles, China's *nine-dash line* is a reminder of the type of force projection Beijing seeks to attain for regional dominance in maritime and aerial domains. Beginning in 1935, the CCP put out a map—*The Map of Chinese Islands in the South China Sea*—that illustrated 11 dashes within the maritime space of the SCS.<sup>27</sup> Over the decades, the 11 dashes have subsided to nine dashes. However, the implications for what these lines imply are exceedingly evident. The nine-dash line encompasses 90 percent of the SCS and includes some of the most fertile fishing grounds, along with huge oil and natural gas reserves beneath its seabed.<sup>28</sup> Moreover, the SCS is poised to become the geoeconomic center of power, with its sea channels providing a gateway to the Indian Ocean. Lastly, and possibly most important for Sino-US maritime hegemonic competition, the SCS encompasses more than 200 islands, atolls, reefs, and seamounts.

Incorporating these maritime geographical features into China's maritime strategy is perhaps one of the most remarkable gambits in naval history. Since 2016, China has used the topographical makeup of the SCS to construct artificial islands, equipping them with antiship cruise missiles, surface-to-air missile systems, jamming equipment, radar systems, and personnel bases.<sup>29</sup> The significance of these developments is threefold. First, the artificial islands provide a sustainable forward-deployment area that can quickly and proficiently intercept any threat from a challenger or rival.<sup>30</sup> Second, these islands offer an opportune method to effectively annex the SCS as a Chinese lake, thereby hegemonizing the region under Chinese naval and mercantile superiority. Third, the islands serve as immovable aircraft carriers and ports that station fighter jets, bombers, short-range and medium-range missiles, and harbors and refueling stations for China's maritime militia and PLAN vessels.

Another hegemonic strategy presented in China's maritime strategy is the *island-chain theory*. Formed by the "father of the Chinese Navy," Admiral Liu Huaqing, in the 1980s, the three-island chain theory holds important sway in Chinese and US constructs of hegemony in the Indo-Pacific.<sup>31</sup> Accordingly, this theory envisions the PLAN asserting control of the three island chains—particularly the three subregional peripheries that include the SCS and ECS, the Philippine Sea, and the Western Pacific—which encompass the Indo-Pacific's paramount territorial and commercial hubs.<sup>32</sup> Although never announced publicly by Beijing, there are growing concerns over the prospect of China successfully gaining a foothold in these three island chains. Specifically, there are fears that China will pursue a westward expansion into the Indian Ocean and its subregional peripheries, thereby creating a fourth island chain that encompasses the Bay of Bengal and a fifth island chain that extends toward the Arabian Sea and the Horn of Africa.<sup>33</sup>

China's *island-chain theory* also closely resembles Imperial Japanese thinking that sought to sketch out a defensive perimeter in the Western Pacific during the 1940s. According to Japanese maritime thinking, if the Japanese military controlled and installed aerial, naval, and ground troops on small, scattered islands in the Western Pacific, then it could, in theory, hedge against US Pacific bases in Guam or the Philippines threatening Japan's home islands in a future conflict.<sup>34</sup>

### **China's Naval Strategy**

To accomplish its hegemonic aspirations in the SCS, the Indo-Pacific, and beyond, the PLAN has undergone rapid modernization in its maritime power, along with assembling a naval force that eclipses the United States as the dominant regional maritime force in terms of numbers—incorporating green-water, brown-water, and blue-water naval capabilities. According to the US Department of Defense (DOD), the PLAN has a battle force of approximately 355 vessels, ranging from surface combatant vessels, submarines, aircraft carriers, amphibious ships, mine warfare ships, and sea auxiliaries. Furthermore, the report indicated that China's massive maritime fleet would expand to 420 ships by 2025 and 460 ships by 2030.<sup>35</sup>

Arguably the crown jewel in the PLAN's arsenal are its three aircraft carriers, specifically the *Liaoning* (Type 001) class launched in 2012, the *Shandong* (Type 002) class launched in 2019, and the recent *Fujian* (Type 003) class in 2022. The *Liaoning* and *Shandong* classes are equipped with a "ski ramp" at the ship's bow, permitting fixed-wing aircraft like the J-15 Flying Shark to be launched. Meanwhile, the *Fujian*-class sports an Electromagnetic Aircraft Launch System (EM-ALS) that will improve the range and payload capabilities of Chinese fighter jets. The PLAN's Type 003 class will thus align itself with the US Navy's (USN) new

*Gerald R. Ford*-class of aircraft carriers. It should also be noted that all three carrier types, as of now, are conventionally powered, and as such, the DOD remarks that the PLAN has begun development of a Type 004 model that will incorporate the *Fujian*-class design but be nuclear-powered.<sup>36</sup>

China has also paid significant attention to its surface combatant vessels that will serve alongside its aircraft carriers. In particular, the PLAN's modernization has focused its shipbuilding program on new guided-missile cruisers (CG), guided-missile destroyers (DDG), and corvettes, each with a niche operational contribution—namely air defense, antiship, or antisubmarine roles—for China's naval dominance.<sup>37</sup> The PLAN is also repurposing amphibious ships, designing them as assault vessels and equipping them with EMALS to support launching UCAVs, UAVs, and medium-lift utility helicopters.<sup>38</sup>

Beijing has also sought to incorporate its artificial islands in the SCS into China's naval strategy by making them fixed bases to house antiship ballistic missiles (ASBM), notably the DF-21D and DF-26, which can reportedly target and hit ships moving at sea. Coupled with the demonstration of Chinese hypersonic glide vehicles in late 2021, China will undoubtedly equip its ASBMs with this new technology to make its missiles more difficult to intercept.<sup>39</sup> Moreover, the artificial islands are set to become vitally important hubs of power for the PLAN, becoming pivotal locations for refueling and porting stations for its naval and aerial forces, along with harboring China's maritime militia. Not only will these islands project Chinese maritime hegemony by enforcing China's geosecurity and geoeconomic interests onto neighboring powers and deter the United States and its like-minded partners interference in the SCS and the Indo-Pacific but the islands will also protect the mainland's industrial, economic, and military infrastructures—permitting China to maintain a high output level of ships to sea.

These maritime and aerial capabilities contribute to a Chinese regional anti-access/area denial (A2/AD) strategy. The A2/AD strategy provides China with the military opportunities to slow the deployment of a rival's maritime force or can disrupt the capabilities of rivals to conduct offensive maritime operations within a specific geographical theater.<sup>40</sup> Within this maritime strategy, A2/AD allows China to execute a multifaceted assault on the navies and inland bases of the United States and US allies by initiating subsurface, surface and inland missile attacks followed by a naval and aerial secondary assault. Such strategic maneuvers would overwhelm the USN and its allies, destroying a large portion of capital vessels belonging to the US Pacific Fleet—particularly America's aircraft carriers. Moreover, an A2/AD strategy will make an adversary more reactionary to Chinese tactical thinking, thereby redirecting military operations that will force the United States to react to the first aggression site. These operations will eventually



lead the United States and US allies to focus firmly on primary aggression sites, moving vital vessels, resources, and intelligence to counter a threat by the full force of a Western-liberal maritime coalition of powers. In turn, this could leave strategic areas in the Indo-Pacific vulnerable to attack, particularly Taiwan, the US Marine Corps base in Guam, or the Senkaku Islands.

### **Chinese Theoretical and Naval Design**

Upon evaluating China's maritime and naval strategies, it is clear that Chinese political and military leaders desire a win-win strategy for China's competition with the United States in the Indo-Pacific. Given its history with foreign interference by extraregional powers and its modern desires to gain geosecurity and geo-economic dominance in the Indo-Pacific and thereby establish an Asiatic system of hegemony on the region's hierarchical structure, norms, and rules, Beijing is following an HST context as China's guiding hegemonic doctrine. In particular, China is using HST to achieve advantageous geosecurity and geo-economic positions, somewhat restrictedly, to elevate its status as a great power within a regional and global structure, evident by its A2/AD and island-chain strategies as an extension of a future *Pax Sinica*. Although Beijing will undoubtedly seek regional hegemony in the Indo-Pacific, either by invading Taiwan, undertaking a Cold War strategy of expanding its ideological governance model to neighboring powers to establish regional and global partners, or executing a great-power war with the United States, China needs to maintain some semblance of hegemonic stability to avoid a complete security and economic breakdown in the Indo-Pacific's institutional, interstate, and normative environment.

China is also using its maritime and naval strategies within a Mahanian concept of sea warfare. The PLAN's modernization and expansion to become the largest naval force in the world, with specific attention to the total tonnage of its vessels, showcase the unchanged nature of how an Asiatic maritime power surveys maritime warfare. Moreover, the need for China to acquire numerous aircraft carriers, more powerful surface and subsurface vessels, and hypersonic missiles into its Indo-Pacific fleet pinpoints China's recognition of Mahan's emphasis on the need for a large naval force to defeat a peer sea power in a decisive and total maritime war.

### **Conclusion**

The growing competition in the Indo-Pacific over Sino-US hegemonic control is a serious threat to regional and global stability and peace. However, confrontation is not unavoidable. As illustrated in this article, China's growing assertiveness

and interest in dominating the Indo-Pacific is due to its historical experiences with extraregional powers having controlled the geosecurity and geoeconomic architecture of the region's hierarchical structure. Moreover, following conventional notions of naval and maritime theory, China is pursuing a Mahanian approach to modernizing the PLAN in the potential lead-up to a great-power confrontation with the United States. As shown by traditional and historical experiences in the Pacific, the correlation between Mahan's concept of large navies winning a war equates with complete commercial and military control of a maritime domain. However, unlike the works of most senior military and policy experts and high-level scholars, this article demonstrates how China is not currently undertaking a great-power transition for regional hegemony. Instead, as argued herein, Beijing seeks to use the hegemonic stability of a declining great power to elevate its status as the region's hegemonic successor and prepare China's hegemonic rule for when a *Pax Sinica* emerges.

Although this article has focused exclusively on China, it is noteworthy to highlight that the United States is also undergoing a shift in its guiding maritime and naval principles. Historically, Washington has always had an "Asia First" outlook.<sup>41</sup> One would be remiss not to think of the United States' strong principal passion equating freedom and liberty with the need for free seas and free trade. For the United States, being a maritime power means having moral imperatives advocating for and defending the notion of freedom and openness, features of a rules-based order that permit free trade and free navigation. For US naval, political, and military thinkers, being a maritime power is directly related to being a democratic great power responsible for preserving and advancing a free-and-open maritime trade and diplomatic system.

To remain the status quo hegemon of the region, the United States must reexamine its understanding of Chinese hegemonic aspirations with its principles for redesigning the Indo-Pacific's maritime dynamic. Although the United States thoroughly enjoys branding itself as a status-quo power, Washington's incorporation of Wilkinsonian and Beresfordian notions of *cooperative hegemony* and *maritime ententes*, using the Quad and AUKUS, demonstrates the atypical strategies the United States is willing to undergo to preserve its regional hegemonic position. The problem that emerges from these new guiding principles is Washington's unwillingness to maneuver beyond its coveted Mahanian heritage of being a maritime power. For this reason, the United States will continuously observe its competition through a PTT lens and, as a result, may undertake misplaced maritime strategies that can accelerate the approaching *Pax Sinica* in the Indo-Pacific. ☛

### **Andrew Erskine**

Mr. Erskine is a research analyst at the NATO Association of Canada and researcher with the Consortium of Indo-Pacific Researchers. He is also editor in chief for The New Global Order, a think tank for young academics and professions based in Rome, Italy, and an analyst director for the NATO Research Group, where he leads a case study on regional security in Southeast Asia. He holds a master's degree from the University of Prince Edward Island, concentrating in global and regional orders, hegemony, and polarity. His work focuses on great-power competition, the Indo-Pacific, and Canadian foreign policy.

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# The State as a Transnational Criminal Organization

## A North Korea Case Study

MAJ BRIAN HILL, USAF

### Abstract

Throughout history, many states have tolerated, sponsored, or even partnered with transnational criminal organizations, but the Democratic People's Republic of Korea (DPRK) stands out as a nation where the government itself *is* the criminal organization, directly conducting drug trafficking, counterfeiting, money laundering, and other criminal enterprises. These activities have direct destabilizing effects and contribute to the DPRK's ability to circumvent sanctions and fund its illicit nuclear weapons program. Moreover, this condition of the state as the criminal organization poses a unique challenge to the international community, requiring a different approach for analyzing and combating the problem. This article explores this phenomenon with a brief historical review of state involvement in transnational crime, then brings together multiple previous analyses to provide a more comprehensive examination of the DPRK as a distinctive case study. It concludes by offering recommendations for further examination and action to counter this destabilizing force that undermines economies and strains national and international security structures.

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What happens when a state not only allows, sponsors, or partners with transnational criminal organizations (TCO) but *is* the transnational criminal organization? How does one deal with an international crime boss who also serves as the head of state for the world's most isolated nation?

Transnational organized crime (TOC) is a destabilizing force that undermines economies and strains national and international security structures. Hostile states are increasingly turning to TOC as an asymmetric tool of power, presenting a key threat to US national security. This trend of state-operated TOC (SOTOC) will continue to increase in conjunction with global connectivity and as less powerful or economically viable states continue seeing benefit in using criminal activity as a balance against more powerful states. Though it is a form of TOC, SOTOC presents unique challenges that can neither be analyzed nor addressed the same way as traditional TOC. One of the most salient modern examples of this phe-

nomenon is North Korea, a nation whose state apparatus is directly involved in trafficking, counterfeiting, and cybercrimes.

This article examines why policy makers and researchers must view SOTOC, its analysis, and its potential solutions differently than either traditional TOC or a hostile government. First this article defines several key terms and scopes the discussion of SOTOC. Then it briefly discusses the historical and modern context of SOTOC. This section will focus on North Korea as a prominent example of modern SOTOC, a state that actively operates trafficking, counterfeiting, and cybercrime enterprises. Finally, the piece concludes with a discussion of why the United States and its allies must analyze and address this problem differently than the TOC conducted by independent TCOs and provide suggestions for doing so both for the DPRK and beyond.

### **Defining State-Operated Transnational Organized Crime**

There are several academic definitions of *transnational organized crime*, but for the purposes of this discussion we will utilize one similar to the *US Strategy to Combat Transnational Organized Crime* definition, with some simplifications. TOC will be considered criminal activity, conducted by an organization, that crosses national boundaries and is motivated by some form of material profit. A *transnational criminal organization* will be defined as a nonstate organization that conducts TOC. SOTOC refers to TOC that is directly operated and sanctioned by a state as part of its official policy. Thus, this article does not focus on states that are simply permissive or complicit in the commission of organized crime by non-state actors but rather ones in which the state is the primary driver of the criminal activity itself. Further, the article does not address the concept of a state as an exploitative entity toward its own population as described by sociologist Charles Tilly,<sup>1</sup> nor will it address genocide and other crimes against humanity as described in the 1945 Charter of London, which guided the Nuremberg Trials and the United Nation's guiding documents for the International Criminal Tribunal for Yugoslavia and, later, Rwanda, and which discuss the state as an organized criminal actor in the context of genocide.<sup>2</sup> This human-rights-focused definition of the state as an organized crime actor has become more common in recent decades and features a growing field of scholarship.<sup>3</sup> These additional definitions are valid, but this article foregoes these discussions and focuses on organized crime in a more traditional context involving profit-motivated entities.

To properly scope this discussion, there are essentially four levels of state involvement in criminal activities. The first is *passive complicity*, wherein a state turns a blind eye toward the activity due to corruption, fear, or simply an inability to act. The second is *encouragement*, where the state sees some form of value to itself in

the activity but is not willing to provide overt support. The third is *state-supported* or *state-sponsored*, in which the state provides financial, material, or other forms of support to the criminal activity. Finally, there is *state-operated*, which is criminal activity directed by the state and conducted through groups that report to the state, either directly or through indirect methods meant to obfuscate state involvement. This fourth category sits at the extreme end of the concept of the *criminalized state* put forward by journalist and national security consultant Douglas Farah and is how this article will define SOTOC.<sup>4</sup> However, it should also be noted that the line between the third and fourth levels is often blurry, particularly since governments typically try to obfuscate their involvement in criminal activity.<sup>5</sup>

### **States' Involvement in Transnational Organized Crime**

SOTOC is not a new phenomenon. Letters of marque for privateers date back centuries and constitute a concerted effort by states to leverage criminal elements against their enemies.<sup>6</sup> The state was not merely endorsing these criminal activities. Rather, the state was actively directing them, falling squarely into the SOTOC category. Similarly, France actively engaged in opium smuggling to support its colonization of Indochina.<sup>7</sup> Smuggling of illicit goods, particularly arms, remains the most widely reported form of SOTOC. The Iran-Contra Affair is a particularly notable example, wherein the US executive branch violated domestic and international laws to provide weapons to Iran and funding and weapons to the Contra insurgency in Nicaragua.<sup>8</sup> Today, state-operated cybercrime is becoming increasingly ubiquitous and includes influence operations, espionage, sabotage, and profit-motivated cybercrime such as extortion via ransomware.<sup>9</sup>

All these forms of SOTOC have similar motivations as any other asymmetric means of conflict. States that are willing to leverage all instruments of power through creative means can overcome a conventionally more powerful opponent.<sup>10</sup> States that are militarily weaker in a conventional sense sometimes turn to state-sponsored or state-operated terrorism to provide an offsetting capability. Similarly, states can leverage TOC to offset disadvantages in the security and economic realms.<sup>11</sup> Also like terrorism, this can be done via proxy or with varying levels of state support and state direction, and this phenomenon is observed in several South American countries, most notably Venezuela and Suriname.<sup>12</sup>

### **The DPRK: A Unique Criminal Enterprise**

However, the single most extreme example of a state actively operating as a TCO is the Democratic People's Republic of Korea (DPRK). In fact, the DPRK

may be more actively engaged in criminal activity than any other nation, and Paul Rexton Kan, Bruce E. Bechtol, Jr. and Robert M. Collins characterize North Korea as particularly unique among states that leverage TOC.<sup>13</sup> By comparison, while the Chinese government may turn a blind eye toward some counterfeiting activity that occurs within its borders and narcotics traffickers partner with some South American governments, the DPRK's government takes an even more active role in these activities, directs their execution, and can even be credited with the initial establishment of its criminal enterprises. This state-controlled crime purportedly occurs across a wide portfolio that includes drug manufacturing and trafficking; weapons trafficking; counterfeiting of goods, pharmaceuticals, and money; endangered species trafficking; insurance fraud; and human trafficking, though some are more clearly linked to the regime than others.<sup>14</sup>

Reports of the DPRK's drug production and trafficking are fairly extensive prior to 2003, with large shipments of methamphetamine and heroin seized and linked directly to the DPRK over the preceding three decades. Since 2003, however, there have been no direct links established between the DPRK and drug shipments. This may be a direct result of the seizure of drugs on the DPRK-flagged vessel *Pong Su* that occurred that year, after which the DPRK government may have reduced its drug activity to avoid further sanctions and scrutiny. However, it may also be a result of partnerships with Chinese criminal organizations that may now be facilitating the movement of drugs, adding an additional layer of obfuscation and making it more difficult to link the drugs to the DPRK.<sup>15</sup> Additionally, the overall shift toward horizontal integration among narcotics traffickers seen around the world may have influenced a change in how the DPRK conducts its own trafficking operations, shifting it from a purely state-owned enterprise to a state-sanctioned one.<sup>16</sup>

There is similar ambiguity in counterfeit pharmaceuticals, a field where both China and the DPRK have been implicated as sources for the products with the actual point of origin remaining unclear.<sup>17</sup> However, if the counterfeit pharmaceuticals were sourced from the DPRK, the advanced pharmaceuticals industry in the DPRK and its direct ties to the government imply significant involvement by the government in their production. In addition to counterfeit pharmaceuticals, the DPRK is likely also involved in the production and distribution of counterfeit cigarettes, with some sources indicating the DPRK is one of the largest producers of counterfeit cigarettes in the world.<sup>18</sup> Probably the most prominent field of counterfeiting in which the DPRK has been implicated is US currency. The United States previously accused it of manufacturing US \$100 "supernotes," though other sources state the evidence for this is tenuous.<sup>19</sup> Nevertheless, there have been numerous counterfeiting incidents tied to the DPRK and indications



that even as far back as the 1950s the DPRK was counterfeiting South Korean currency.<sup>20</sup> Additional reports suggest links between the DPRK regime and both human and endangered species trafficking, though the degree to which the regime itself is involved in these is unclear.<sup>21</sup>

Finally, the DPRK is heavily involved in cybercrime. This is not unusual for many states, with nations committing cyberattacks on infrastructure and conducting intrusion into government and commercial networks for the purpose of military, industrial, political, and economic espionage. The DPRK has been implicated in such operations as well but also leverages crime in cyberspace for the more classic criminal purpose of profit. A cyber robbery in which USD 100 million out of an attempted USD 1 billion was stolen from the Bangladesh Bank via the Federal Reserve Bank of New York was linked to the DPRK.<sup>22</sup> UN reporting indicates North Korean hackers directly stole USD 50 million in cryptocurrency in 2020, which was likely funneled into its nuclear weapons program. Other reports from April 2022 link the DPRK to a USD 615 million cryptocurrency theft. All reports consolidated suggest the DPRK has stolen billions in cryptocurrency.<sup>23</sup>

The DPRK's driving motivation is clear: economically, the regime is extremely weak from a conventional sense. A combination of international sanctions and its own reclusiveness and insistence on self-reliance combine to keep the DPRK's economy closed off from much of the world. Pyongyang has taken some steps to change this and engages in limited trade, with China as its primary partner, but runs at a steep deficit and does not generate enough income to support a robust economy. North Korea's internal economy also remains weak and continues to decline according to estimates by the Bank of Korea in South Korea.<sup>24</sup> States that are militarily weak on the conventional side often turn to asymmetric activities like state-sponsored terrorism. Similarly, the DPRK has turned to transnational criminal activity to bolster its funding, with the primary concern from analysts being that these additional funds are funneled into its nuclear weapons program.<sup>25</sup> Thus, this goes beyond the typical construct of corrupt government officials profiting from criminal activity. Rather, the state apparatus itself is the TCO.

### **Combating SOTOC: Beyond Traditional Countermeasures**

This poses unique challenges when determining how to combat this form of organized crime. Distinguished fellow at the Carnegie Endowment for International Peace Moisés Naím proposes several key activities for combating TOC, including reducing corruption, leveraging nongovernmental organizations (NGO), enhancing tracking technology, and partnering with other nations to present global solutions.<sup>26</sup> Some tactics, like improving cybersecurity and cutting off the supply of counterfeit currency while improving detection and removal of

that which is already in circulation are fairly straightforward at addressing cyber-crime and monetary counterfeiting, respectively. Unfortunately, many of the other counter-TOC strategies become much more difficult or entirely ineffective when confronted with SOTOC.

Attempting to reduce corruption in the host nation is a key tactic in combating TCOs but is entirely moot in the context of the state acting as the TCO. Corrupt officials are not the problem, since the state apparatus as a whole is conducting these operations. Therefore, such a tactic would be like trying to combat a drug trafficking cartel by reducing corruption in the cartel, a tactic unlikely to have any effect other than, possibly, making the organization even more capable. Partnering with other nations to present global solutions is still possible and will likely have an effect. US-led sanctions regimes have made it harder for some nations to conduct illicit activities, and as more nations buy into these regimes, the measures become more effective. Financial targeting like the US Department of the Treasury's crackdowns on banks and front companies used by the DPRK in the mid-2000s were also effective in curbing the DPRK's SOTOC.<sup>27</sup> While these partnerships should still be pursued with the DPRK's trading partners, particularly China, one cannot expect these measures to have the same effect as other counter-TOC partnerships. For example, while many nations coordinated to counter cocaine trafficking by Pablo Escobar's cartel, the participation of the Colombian government was necessary to actually bring it down. Without the host nation's cooperation, the effects of global coordination will be limited, and one cannot expect the DPRK to take actions against itself. Leveraging NGOs also becomes more difficult for the same reason. Generally speaking, an NGO operates with the permission of the host government. The DPRK is already very restrictive in allowing NGOs access. NGOs seeking to combat the criminal activities of the DPRK cannot expect to be allowed entry into North Korea unless they conducted their counter-TOC activity clandestinely—a dangerous proposition. The one exception to this limitation could be NGOs operating in cyberspace, which would not require physical access to the DPRK. However, these organizations' reach would also be limited due to the DPRK's severely restricted access to the global internet.

This leaves few options for combating SOTOC like that seen in the DPRK. A traditional, supply-side-focused strategy is difficult at best when there is minimal or no access to the source country. Certainly, interdiction and confiscation outside the DPRK's borders can be tactically successful in reducing the supply and should still be used. Military interdiction in international waters remains a useful tactical tool. Further, along the supply chain, law enforcement cooperation and exchanges between willing nations, including the establishment of multinational and inter-agency fusion centers, should be used to increase interdiction capacity in ports

and territorial waters while also standardizing enforcement to prevent weak seams that can be exploited. This could include a more stringent version of the Container Security Initiative enacted by key destinations for DPRK shipping that increases scrutiny on those shipments. Establishing the necessary agreements for this cooperative enforcement will also require engagement in the diplomatic realm.

However, focusing on the supply side rarely leads to strategic success.<sup>28</sup> In that sense, combating the DPRK's SOTOC presents an opportunity. With such limited options to combat the supply side, anyone seeking to do so is forced into focusing on the demand side of the criminal activity. Strategies like reducing demand for methamphetamines and heroine in DPRK-targeted markets or promoting consumer resistance to purchasing counterfeit products could have desired effects. For counterfeit goods, an aggressive, multilateral information campaign should be used in the primary markets for DPRK's counterfeits. Strategic messaging that emphasizes negative cuing along with promoting relationship marketing by the companies whose products are being counterfeited have shown positive results.<sup>29</sup> For narcotics trafficking, the United States must partner with key markets for DPRK narcotics—including China, Japan, the Philippines, and Thailand—to help enact effective demand-reduction policies, including treatment programs and education.<sup>30</sup> These and similar tactics have been proposed academically and utilized to limited extents by the United States and other governments in their general counter-TOC strategies.<sup>31</sup> However, these methods must have a higher share of the overall strategy to counter the DPRK and other sources of SOTOC, if only because there is no other option.

The United States also has options in the cyber realm to directly counter state-operated cybercrime and to leverage cybertools to monitor and track other SOTOC activity. In the case of the DPRK, the United States should work to strengthen the international cybersecurity regime by promoting multilateral cybersecurity partnerships. A global regime like the 2001 Budapest Convention on Cybercrime will be hard to achieve in the near term, with key nations like China not having signed even that long-standing Convention, but more limited partnerships to specifically monitor DPRK cyberactivities could be achievable if scoped properly. The United States should conduct diplomatic engagement to explore this possibility, focusing on technically capable nations that have already been the victim of DPRK cyberactivities, while offering cybersecurity assistance to less-capable nations concerned with DPRK cyberactivities.

Finally, the area where the United States and other nations may have the most room to effectively operate is in financial targeting. The DPRK remains under strict sanctions that limit its ability to interact with global financial markets, and the United States and others have successfully frozen assets or countered financial

transfers related to DPRK organized crime. However, the DPRK has a variety of sophisticated means to evade these restrictions. The regime's money-laundering activities allow it to take full advantage of its other criminal activities and countering them could significantly reduce the effectiveness of Pyongyang's criminal enterprises. The DPRK has not only leveraged foreign banks with relatively low capabilities to counter money laundering but has also used large American banks like JPMorgan Chase and the Bank of New York Mellon, which have better capabilities against illicit transfers and present a greater opportunity for the United States to take action.<sup>32</sup> Pyongyang has also leveraged the burgeoning cryptocurrency market and its low level of global regulations to rapidly move money.<sup>33</sup>

The United States, particularly the Department of the Treasury, must continue its current trajectory of strengthening its ability to counter DPRK money laundering. This is important but insufficient by itself. The interconnectedness of the international financial system necessitates a broader approach involving global partners, particularly those with weaker anti-money-laundering capabilities or policies. The best way to do this is through what Fordham University's Seongjun Park calls "upward regulatory harmonization."<sup>34</sup> This policy seeks to incrementally improve anti-money-laundering capabilities among developing nations via an incentive structure, similar to some of those used to reduce carbon emissions. This appears to be more effective than a punitive approach.<sup>35</sup> This will likely not be a fast or complete solution, particularly since the largest regional economy, China, is hesitant to do anything that would destabilize the DPRK. Nevertheless, even partial gains in this space would be beneficial for countering DPRK SOTOC.

## **Conclusion**

North Korea serves as the most prominent example of organized crime that is truly organized and run by a state itself. Many of the tools for analyzing and combating organized crime may not apply to this SOTOC. This presents a challenge unique from those posed by governments that are simply corrupt, complicit in, or unable to respond to organized crime. However, the recommendations offered in this article can be utilized for other states connected to TOC at a variety of levels: i.e., Venezuela, Suriname, and Russia. For those states with lower levels of government involvement, these approaches can be combined with more traditional counters to further improve overall effectiveness. The United States, along with other governments and organizations, must focus more on the demand side of the networks, while continuing to strategically engage with other key international partners and tactically engage with more traditional forms of countertrafficking like interdiction and sanctions. While such a holistic approach to countertrafficking is not a new concept, the proportional effort on each part must be

different due to the unique dynamics of SOTOC. This will be a challenge for the national security apparatus, but particularly when considering the support these activities provide to programs like the DPRK's nuclear weapons development, it must be done correctly to promote global stability. ☸

#### **Maj Brian Hill, USAF**

Major Hill is an intelligence officer in the United States Air Force. He has worked in a broad range of fields, including counterterrorism, partner-nation engagement, nuclear proliferation, political-military analysis, and denial and deception. He holds a bachelor's degree in mathematics and a master's degree in intelligence studies and is pursuing a master's degree in international security with the University of Arizona.

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# China's Malacca Bluff

## Examining China's Indian Ocean Strategy and Future Security Architecture of the Region

SON LDR MOHIT CHOUDHARY, INDIAN AIR FORCE

### Abstract

China's rise has been a topic of wide-ranging studies in international politics. Trade-driven economics appear to be the primary driver of Beijing's meteoric rise. From 2007 to 2017, China contributed as much to global trade enlargement as all other countries. Accordingly, the Indian Ocean, China's trade highway, became a crucial lifeline for Beijing. In fact, China has openly discussed its vulnerabilities in the ocean, the most debated one being the so-called *Malacca dilemma*. However, in contrast with Beijing's depiction of the Malacca dilemma, China appears to be bluffing its vulnerability to assert its domination on these straits. In doing so, China intends to project power into the wider Indian Ocean region (IOR), which China has started to consider as its legitimate zone of influence. China's approach to the IOR reveals a long-term strategy with a potentially destabilizing impact that necessitates a cooperative security architecture in the region. This article first analyses China's Malacca dilemma and responses to the dilemma through a Chinese prism. Second, it examines the *Malacca bluff*, the underlying Chinese IOR strategy, and its impact. Last, the article recommends a multilayered security arrangement for the region.

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With China becoming the world's production center, its energy demands grew dramatically. China's domestic oil consumption increased by 30 percent per year at the beginning of the twenty-first century.<sup>1</sup> However, Chinese domestic oil production continued to lag. China imported 120 million tonnes of oil, a 40-percent increase over 2003, compared to only a 2-percent increase in domestic oil production.<sup>2</sup> There was a corresponding increase in the consumption of natural gas. China's natural gas consumption multiplied 3.4 times—from 13.7 million tonnes in 1993 to 60.6 million tonnes in 2007.<sup>3</sup> Although domestic gas production was able to meet the demand, the International Energy Agency forecasted that domestic consumption would soon outgrow the supply.<sup>4</sup> The writing on the wall was clear. If China was to sustain its economic growth, it must rely increasingly on ship-borne fossil fuel imports from the Middle East and Africa.

The Chinese Communist Party's (CCP) legitimacy quickly became intertwined with meeting the rising energy demands to sustain economic growth. In a country where regimes have had a history of imploding, the foundational necessity of the CCP is to exercise a stronghold over the mammoth population. Central to that necessity is the CCP's propaganda of being the sole driver of the Chinese state from the "century of humiliation" to rejuvenation. China's growing reliance on oil imports, necessary for domestic stability and economic growth, made it imperative for the CCP to do whatever necessary to secure its sea lines of communication (SLOC).<sup>5</sup> Any vulnerability in oil transport directly affected domestic stability and the CCP's close control over its people. Energy security, in this way, became inextricably linked to the CCP's survival in a rapidly expanding economy and, hence, a national or regime security imperative. This energy security entailed securing the maritime trade routes that necessarily passed through the Malacca Strait and led to the articulation of the term *Malacca dilemma*.

To understand China's so-called dilemma, it is essential to look at the geography of the strait and surrounding areas. President Hu Jintao first used the term *Malacca dilemma* at a CCP economic work conference in 2003.<sup>6</sup> According to Hu, the vulnerability of the straits is principally a function of geography. East–West trade routes linking China and the oil-producing countries must pass through the IOR, with few entries or exit points and large distances between them.<sup>7</sup> One critical entry–exit point is the Malacca Strait, which measures 1,100 km in length, with the narrowest width being 2.8 km at the Phillips Channel. Hu made it clear that this geography creates a potential chokepoint critical to the economy and, hence, the security of China.<sup>8</sup> He added, "Certain powers have all along encroached on and tried to control navigation through the strait."<sup>9</sup> This was a veiled attack on the US presence in the surrounding region, which was not a new development. Experts, who bought this narrative, further explained that the strait was vulnerable to piracy and terrorist attacks—especially post 9/11—and potential blockages due to accidents.<sup>10</sup> As a result, according to Chen Shaofeng, the Malacca Strait became a vulnerability for China that could be exploited by adversaries and non-state actors and hold Beijing hostage to their terms.<sup>11</sup> Looking at the problem through the Chinese prism paves the way for understanding the Chinese responses in a way that Beijing wants the international community to view them.

Beijing's responses to the Malacca dilemma, of concern to this article, are primarily two. First is the military strategy to ensure secure passage for Chinese vessels traversing the Malacca Strait. The CCP claims, as a purely defensive act, are incumbent upon the People's Liberation Army Navy (PLAN) assuming a more significant role in guaranteeing safe passage for trading vessels through the straits. From Beijing's viewpoint, this will contribute to overall regional security and pro-



mote free and open seas, thus alleviating China's vulnerability. Second, China should find alternative pathways bypassing the Malacca Strait. Such projects include China–Pakistan Economic Corridor (CPEC) linking Gwadar Port in Pakistan to Xinjiang Province in China, the Myanmar Oil Pipeline to Kunming in China, and the Kur Strait in Thailand.<sup>12</sup> The solutions, briefly, seem straightforward and justified for any state aiming for security and prosperity. However, the Chinese responses have far-reaching ramifications for the region and demand a microscopic analysis of this so-called *dilemma* to understand Beijing's true ambitions.

### **Malacca Bluff: Looking Beyond the Chinese Version of the Malacca Dilemma**

A detailed examination of China's Malacca dilemma reveals multiple ambiguities exogenous to the Malacca Strait. These are essentially three: geographical, security, and behavioral ambiguity. First, examining the geographical ambiguity, one needs to zoom out from the Malacca Strait and not look at it in isolation as Beijing wants the world to view it. Conducting a macro-analysis of the surrounding region, the Malacca Strait is not the only way out of the IOR. There exist three other adjacent straits—the Sunda, Lombok, and Makassar—and making this detour is not economically as costly as the CCP narrative depicts. If there must be a chokepoint, it would be the Strait of Hormuz.<sup>13</sup> So then, according to Hu, China faces a Malacca dilemma, but why not a Hormuz dilemma or, for that matter, a Sunda, Lombok, or Makassar dilemma?<sup>14</sup> Geographically, the Hormuz and the entire IOR are a much bigger vulnerability because that region is not a traditional stronghold of the PLAN, and instead a locale where the United States and India enjoy a superior advantage.

Beijing exaggerates China's security concern in the Malacca Strait for three reasons. First, three neutral countries—Indonesia, Malaysia, and Singapore—surround the Malacca Straits. These countries resist any international attempts, including US initiatives, to administer the straits amid concerns that it would compromise the local coordination efforts between them in the region.<sup>15</sup> Second, there is local disagreement regarding the primary threat to the straits. On the one hand, the United States and Singapore highlight the vulnerability of the waterways to terrorism and piracy. On the other hand, Malaysia and Indonesia believe that some countries are using the threat of piracy and terrorism as an excuse to exercise a strategic stronghold over the region.<sup>16</sup> These counterbalancing viewpoints rule out a single actor's targeted blockade of the strait. Moreover, Beijing shares this concern about terrorism and piracy, which threatens all countries equally, meaning the issue is neither Western- nor China-specific.<sup>17</sup> Coordinated maritime patrol activities by the three

surrounding countries successfully reduced piracy attacks to just four incidents in 2008 from 38 in 2004.<sup>18</sup> Third, as highlighted before, while attempting to enforce a blockade against the Chinese, the United States is more likely to prefer Hormuz over Malacca, as the US Navy enjoys unchallenged superiority in the former. Even in a hypothetical scenario, if the US blockades Malacca, and all the other surrounding straits, an expensive proposition, China can reciprocate by blockading US allies such as Japan, South Korea, and Taiwan through the East and South China Seas. Discussing Malacca Straits, You Ji, a professor at the University of Macau, argued, “SLOC risks are often overstated, by seeking to portray SLOC insecurity as a matter of life and death for nations, in view of its adverse impact on economy.”<sup>19</sup>

In terms of behavioral ambiguity, a Chinese president using the party conference platform in 2003 to highlight the Malacca Strait as China’s Achilles’ heel appears unusually inconsistent. Traditionally, the party conferences center on the propaganda of the party’s pivotal role in taking the Chinese nation forward and future action plans. This highlighting of a strategic vulnerability, a behavioral inconsistency, might be a tactful ploy to legitimize China’s pivot to the IOR and strategic signaling to the international community of expanding Chinese ambitions. In other words, China intends to dominate the straits and use them to springboard its naval presence in the IOR. Overall, the three factors reveal China’s Malacca bluff and uncover the underlying Chinese strategy toward the IOR.

### **China’s Indian Ocean Strategy**

China’s Malacca bluff relates to the significance of the IOR for Beijing. As a result, China began following a “Two Oceans” strategy to exercise control over the Indian and Pacific Oceans. Both oceans are critical to sustaining Chinese growth. The Indian Ocean is the maritime highway for China’s raw materials and energy needs. The Pacific Ocean is the pathway for its export-led economy. While the United States and its allies present a formidable challenge to China in the Pacific, the power vacuum in the IOR and incoherent security architecture therein offer an excellent opportunity for Chinese expansion. China’s new strategy in the IOR is not ad-hoc. Instead, it represents a well-conceived and formalized doctrinal effort. China’s defense white papers from 1998 to 2008 demonstrate this transformation, where the narrative shifted from “China does not station troops or set up military bases in a foreign country” to distant force projection.<sup>20</sup> The 2008 global financial crisis strengthened Chinese beliefs about the West’s decline and how China could lead the globe to economic revival. To achieve this, China appears to be following a three-pronged strategy in the IOR that can be divided into economic, military, and diplomatic lanes.

First, China understands the influence of financial might in a region that has fragile nation-states. The IOR states—such as Pakistan, Sri Lanka, Bangladesh, and Myanmar—struggle with a combination of military coups, fragile economies, and weak political institutions and have been historically susceptible to external influences. Beijing has engaged these nations with mammoth infrastructural projects under China's Belt and Road Initiative (BRI), termed a “win-win” endeavor for all by President Xi Jinping. Each of these IOR states is a party to the project, where Chinese corporations have undertaken port infrastructures and unsustainable debt policies.<sup>21</sup> Similarly, China has also engaged Seychelles, Maldives, and Madagascar with lucrative infrastructural aid.<sup>22</sup> The infrastructure addresses China's SLOC concerns by providing alternative transport routes, normalizing the Chinese presence in the IOR, and allowing greater surveillance over shipping routes. The projects, though, are yet to be economically viable, let alone spurring growth in the host countries. However, the projects provide an excellent opportunity of bringing China to the table and granting Beijing a stronger voice in the IOR. Also, these debt traps increase China's hold over domestic politics and policy making in these states and allows China to shape the narrative within the IOR.

Second, while geo-economics drive Chinese policies, a robust military presence in the IOR is foundational to the Chinese strategy of regional hegemony. Accordingly, the PLAN assumed a central focus in future military planning. China's 2008 White Paper argues, “Struggles for strategic resources, strategic locations, and strategic domination have intensified,” highlighting the urgent need to develop distant water capabilities.<sup>23</sup> The 2015 white paper unambiguously stated, “China will work to seize the strategic initiative in military competition.”<sup>24</sup> As a result, China's military presence in the IOR increased significantly. From deploying a nuclear submarine in the IOR for the first time in 2013 to a satellite-tracking ship making a port call at Hambantota in 2022, China's military IOR presence has steadily increased.<sup>25</sup> Through evacuation operations in Yemen, a naval base in Djibouti in 2017, and agreements for military access to ports in Bangladesh, Myanmar, Pakistan, and Sri Lanka—accompanied by military exercises with host nations—China has signaled its long-term intentions in the IOR.<sup>26</sup> Also, by arguing that the Indian Ocean does not belong to India, Beijing clarified its position in the IOR by rejecting any contradicting claims by a regional player.<sup>27</sup> China's undersea intelligence-gathering and surveying operations hint that Beijing intends to develop offensive and counteroffensive capabilities in case of a broader crisis and prevent any sea-based interdiction of its trading routes. In short, a strong naval presence is crucial to Chinese hopes of securing trade and projecting economic might in the IOR and its surrounding areas.

Third, Beijing has firmly established China's position in the IOR's multinational forums through diplomatic coercion. China proactively tapped into the growing economic and security needs of the IOR's secondary powers and island nations. While Beijing has always enjoyed an "all-weather friendship" with Pakistan due to shared enmity with India, China also became Bangladesh's most extensive military hardware and textile import partner.<sup>28</sup> Similarly, China has engaged with four island nations of the IOR—Sri Lanka, Maldives, Mauritius, and Seychelles—which have geographical centrality to China's maritime trade routes. China is the largest export destination for Sri Lanka and has been a major military hardware supplier to Colombo. More than 50 high-level visits between China and these countries, and post-BRI announcements, indicate the importance that these "new natural partners" hold for China. The support of these secondary powers and island nations ultimately paved the way for increased Chinese influence in regional organizations such as the Indian Ocean Rim Association (IORA) and the Indian Ocean Commission (COI).<sup>29</sup> In short, Beijing is employing hard- and soft-power tactics to arm-twist its way into the IOR. Financial levers provide China with diplomatic and military maneuvering space. Through its three-pronged strategy, Beijing has been aggressively pushing forward to stamp its authority as a regional hegemon and fill the power vacuum in the IOR arising from a relative US decline and a perceived Indian incapability to respond.

Despite Beijing's rhetoric that the increased Chinese presence in the IOR is for the improvement of collective security, the future trajectory of the IOR appears to be volatile. This instability can be attributed to two factors. First, the unprecedented Chinese presence dials up the Indo-US security dilemma. India has historically approached the IOR as its sphere of influence and resisted any extraregional interference. With China rejecting any such Indian claims and developing potential dual-use infrastructure all around the Indian peninsula, termed the *string of pearls*, the situation heightens New Delhi's sense of insecurity and resulting responses.<sup>30</sup> Similarly, China's naval exercises with Iran and Russia in the region challenge the US domination in the region.<sup>31</sup>

Second, Chinese investments and infrastructural projects tend to be destabilizing. Chinese economic aid was lucrative to host countries due to the reluctance of international institutions to extend assistance of such magnitude. Thus, it was no surprise that Sri Lanka, Pakistan, and others defaulted on loan repayments to China.<sup>32</sup> Also, the increasing presence of Chinese nationals and private security firms in these countries is seen as a form of neocolonialism, replete with all the inequities of that era. The rising domestic resistance to the Colombo Port project and the Baloch resistance to the Gwadar project illustrate domestic resistance in these nations toward Chinese influence.<sup>33</sup> With Sri Lanka having declared bank-

ruptcy, a nuclear-tipped Pakistan struggling to finance itself, and concerns that Bangladesh and Myanmar are backsliding from democracy, the future of the IOR appears anything but stable. This instability necessitates urgent measures to address security concerns in the region.

### **Recommendations for a Multilayered Security Architecture**

China's investments and increased presence in the IOR destabilize the region in terms of security and economy. Despite this, a formalized security architecture cannot solve the heightened security dilemma of the region. Frequent calls for institutionalizing Indo-Pacific dialogues such as Quadrilateral Security Dialogue (Quad) into an Asian NATO occur without looking at the history of failure of such organizations in the area. The Southeast Asian Treaty Organization (SEATO) and Central Treaty Organization (CENTO), created in the aftermath of World War II, failed within 25 years of their creation.<sup>34</sup> The region is largely unsuitable for such architecture due to existing geographic, political, economic, cultural, and historical divergence. Moreover, such an organization that excludes China will only amplify Beijing's security dilemma and further destabilize an already volatile region. Also, excluding minor but crucial countries contiguous to these critical chokepoints from a security architecture incites discontentment and is viewed as extra-regional interference.

The complications and conflicting viewpoints in the IOR necessitate a multilayered and inclusive security arrangement that incorporates major powers *and* regional players. There are three possible ways of articulating this arrangement. First, such an arrangement should address contiguous states' concerns regarding local issues such as piracy and terrorism. For example, ensuring security in the Malacca Straits should be the responsibility of Malaysia, Indonesia, and Singapore. The role of powerful states will be limited to capacity building and sharing maritime domain awareness. This will not only assuage the concerns of smaller states but also transfer the much-needed ownership to more relevant parties and possibly address the shared security dilemma of great powers in the region.

Second, the great powers must carefully navigate their conduct in forums such as Quad and the Australia–United Kingdom–United States (AUKUS) trilateral. Cooperative international forums can heighten an adversary's security dilemma or mitigate it through strategic signaling. The naval exercises conducted by AUKUS and the Quad must be conducted in a manner to send a balanced signal and not be mere displays of power that provokes an equal response from the adversary. Additionally, Quad and AUKUS should incorporate measures where more states can observe and participate in cooperative efforts.

Third, there needs to be enhanced cooperation and dialogue between regional organizations such as the IORA, COI, and maritime security-focused communities like the Indian Ocean Naval Symposium (IONS) and the Malacca Strait Patrols (MSP).<sup>35</sup> Formalized dialogue at political and military levels in a disarrayed region will build a shared understanding of maritime issues and possibly eliminate conflict points. In other words, the instability of the IOR cannot be solved by mimicking NATO—and definitely not by isolating China. India and the United States must understand that the Chinese presence in the IOR cannot be reduced to zero. Likewise, Beijing must realize that its security dilemma in the IOR is exaggerated and that China cannot dominate the region, irrespective of its evolving naval capabilities.

## Conclusion

The quest for resource hoarding and military domination in the IOR is not new but ironic in that an ostensibly anti-imperialist China is exhibiting the traits it professes to resent—essentially engaging in a form of neocolonialism.<sup>36</sup> China's IOR strategy is simple: increasing the economic dependence of vulnerable countries to secure political leverage.<sup>37</sup> By characterizing the Malacca Straits as a vulnerability, Beijing intends to legitimize China's domination and use the straits as a gateway to control the geopolitically crucial Indian Ocean. Due to the increased militarization of the region and conflicting viewpoints of the IOR states, a multi-layered and inclusive security architecture is necessary. It should focus on addressing contiguous states' local concerns and enhancing strategic communication among major powers about concerns and conflicts. On the other hand, following a traditionalist security approach will only escalate the security dilemmas of major players, where they may end up engaging themselves in self-perpetuating conflicts. Ultimately, the solution lies in normalizing the Chinese presence in the IOR without derailing stability and undermining major players' legitimate spheres of influence. ★

### **Sqn Ldr Mohit Choudhary, Indian Air Force**

Squadron Leader Choudhary is a student at the Air Command and Staff College, Montgomery, Alabama. Sqn Ldr Mohit Choudhary was commissioned in 2011 and holds a bachelor's degree in science from the Jawaharlal Nehru University, New Delhi and a post graduate diploma in applied aeronautics from the Jamia Milia Islamia University, New Delhi.

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# The Gist of Seoul's Indo-Pacific Strategy

DR. HYUN JI RIM

## Abstract

In its inaugural Indo-Pacific strategy, South Korea pledged to bolster the regional rules-based order to protect freedom, democracy, and human rights. The document expands on President Yoon Suk-yeol's previous promises to accept greater responsibility for defending democratic principles and is consistent with the national security strategies of the United States and its allies. Seoul stressed the threat of North Korea's growing nuclear and missile arsenal, however, once again, held back from unambiguously defining the Chinese threat to the same extent that Washington, New Delhi, Tokyo, and others have.

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Following the announcement of his Audacious Initiative (담대한 구상) in August 2022, President Yoon Suk-yeol published the first Indo-Pacific strategy (IPS) for South Korea, entitled the *Strategy for a Free, Peaceful, and Prosperous Indo-Pacific Region*. The strategy projects Seoul's long-term regional goals focusing on the Indo-Pacific theater. This represents significant progress in terms of national strategy. It suggests South Korea has officially set a policy guideline on how to position itself in the Indo-Pacific, where deepening strategic competition between China and the United States is heightening geopolitical tensions. While the IPS lacks specifics on how to achieve Seoul's strategic objectives in the Indo-Pacific, the international context and timing of the strategy's announcement are noteworthy.

The IPS notes, "Rising geopolitical competition involving diplomacy and security, economy and technology, and values and norms have stalled the drive for cooperation among Indo-Pacific nation. . . . Korea aspires to become a Global Pivotal State that actively seeks out agenda for cooperation and shape discussions in the regions and the wider world." The strategy outlined nine core lines of effort (LOE) centered around international norms, priority sectors, and cooperation through partnerships.

First, the international norms of rule-based order, democracy, human rights, nonproliferation, and counterterrorism were included in the first three LOEs. While emphasizing South Korea's commitment to preserving peace and cooperation based on rules and international laws, the report paid close attention not to draw the ire of countries in the region who do not share these commitments—especially China, North Korea, and some ASEAN countries—by stating "we sup-

port an Indo-Pacific where nations that represent diverse political systems can move forward together peacefully.”<sup>1</sup>

Second, LOEs 6 and effort 7 focused on strengthening cooperation in “critical domains of science and technology” and “climate change and energy security.” Suggesting how South Korea can help close the digital gap in the region, the report proposes collaborations developing technologies, including semiconductors, artificial intelligence, quantum science, advanced biology, telecommunications, and space. Moreover, climate change and energy security are other areas highlighted for South Korea’s possible growing contributions. Science and technology, climate change, and energy security target Seoul’s bigger role in cooperative partnerships, especially toward ASEAN countries.

Third, expanding comprehensive security cooperation, building economic security networks, and engaging in “contributive diplomacy” are emphasized to develop cooperative partnerships in the Indo-Pacific. As President Yoon stated in November 2022, contributive diplomacy and cooperative partnerships target Southeast Asian countries: “Peace and Stability in the Indo-Pacific region directly affects our survival and prosperity. That is why I propose fostering a ‘free, peaceful, and prosperous Indo-Pacific region’ through solidarity and cooperation with major countries including ASEAN.”<sup>2</sup> To ASEAN members that hold increasing strategic value under current US–China competition in the Indo-Pacific theater, Seoul proposes a “tailored development cooperation” to meet each countries specific needs and strengthen mutual trust. By targeting that niche, South Korea aims to position itself as a stronger geopolitical player in the region.

The three principles of cooperation are inclusiveness, trust, and reciprocity. In line with South Korea’s aim to become a “global pivotal state,” inclusiveness is highlighted throughout the report. Contrary to those who say the IPS barely mentions China,<sup>3</sup> the new report contains strong messages for China. Discussion of *inclusiveness* mainly targets Beijing’s concern of being targeted by any Indo-Pacific strategies that aim to penalize China in favor of Washington. In this context, the report states that Korea, a US ally, aims to be a global pivotal state that is not “hostile” toward China. If it were not for the Yoon administration’s close relationship with Washington, US leaders could have viewed this as a mixed message. However, the fact that Yoon can confidently include such phrasing in official documents illustrates that Seoul is not concerned about delivering a wrong message to Washington and proves that the US–ROK alliance stands strong.

The *global pivotal state* narrative is the most controversial part of the initiative and the key difference from the approach of Japan, Australia, and India. The Quad members officially have clearly placed the grouping in the US camp; whereas South Korea may prefer to position itself in the middle. This may read as Seoul’s

attempt to balance autonomy and alliance, yet, considering the value of the US–ROK alliance to Seoul's global strategy and the history of the partnership, Washington's concern of losing Seoul to Beijing is a bit of a stretch. At the center of South Korea's decision to claim itself as a global pivotal state lies a sophisticated calculation aimed at protecting Seoul's nascent strategy from Beijing's attack or severe political competition between the United States and China. In the initial stage, the Korean IPS will need to survive the turmoil of strategic competition, and close coordination within the alliance framework on expanding the strategy will be a prerequisite to its success.

While Seoul's IPS is topically very comprehensive, it lacks sophisticated action plans and requires more work to finesse the LOEs outlined and to incorporate them into every step of South Korea's foreign policy and diplomatic activities. The gist of South Korea's IPS is as follows: (1) South Korea is very much committed to the peace and stability of the region, (2) South Korea is neither targeting nor excluding China, and (3) South Korea will resolve its confrontation with nuclear North Korea while by abiding international rules.

In addition to the content of the first IPS, the timing of the announcement is also of critical interest. Since the inauguration of President Yoon, many observers expected a much more hardline approach to North Korea and security issues—a critical change in policy direction from previous Moon administration. South Korea has resumed US–ROK joint military exercises, tested submarine-launched ballistic missiles (SLBM), conducted missile defense exercises, and deployed F-35 fighters. In addition, Seoul increased its defense budget from 51.6 trillion won (USD 41.7 billion) in 2022 to 57 trillion won (USD 45.5 billion) in 2023. Much of the increase was allocated for developing the 3Ks of kill chain, the Korea Air and Missile Defense (KAMD) system, and the Korean Massive Punishment and Retaliation (KMPPR) plan.<sup>4</sup> All this occurred amid North Korea's relentless missile tests—67 times in 2022 alone, including tests of 51 short-range missile, 2 SLBMs, 7 intercontinental ballistic missiles<sup>5</sup>—and aerial exercises,<sup>6</sup> and Pyongyang's calls for an “exponential” increase in nuclear capacity.<sup>7</sup>

Amid increasing tensions on the Korean Peninsula, Yoon's Audacious Initiative for regional and global peace through the denuclearization of North Korea was announced in August 2022. It was the administration's effort to persuade Pyongyang to deescalate and accept step-by-step economic and financial support for its own sustainable growth. Different from previous proposals of bringing North Korea to the negotiating table by offering carrots before any commitment from Kim Jong-un, this initiative included Seoul's salami tactic-like approach. The initiative promises drastic measures, including exemptions for current sanctions on Pyongyang's mineral resources conditioned on North Korea's sincere and responsible

participation in the negotiation process. This is to allow North Korea to allocate the revenue toward purchasing daily necessities like food and basic medical supplies and to expand cooperation with Seoul in areas like welfare, drinking water supply, and forestry management. The initiative further stipulates Pyongyang's denuclearization will be met with comprehensive measures to match political, economic, military benefits Kim currently seeks through his nuclear program.

Despite the grandiose yet realist approach, the initiative failed to render a noticeable impact on policy circles, domestic or international. Insiders pointed to the mistiming and the lack of coordinated public relations efforts of the current foreign ministry for such lack of influence. Above all, North Korea "trashed" the proposal by officially calling Yoon "foolish."<sup>8</sup>

The administration announced the IPS in late December 2022 after the not-so-successful launch of the Audacious Initiative and during an ongoing standoff with North Korea exchanging missile tests and shows of force. The timing suggests that the Yoon administration intended to change the escalatory atmosphere between the two Koreas and set a new tone for the year 2023. Through incorporating North Korea in a global context under Indo-Pacific security and stable growth targeting an international audience, and by showing Pyongyang that Seoul is strengthening South Korea's partnerships, including existing alliances, for a "free, peaceful, and prosperous Indo-Pacific region" and not just aiming to foil North Korea, the report laid out possible channels for cooperation on multiple levels and across different domains.

After South Korea announced its IPS, Kim Jong-un vowed to boost the quality and quantity of North Korea's arsenals. He called for North Korea to increase its nuclear capabilities, focusing on tactical nuclear weapons targeting South Korea. In previous years, Pyongyang was more focused on countering what it perceived to be the threat posed by the United States rather than South Korea. Now what we see is a slight change in Pyongyang's tone: what dictates Pyongyang's drive for nuclear weapons? And who is the main enemy, South Korea or the United States? Does South Korea's plan for growing influence in the region and its promotion of cooperation and partnerships lead Kim to see Seoul as a greater threat? Considering rising tensions and military threats on the Korean Peninsula, including North Korea's recent drone flights on the South Korean side of the border and aggressive pursuit of tactical nuclear weapons, some argue that an escalatory arms-race dynamic is emerging between the two Koreas beyond military modernization and competition.<sup>9</sup>

In addition to North Korea's response to the new IPS, there are a few other matters to carefully watch in the near future. First among these is China and South Korea's complicated relationship and how these two dance around geopolitically sensitive issues such as THAAD, cross-strait issues, and North Korea.

Another is the future of US–ROK alliance—especially how the two nations utilize the trilateral cooperation of the United States, Japan, and South Korea to further build a stronger alliance network and draw practical cooperation and policy coordination. The most critical factor that will determine the success of the IPS for South Korea will be in the details of how capable Seoul is in operationalizing its long-term strategy around these areas. ✪

**Dr. Hyun Ji Rim**

Dr. Rim is a nonresident scholar at the Edwin O. Reischauer Center for East Asia Studies at Johns Hopkins University and a visiting research associate at the University of Missouri–Kansas City. She received her PhD from the School of Advanced International Studies (SAIS), Johns Hopkins University and works extensively on Indo-Pacific strategies, extended deterrence, and alliance management.

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# Preventing China from Occupying the Senkaku Islands and Taiwan by 2025

MARTY J. REEP

## Abstract

The United States needs to prevent China from occupying the Senkaku Islands and Taiwan by the latter half of 2025. For years, Beijing has made it known that China intends to take control of the Senkaku Islands and to unify Taiwan with the mainland. These courses of action would impact the regional balance of power and disrupt the production of microchips from a global supplier, which would have far-reaching, negative effects on state economies. This article differs from other works on the same subject because it identifies potential cause-effect events and their timing, to allow the US Air Force and the Department of Defense (DOD) to alter the outcomes. It is relevant to the operational force because multiple DOD services will need to work together to thwart China's plans.

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Two security issues in the Indo-Pacific region continue to grow: China's increased attempts to take control of the Senkaku Islands from Japan and Beijing's desire to militarily force Taiwan to unify with China. In 2025, whether due to a severe world economic downturn, a massive earthquake in Japan, or a typhoon across Taiwan, Beijing's leadership could use the disaster(s) to exploit either scenario, to change the regional balance of power, and to seize control of its neighbors' territories. Relatedly, China's control of Taiwan's microchip production would have immeasurable impacts on the world.<sup>1</sup> While one or both scenarios could become a catalyst to draw the United States into war with China in the next three years, US leaders can get in front of the potential situations and alter their outcomes.

## Security Issue: China Takes the Senkaku Islands from Japan

For more than a century, Japan, China, and Taiwan have each claimed ownership of the Senkaku Islands in the East China Sea (ECS). These islands are vital to Japanese maritime control, international freedom of navigation, natural resources above and below the water, and military defense. Japan annexed the Senkaku Islands during the First Sino-Japanese War (1894-1895).<sup>2</sup> After World

War II, the US administered control of the islands until 1970, when it returned control to Japan.<sup>3</sup> Since then, most of the international community has recognized the islands as Japan's territory. When geological surveys in the 1970s revealed oil and gas deposits around the Senkaku Islands, China renewed its claim of the islands. Tensions came to a head in 1978, when the Chinese government sent more than 100 fishing vessels to the islands to control the area outright.<sup>4</sup>

Over the past few decades, China has desired to become the dominant state in the Indo-Pacific region and in the world and has worked to create a power transition.<sup>5</sup> Part of Beijing's long game is to establish control of *the second island chain*, but before it can do that successfully, China must control the *first* island chain, which includes the Senkaku Islands.<sup>6</sup> With that information, the United States could use its own *National Security Strategy (NSS)* to counter China's attempted power transition.<sup>7</sup>

Since the Senkaku Islands are part of the island chain nearest China and far from immediate US reinforcements, the United States must rely on partners and allies to amplify US power and influence in the region.<sup>8</sup> Although China and Japan have said they do not want to go to war against each other, neither side is backing down from the slow buildup of tensions in the ECS. Relatedly, per a 1960 military alliance between the United States and Japan, the former agrees to defend Japan in the event another state attacks.<sup>9</sup> Thus, Washington has a vested interest in China's actions toward Japan's territory—including the Senkaku Islands.

Among the *NSS*'s intents is to encourage state governments to grow democratically and succeed financially.<sup>10</sup> As such, previous US leaders thought that as China grew in wealth and gross domestic product (GDP) during the 1990s and early 2000s it would gradually adopt capitalism as a way of life. So far, China's leaders have not followed that same logic. Instead, they used their newfound financial resources to clamp down on people and organizations that opposed the central government during that time and have continued doing so in the past few years.<sup>11</sup> As China continues to grow its GDP and develop its military, one of the concerns for the United States is that China will want to dominate more of the world stage.<sup>12</sup> To take the lead, China would need to cause a global power transition.

Parts I–III of the *NSS* are important for maintaining the balance of power in the region and specifically thwarting China's interest in wresting the Senkaku Islands from Japan. Since agreements and interactions between states are multi-layered and multifaceted, using all of the factors of the *NSS* are invaluable: statecraft, cybernetworks, military, and economics.<sup>13</sup> As such, the *NSS* provides US leaders with a wide range of strategies to employ and execute, as best fit the changing situation in the ECS and surrounding areas. Thus, if one of the options in the *NSS* does not work, other options are still available. As the attempted

power transition continues to play out over time around the world and specifically with the Senkaku Islands, Washington will need adhere to its national strategy.

### **Security Issue: China Invades Taiwan**

If China were to invade Taiwan, the United States could begin a response with a coercive, multi-domain strategy including air, space, and cyber power. Per guidance from Joint Publication 3-0 (JP 3-0): *Joint Operations*, the Joint Operations Planning Group (JOPG) would consider the US Air Force's abilities and components in combination with those of other services.<sup>14</sup> Specifically, JP 3-0 discusses "The Theater Campaign" and "Show of Force Operations" that relate to this scenario of China invading Taiwan.<sup>15</sup> Likewise, Karl Mueller's work on coercion highlights and explains in depth the value and costs of coercing a foreign government and its military into backing down from actions against another state.<sup>16</sup>

A coercive airpower strategy would provide a visible, immediate show of force to influence China to reverse its actions against Taiwan and withdraw its troops. Airpower would also quickly reassure Taiwan that the United States would protect and defend its partner state.<sup>17</sup> Fighter jet flybys could deny China access to Taiwan's airspace. Jamming and overwatch could protect communication systems and sensors in the area.

Next, coercive spacepower strategy would limit and diminish China's access to communications between its command centers and deployed assets across the South China Sea and Taiwan Strait. Spacepower is often unseen and not thought about when it is working correctly. However, when a state's communication channels and data-transfer capabilities are removed, it usually gets foreign leaders' attention—hard. From jamming China's satellite systems to degrading its communications, several viable options are at the decision makers' disposal. Consequently, while sophistication, subtlety, and caution are expected characteristics of political statecraft, a swift and result-driven response is necessary if China were to invade Taiwan, under any circumstances.<sup>18</sup>

Though airpower and spacepower are many times viewed separately, there is an additional part of these two coercive strategies that combines technologies from both: the threat of using missiles. Air-launched missiles—kinetic and nuclear—exist for the purpose of reminding the intended recipient that an even larger and more visible impact is an option. Air-launched missiles use the delivery-to-theater vehicle of aircraft and the precision guidance system of satellites. This option adds powerful leverage to the air, space, and cyberspace coercive strategies.

Also, a coercive cyberspace strategy could strangle China's ability to conduct a vast array of functions that are critical to a successful invasion in the twenty-first century.<sup>19</sup> For example, options include sabotage, denial of service (DoS), electri-



cal power-grid attacks, propaganda, and economic disruption.<sup>20</sup> And, if necessary, technicians could demonstrate a sample of extreme coercive cyberpower by making parts of mainland China go dark.<sup>21</sup>

To dispel China's invasion of Taiwan, the AF must be ready, willing, and able to deliver the coercive power strategies and options listed above, as part of a larger joint strategy. The appropriate USAF leaders and personnel can implement the plans and programs needed to succeed in this endeavor. Additionally, the United States needs to hedge its economic stability by increasing microchip production domestically. Meaning, by reducing its dependence on outside sources for microchips, the United States would fare better in the event of a disruption in Taiwan's production.

In summary, two security issues continue to grow in the Indo-Pacific region that have far-reaching impacts around the globe: China's desire to take control of the Senkaku Islands and Beijing's statements regarding forced unification with Taiwan. One or more disasters in the latter half of 2025 could open the door for both hypothetical situations to become a reality at that time. Therefore, the United States needs to be prepared for China's intentions and prevent them from happening. 🌟

#### **Marty J. Reep**

Mr. Reep manages Special Operations training at Pope AAF, North Carolina. In February 2019, he published a forecast of the pending drop in US gross domestic product—one year before it occurred in February 2020. He completed Air War College in 2021.

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# Game Play in the Indo-Pacific

## Many Players, Strategic Interests, and Common Challenges

SALONI SALIL

### Abstract

The twenty-first-century geopolitical reality recognizes that in an interconnected world geo-economic ties and strategic competition have shifted toward a region that connects two of the most important bodies of water bodies. The Indo-Pacific is a mental construct and a melting pot of the interests of several countries where many of the stakeholders are from far beyond the region, thus, complicating internal and external dynamics. Some noted geopolitical experts believe that in large part the Indo-Pacific is a code for geopolitical schemata—America’s pivot to Asia and countering of China, India’s play for magnanimity, Japan’s wishes to regain its past influence, Indonesia’s search for clout, Australia’s alliance-building, and so forth—and that other states must protect their strategic interests through partnerships, recognizing multipolarity as the character of the new regional order. The aim of this article is to highlight the historical context of the term Indo-Pacific and its significance in twenty-first-century geopolitics, the stakeholders and their strategic interests increasing the complexity in the geopolitical environment of the region, and the scope for cooperation and way forward.

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The term *Indo-Pacific* has been echoing in the foreign policy of nations across the world, showcasing the importance of the region. In the 1920s, German geopolitical scholar Karl Haushofer, in his work “Indopazifischen Raum,” coined the term *Indo-Pacific*, examining the architecture of political oceanography arguing the case for the Indo-Pacific as a natural realm.<sup>1</sup> Two decades later in India, Indian historian and parliamentarian Kalidas Nag used the term in his 1941 book, *India and the Pacific World*.<sup>2</sup>

After a lengthy abeyance, the term gained currency again in 2007 when Japanese prime minister Shinzō Abe, while addressing a joint sitting of the Indian Parliament, invoked Mughal ruler Dara Shikoh’s Sufi text “Majma-ul-Bahrain,” which translates as “Mingling of the Two Oceans,” referring to the Indian Ocean and the Pacific Ocean. Abe used Dara Shikoh’s title as a perfect metaphor to highlight a broader Asia in which the “Pacific and the Indian Oceans are now bringing about a dynamic coupling as seas of . . . prosperity.”<sup>3</sup> The term gradually gained use in US parlance as well, culminating in the 2018 renaming of US Pa-

cific Command to US Indo-Pacific Command (INDOPACOM). However, the catalyst for the adoption of the Indo-Pacific moniker in contemporary usage “was China’s increasing politico-military assertiveness and the ensuing enunciation of China’s ‘String of Pearls’ strategy in 2005 by a U.S. think-tank.”<sup>4</sup>

So, why is the Indo-Pacific becoming the fulcrum? As Alfred Thayer Mahan, a naval strategist and the author of *The Influence of Sea Power Upon History*, argued “Whoever rules the waves rules the world,” and the thicket lies in the geopolitical realities of the twenty-first-century politics that has led to a power play in a region that is geoeconomically becoming the center of gravity with the shift from the West to East. Thus, many observers have referred to our current period as the *Asian Century*—a politically contested and militarily volatile flashpoint for potential conflicts between the major powers vying for influence that heralds a potential reset of the world order.

Though for the past 70-plus years the United States has spearheaded the prevailing world order, in recent years, China has become the largest beneficiary of this order in terms of growth in trade and investment. Until the beginning of the Cold War, the center of global politics and trade remained across the Atlantic. Later, that was replaced by the Asia-Pacific, which largely excluded India due to its policy of nonalignment. Now, by transforming the *Asia-Pacific* into the *Indo-Pacific*, India has been brought into counterbalance growing Chinese influence in the region. Thus, China’s rise is highlighted as one of most imposing factors in this regional construct.

As Michel Foucault stated, “that ‘power is everywhere,’ power is pervasive and it is truer for China’s power for its neighbouring Asian states. It has certainly altered the political landscape producing different trajectories in terms of accommodation, adjustment, balancing behaviours in the region.”<sup>5</sup> China is seen as a power player in international subtlety and threatens the political order in the region. Beijing has been asserting itself in the Indo-Pacific through its belligerent behavior, with many accusing China of engaging in “wolf-warrior diplomacy” and of colonizing the region through debt-trap lending. All these reasons and more have drawn the world’s attention to this area as an arena of global interest and emphasized the need to protect their own national agendas by making their presence felt in the region.

### **The Players and Their Strategic Interests**

The Indo-Pacific game is replete with multiple players that are at times in competition and at times intertwined at the strategic levels, interacting in such a way where the engagements and strategic appeal of one powerful state affects the interests and influences the actions of the others. Therefore, what may seem like an ob-

secure geographical moniker is in actuality an attempt to redefine Asia as a strategic center. As Michael Raska states, “The Indo-Pacific’s security hinges on the convergence of four major interrelated developments: (1) the adroit management of China’s rise, both internal and external; (2) the challenge in reassessing strategic interests in the US-led web of Asian alliances; (3) the regional disparities in addressing endemic global security issues; and (4) the prevalence of traditional security quandaries in flashpoints such as the Taiwan Strait or the Korean Peninsula,”<sup>6</sup> South China Sea disputes, Diaoyu/Senkaku Islands disputes, and so forth.

The power narrative of the Indo-Pacific intersects the interests of major powers like China, India, Japan, and the United States and other players, including Australia, South Korea, and the Southeast Asian nations. This region also has external stakeholders like the European nations—Germany, France, Russia, and others—who are making their presence felt by developing robust Indo-Pacific-oriented foreign policies. Thus, it becomes apparent that the Indo-Pacific is driven by multipolar order or disorder and determined by the agency of multiple players—the ripple effect of which will go far beyond the mental geographic boundaries of the region.

Observers can gauge the United States’ strategic interest in the Indo-Pacific region through the lens of the Trump administration’s *Indo-Pacific Strategy*, which was released on 1 June 2019, and the latest iteration of that strategy from the Biden administration, which was published 22 February 2022. As per excerpts from the report, for the United States, the Indo-Pacific is “from our Pacific coastline to the Indian Ocean,” with focus on Northeast Asia, Southeast Asia, South Asia, and Oceania—including the Pacific islands. Washington’s broad strategy is to build “a balance of influence” in the region and manage competition with China responsibly. The strategy notes that China “is combining its economic, diplomatic, military, and technological might” to pursue “a sphere of influence in the Indo-Pacific.” China seeks to “become the world’s most influential power.” Although China’s “coercion and aggression spans the globe,” according to the strategy, the effects of Chinese behavior are “most acute in the Indo-Pacific.”<sup>7</sup>

For New Delhi, the Indo-Pacific forms the main artery to India’s growth and development. Nearly 90 percent of India’s trade and energy supply is transitioned through the Indian Ocean, with approximately 50 percent or more of its trade concentrated in the Indo-Pacific. Therefore, freedom of navigation, securing the sea lanes of communication (SLOC), and the peaceful resolution of conflicts are among India’s top concerns. Apart from economic considerations, the rise of China in India’s backyard is another major irritant. New Delhi is also trying to counterbalance China’s influence by strengthening India’s footprint in regions like Southeast Asia, the Southwest Pacific, the Middle East, and Africa. The Indo-Pacific offers New Delhi the opportunity to raise India’s visibility as a net

security provider and as a first responder, thereby further augmenting its global position. India also figures prominently in the Indo-Pacific policies of several nations, thus enjoying a geopolitical vantage position that New Delhi has been using to advance India's own strategic objectives.

Australia geographically can be best described as a central Indo-Pacific country,

bordered to its west by the Indian Ocean and to the east by the Pacific Ocean, and lies in close proximity to members of the Association of Southeast Asian Nations (ASEAN) to its north. The idea of a strong Indo-Pacific has become a point of reference for Australian governments to define the country's foreign and security policy interests. In terms of its trade interests, however, Australia has looked increasingly to markets in Asia and proportionally less to traditional Western allies. As China has risen and grown more assertive, setting up a strategic rivalry with the US and its regional partners, Australia has begun to find it harder to insulate its commercial interests from regional geopolitical tensions.<sup>8</sup>

Japan, a country often credited with jump-starting the Indo-Pacific concept, however, took time in developing its Indo-Pacific approach. As Mercy A. Kuo states, "China's maritime expansion directly threatens Japanese interests in the East China Sea, with repeated intrusions into Japan's territorial waters around the Senkaku Islands, claimed by China by the name Diaoyu Islands." Although, "Japan's regional military role is circumscribed by its 'peace constitution' and domestic political constraints. That said, Tokyo has been highly active on multiple fronts trying to balance China's rise on the one hand and play a greater role in the U.S. alliance on the other."<sup>9</sup> Tokyo has been enhancing its game in the Indo-Pacific through Japan's extensive network of infrastructure and foreign direct investments across the two oceans and two continents.<sup>10</sup> A pacifist Japan now seems to be moving away from its post-World War II philosophy of peace promotion and minimal muscle flexing toward being combat ready as the Russian invasion of Ukraine, China's posturing toward Taiwan, and other security challenges. This transition has been an eye-opener for many in the region. In December 2022, Japan "unveiled its biggest military build-up since World War Two with a \$320 billion plan that will buy missiles capable of striking China and ready it for sustained conflict. Its sweeping, five-year plan, once unthinkable in pacifist Japan, will make the country the world's third-biggest military spender after the United States and China, based on current budgets."<sup>11</sup>

As Rajeshwari Pillai Rajagopalan states, an equilibrium in the Indo-Pacific "cannot be managed by Indo-Pacific powers alone. There is a need for a larger coalition that can call out China on its aggressive behavior. Therefore, much of the region is cautiously optimistic about proactive external stakeholders like Europe."<sup>12</sup> Per Josep Borrell, High Representative of the European Union for Foreign Affairs

and Security Policy, “the futures of the EU and the Indo-Pacific are inextricably linked given the interdependence of the economies and the common global challenges.”<sup>13</sup> Therefore, anything that happens in the Indo-Pacific region directly or indirectly affects the interest of European nations.

ASEAN is at the heart of the Indo-Pacific. As Igor Driesmans states, “ASEAN has a special role in supporting stability of the Indo-Pacific, which has, in turn, enabled strong economic growth of what is now widely recognised as an important engine of the global economy. Over the years, the ASEAN-led regional architecture has provided a space for dialogue and trust-building across the Indo-Pacific and among countries that see each other as adversaries.”<sup>14</sup> Premesha Saha claims this role began when the “main initiative for drafting the ASEAN vision of the Indo-Pacific was taken by Indonesia. It proposed a distinct ASEAN Indo-Pacific approach at a foreign ministers’ retreat in January 2018 and has led the discussion since then.”<sup>15</sup>

This new vision was embodied in the subsequent *ASEAN Outlook on the Indo-Pacific*, an official publication that emphasizes ASEAN Centrality amid the shifting global politics that are brewing in the Indo-Pacific—especially in the face of growing Chinese belligerence. However, ASEAN has been careful not to mention the China challenge directly, so as not to irk its strong trading partner. Excerpts from the *ASEAN Outlook on the Indo-Pacific* suggest that the organization’s members aim to further strengthen and optimize ASEAN-led mechanisms. Furthermore, the “ASEAN Outlook on the Indo-Pacific is based on the principles of strengthening ASEAN Centrality, openness, transparency, inclusivity, a rules-based framework, good governance, respect for sovereignty, non-intervention, complementarity with existing cooperation frameworks, equality, mutual respect, mutual trust, mutual benefit and respect for international law, such as UN Charter, the 1982 UN Convention on the Law of the Sea, and other relevant UN treaties and conventions, the ASEAN Charter and various ASEAN treaties and agreements and the EAS Principles for Mutually Beneficial Relations (2011).”<sup>16</sup> Although there are divisions within the ASEAN itself regarding several issues, it is well understood, given ASEAN’s geographical location, the bloc faces tremendous challenges from other actors—especially when its growth can be hijacked by the tussle of the major powers.

Though each nation’s response to geopolitical tensions differs, strategic interests and challenges intertwine at most levels; thus, building on these commonalities and laying out opportunities for collaboration to engage with other like-minded players internal and external to the region would be vital in stabilizing a region fraught with dangers.

## **A Common Way Forward**

The Indo-Pacific security dynamics are interwoven with today's realities regarding global economic interdependence, climate change, terrorism, resilient and diversified value chains, and the COVID-19 pandemic and similar health challenges, rendering it basically a global commons. This presents a paradox that while there are historical rivalries, strategic discomfort and distrust, bilateral and multilateral forums, treaties, and joint military engagements, the security complex in the Indo-Pacific region is also defined by commonalities and nonmilitaristic norms. As Raska writes, these "centripetal and centrifugal forces both amplify and mitigate sources of conflict in the region. Yet, the risks of miscalculation and potential confrontation exists. Economic interdependencies cannot resolve the region's enduring security dilemmas amid contending national interests, strategies, and rising power-projection aspirations and capabilities. Seen from this perspective, increasing global and regional economic interdependencies juxtaposed by the strategic uncertainties, costs, and risks of potential conventional conflicts shape preferences for long-term competitive strategies between major powers in the region."<sup>17</sup>

The best way to keep conflicts at a minimum and heighten cooperation is by building deeper standards for the global commons: i.e., freedom of navigation and equal access as a right under international law to the use of common spaces at sea and in the air, unimpeded commerce, and peaceful settlement of disputes in accordance with international law, environmental global standards, protection of intellectual property rights, and adherence to rules covering the digital economy. All these measures would contribute to a deeper integration of the region rather than continuing to respond to tensions by focusing solely on national security considerations.

Also, the players in the region especially the big four and countries like Taiwan, Indonesia, and South Korea must focus on enhancing cooperation to keep the Chinese challenge at bay while working toward improving military cooperation, reducing conflicts, and augmenting economic partnerships. Conflict-oriented actions shut off avenues for regional growth and deepen cleavages between countries; therefore, it is imperative to develop connectivity based on respect for sovereignty and territorial integrity, consultation, good governance, transparency, viability, and sustainability.

## **Conclusion**

As Darshana M. Baruah states, throughout world history "the maritime domain has been a crucial space in establishing new and emerging powers shaping regional dynamics and the larger security architecture"<sup>18</sup>; the Indo-Pacific is no



different in this sense. The Indo-Pacific—while being a newly conceived theater of opportunity—is home to the world’s largest economies and generates a third of the world’s economic output, more than any other region of the world. The region has emerged as one of the “pivotal theatres of inter-state contestation and competition.”<sup>19</sup> The cleavages in the dynamics between the region’s internal and external powers is going to decide the present and the future of the region.

The Indo-Pacific’s geopolitical stresses of 2022 are likely to spillover and continue to dominate well into 2023, “with the overall environment staying tense and uncertain. New security and economic partnerships are likely to emerge, and new initiatives under the existing alliances and partnerships may be announced. The security partnership between competing parties may get accelerated, with appropriate signaling. The extension of competition to all domains, would exacerbate friction. The implementation of the Indo-Pacific strategies of different players will get tested for delivery and effectiveness,” as Girish Luthra puts it.<sup>20</sup> And thus, even a limited conflict could have catastrophic results. Therefore, to keep up with the embedded forces whether economic or strategic, fostering an era of cooperation, forging more meaningful partnerships, and augmenting capabilities in one’s domestic sphere seem to be at the core of the best way forward. 🌐

### Saloni Salil

Ms. Salil is an independent geopolitics and security analyst, advocate (law-qualified), and MAX Security-certified intelligence analyst (ASIS-recognized) with more than 10 years of experience focusing on global security risk and intelligence, South Asia, naval affairs, maritime security, and the Indo-Pacific region; and delivering risk assessments and policy frameworks across a spectrum of risk matters, international business, and geopolitical issues. She has been a regular contributor to several prominent strategic affairs platforms, magazines, and journals with more than 54 publications. She is also a frequent panelist on prime-time debates in one of the leading news channels (both English and Hindi) in India.

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