



China's Arctic Strategy – a Comprehensive Approach in Times of Great Power Rivalry

RESEARCH ARTICLE

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ABSTRACT

There are growing signs that great power rivalry is making a comeback in the Arctic region, and China, a self-proclaimed “near-Arctic state,” has shown growing interest in expanding its activity in it. This article investigates China’s Arctic intentions in the context of the recently emerging notion of “total national security” in the country, and suggests that individual aspects of China’s Arctic strategy – including its Arctic military strategy – should not be analyzed on their own but should, rather, be seen as a manifestation of China’s rather unique total security conception in a regional context. Drawing insights from original, official, Chinese-language sources, discussions on China’s Arctic strategy among Chinese security experts and academic communities, and by observing recent Chinese economic, political, and scientific activities in the Arctic, the article demonstrates that China’s Arctic strategy follows what we describe as a “comprehensive approach” consisting of four main arms: political, economic, scientific, and military. This strategy is designed to advance the party-state’s influence in the Arctic through simultaneously moulding discourses and challenging legal concepts of the Arctic (political), boosting its economic interests in the Arctic (economic), fusing civil-military scientific and technological innovation (scientific), and preparing for a military presence in the Arctic (military). Finally, the article concludes that as the significance of the Arctic for China’s long-term security strategy is guided by Xi Jinping’s thought on total national security, future analyses of China’s Arctic intentions should pay particular attention to this evolving concept.

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The strategic importance of the Circumpolar North is increasing as Arctic sea ice melts even more rapidly than expected due to accelerating climate change (see, for example, Guarino et al., 2020). Since new Arctic shipping routes and economic opportunities in resource extraction will open in the coming years, it is hardly surprising that Chinese strategic calculations concerning the Arctic have also grown steadily during the last decade. Officially China now defines itself as a “near-Arctic state” with ambitious plans to establish itself as a “polar great power” by 2035 (State Oceanic Administration, 2014). At the same time, the security situation of the Arctic region, once viewed as an “international zone of peace” (see Gorbachev, 1987), has deteriorated; the long-term regional impacts of Russia’s attack on Ukraine in early 2022, meanwhile, are yet to be fully felt.

Besides its economic potential, China increasingly sees the Arctic region as a security issue; the Chinese top leadership, however, has remained notoriously silent on exactly how China plans to advance and protect its interests there. China’s first Arctic policy white paper, published in 2018, simply states that China “shoulders the important mission” in promoting security within the Arctic region but refrains from providing any further details (State Council Information Office, 2018). Official jargon aside, numerous Chinese experts in the fields of international relations and security studies emphasize the importance of the Polar regions, urging the Chinese leadership to begin developing the capabilities required for securing Chinese interests within these new domains of great power competition. Notably, one of the most authoritative of such voices, *The Science of Military Strategy*, a textbook published by the Chinese National Defense University (NDU) in 2020, states that the Arctic region “represents the main direction in which our national interests are expanding,” and that the region is bound to provide new missions for the Chinese military forces as well (Xiao 2020, pp. 166–167).¹ The views proposed in the book series are seen by scholars as representative of the views of the Chinese military leadership (see Fravel, 2017). *The Science of Military Strategy* states, notably, that in expanding towards the Arctic, China must follow an extremely cautious grand strategic approach serving the nation’s larger foreign policy objectives. In such an approach, unnecessary demonstrations of military power in the region might only evoke “international contradictions” and harm China’s great power relations (Xiao, 2020, pp. 166–167). Other scholars even warn of the emergence of “Arctic China threat theories” (中国的北极威胁论), which the Western states are seen as being spreading on purpose, potentially hindering the prospects of China’s Arctic advance (Liu, 2022).

China’s Arctic ambiguity is thus likely a very conscious choice. China – notwithstanding its “near-Arctic” self-identification – is located far away from the Arctic regions, and most of the Arctic Ocean falls under the jurisdiction of the five Arctic littoral states (Canada, Denmark via Greenland, Norway, Russia, and the United States) with sovereign rights in exploiting lucrative Arctic resources. China needs friendly or at least cooperative relations with them to be able to utilize these mineral and energy sources, not to mention land-based resources. In communicating its Arctic intentions, hence, the Chinese leadership has been extremely cautious, emphasizing the cooperative and peaceful nature of its Arctic policy and shying away from any hard security topics – aware that its statements and actions are under tight scrutiny by the international community, especially by the Arctic states themselves.

The vagueness of official Chinese rhetoric combined with general uncertainty about the intentions of the Chinese Arctic strategy has left ample room to be filled by the imagination of international scholars and practitioners. Some observers believe that China is developing Arctic dual-use ports to serve as bases for its nuclear submarines on patrol under the Polar ice cap (see, for example, Brady, 2019; Goldstein, 2019; Ghoshal, 2020). In the most “alarmist” visions, as in the words of the former U.S. Secretary of State Mike Pompeo, China’s expansion could even transform the Arctic into “a new South China Sea, fraught with militarization and competing territorial claims” (Pompeo, 2019). While Pompeo’s vision may be a little exaggerated, it seems reasonable to believe that China’s growing regional presence will significantly shape the political and economic futures of the Arctic (see Kauppila & Kopra, 2022; Kopra, 2022). Against this backdrop, it is hardly surprising that much recent literature explores China’s Arctic interests, political and economic activities, and contributions to regional governance (see, for example, Bennett & Eiterjord, 2022; Fravel, Lavelle & Odgaard, 2021; Kauppila, 2022; Kobzeva

1 The book has its own subchapter on military operations within the Polar regions.

& Todorov, 2023; Koivurova & Kopra, 2020; Odgaard, 2021; Sørensen, 2021). Apart from a few exceptions (e.g. Brady, 2019; Lanteigne, 2020; MacDonald, 2021; Staun & Sørensen, 2023), not much scholarly attention has been paid to China's security interests in the High North and none have situated these interests within China's broader concept of total national security – a gap in the literature that this article seeks to fill.

As the Arctic does not constitute a major national security or foreign policy priority for China, we state that individual aspects of China's Arctic strategy – including its military dimensions – should be analyzed as elements of the larger, holistic strategy, just as the *Science of Military Strategy* suggests. Therefore, we build our analysis on the party-state's conception of “total security” and ask: How does this conception guide China's Arctic strategy? Drawing insights from original Chinese-language sources, such as official sources, discussions on China's Arctic strategy among Chinese security experts and academic communities, and by observing recent Chinese economic, political, and scientific activities in the Arctic, we claim that the glue connecting China's Arctic strategy to China's grand strategy can be found in the recently emerging thought around total national security in the country. In contrast to the most alarmist estimates of China's rapid military expansion to the Arctic, we thus state that China seems to be following a careful “comprehensive approach” for securing its interests within the region.² Although we define the comprehensive approach as a strategy pursued by the Chinese leadership, such a strategy is not necessarily designed in detail or well-coordinated according to any grand plan. The comprehensive approach resembles what is known in the literature as “emergent strategy,” in which, while a rough design and a vision of a preferred end-state (“China as a polar great power in 2035”) are given, the various state-affiliated and private actors (state-owned companies, funds, scientific institutions, the military) play it out independently, albeit in often contradictory ways (on emergent strategy, see Popescu, 2018; Silove, 2018).

Structurally, the article begins by presenting the conceptual framework of the comprehensive approach, discussing currently prevailing Chinese understandings of the concepts of “security” and “interest” to elucidate the role of the Arctic in China's larger foreign policy thought. After a methodological section, presenting the literature analyzed in the study, the article then continues into its empirical section, which examines how the party-state seeks to establish an Arctic presence by combining political, economic, scientific, and military arms of state power. Finally, in the discussion section, we assess that while, to a certain extent, its comprehensive approach has enabled China to expand the state's presence within the Arctic region, the strategy is now facing challenges due to intensifying geopolitical competition, especially after Russia's invasion of Ukraine in 2022. China's Arctic strategy as a whole is, therefore, under pressure to change and adapt, likely leaning more on cooperation with Russia, which could provide China with new opportunities for furthering its Arctic expansion.

CHINA'S HOLISTIC APPROACH TO NATIONAL SECURITY – A CONCEPTUAL FRAMEWORK

China increasingly sees the Arctic as a security issue and wants to safeguard its interests in the region. But how does the ruling Communist Party understand the concepts of “security” and “interest”? Beginning with the concept of security, Jonna Nyman (2023) has recently argued that instead of more traditional Euro-American understandings of security as being mainly related to foreign (military) threats to the state, the Chinese concept of security is broader and more holistic in nature. It encompasses a wide range of political, societal, economic and military threats, seen as being complexly intertwined. At the same time, the line denoting the spheres of foreign and domestic security is ambiguous.

Such blurriness has been officially canonized following the introduction into the official political lexicon of the concept of total national security (总体国家安全) during Xi Jinping's administration.³ According to the official definition, total national security consists of 16 subfields of security, ranging from economic and political security to more narrow subfields

² We have briefly introduced our initial thoughts on the “comprehensive approach” in Kopra, Puranen & Tiuraniemi, 2023 and Puranen & Kopra, 2022.

³ The concept is often translated as “comprehensive national security” or “overall national security”, but in this article we use Nyman's translation (“total national security”) in order to distinguish the official Chinese concept from our own analytical concept, the comprehensive approach.

such as cultural, biological, and, indeed, polar security (Drinhausen & Legarda, 2022). These subfields of security are closely interlinked, and threats and issues can travel from one subfield to another, or from the sphere of international security into the domestic sphere, in an unpredictable manner. While Xi Jinping's administration views security holistically in this manner, at the very centre of this concept is political security – that is, the security of the ruling regime itself (Nyman, 2023; Blanchette, 2022).

Another important concept closely connected to the concept of security is (national) interest, and like security, it bears certain unique characteristics. In Chinese expert discussions, national interests are typically divided into two broad categories, “core interests” (核心利益) and “overseas interests” (海外利益).⁴ Core interests, although ambiguously defined, point to the territories that China sees as being part of its sovereign territory. These include Taiwan, the South and East China Seas, and the disputed territories along China's border with India (see Zhou, 2019). Core interests can thus be understood as denoting China's red lines, and securing them allows the use of hard military power and the toolkit of “hybrid warfare” seen, for example, in the South China Sea. However, anything lying beyond these red lines is categorized as “overseas interests.” This includes the security of Chinese investments and Chinese nationals in foreign countries, as well as the security and stability of strategically important sea lanes. In securing its overseas interests, the Chinese approach has been markedly different from the way it deals with its core interests, as it has mainly included careful and coordinated use of diplomatic tools, internationally mandated peacekeepers, and private security companies (see Ghiselli, 2021).

Chinese military strategy is somewhat similarly divided into two main objectives or missions. The first main objective of the Chinese military forces is to secure Chinese territorial sovereignty, which includes defending Chinese claims in the disputed territories and, most importantly, the “reunification” of Taiwan with China. In other words, the primary goal is to prepare for a possible great power conflict with the United States over Taiwan or, more preferably, to deter such a conflict from taking place. Within the maritime domain, this main objective is understood as “near seas defence” (近海防御), and it guides the Chinese military to develop capabilities such as anti-sea ballistic missiles and nuclear attack submarines, and to construct military facilities in the contested maritime territories (Shou, 2013, pp. 207–208).

The second main objective of Chinese military strategy is the protection of overseas interests (维护海外利益安全). It emerged due to the rapid expansion of Chinese economic interests and was officially promoted with Hu Jintao's “new missions” in 2004 (Mulvenon, 2009).⁵ Ever since the declaration of the “new missions,” official Chinese military and defence publications have begun emphasizing the significance of “far seas” and the security of sea lanes. In the military strategy white paper published in 2015, “far seas protection” (远海护卫) was officially elevated as the second leg of Chinese military strategy (see State Council Information Office, 2015). In contrast to near-seas defence, far-seas protection has guided the development of capabilities such as aircraft carriers, supply ships, and strategic airlift, and led the attempts to construct Chinese-owned ports in friendly states and the establishment of China's first actual military base in Djibouti in 2017 (see Wuthnow et al., 2021).

The Arctic region is a subfield of total national security falling within China's category of overseas interests, and from the point of view of military strategy, under the mission set of far seas protection. As we will demonstrate in our analysis below, Chinese expert discussions suggest that China's Arctic strategy should be holistic and comprehensive in essence, reflecting the concept of total national security. Specifically, we structure the analysis through the four “arms” that these Chinese experts and strategists themselves have identified as vital for current Chinese strategy security thinking – the political, economic, scientific and military arm (see Li, You & Wang, 2015; Sun & Wu, 2016; Xia, 2018). As they are always supposed to be applied in unison, we call the four arms, “the comprehensive approach.” Before moving on into the actual analysis, however, a brief note on methods and material is in order.

⁴ Sometimes also the categories of “important interests” (重要利益) and “normal interests” (一般利益) are provided (see Shou, 2013, pp. 13–16)

⁵ Concepts such as “diversification of military missions” (多样化军事任务) and “military operations other than war” (MOOTW, 非战争军事行动) gained prominence around same time (Xiao, 2020, pp. 14–15)

METHODS AND MATERIAL

Methodologically the article consists of a literary review of two different sets of research material. The first set consists of official Chinese publications and expert discussions on the role of the Arctic in Chinese security policy in Chinese academic journals. For this part, journal articles were searched with such keywords as “polar” (极地), “Arctic” (北极) and “security” (安全), and downloaded from databases such as China Academic Journals (CAJ) and the National Social Science Database (国家哲学社会科学学术期刊数据库). Shorter commentary texts published in state-affiliated newspapers such as *People’s Daily* or the *PLA Daily* were also used.

In addition to analyzing the aims of the Chinese Arctic strategy and how China plans to achieve them, the empirical section analyzes its concrete manifestation in the domains of politics, economics, science, and military affairs (i.e., the realized strategy; see [Silove, 2018](#)). For this, we looked at various reports, policy papers, statements, newspaper articles and commentaries detailing China’s actual conduct in the Arctic, written mainly by Western scholars and journalists.

Huiyun Feng and Kai He suggest that approaching Chinese foreign policy through parsing academic discussions can be a valuable tool for illuminating the “black box” of China’s foreign policy decision-making. Although a causal linkage between academic discussions and foreign policy naturally cannot be established, Feng and He suggest that debates in Chinese scholarly communities can still “make sense of the policy boundaries and future directions of China’s foreign policy” ([Feng & He, 2020, pp. 17–18](#)). Chinese scholarly discussions on Arctic security are particularly interesting since they can hardly be defined as “debates.” Almost all the authors surveyed for this article seem to agree on the essential principles of China’s Arctic strategy (its comprehensiveness and main arms, for example), causing the research material to become rapidly saturated with similar definitions and policy suggestions.

ANALYSIS: READING CHINA’S ARCTIC STRATEGY AS A COMPREHENSIVE APPROACH

China’s foreign policy is guided by the necessity of protecting total national security. China’s Arctic strategy is thus best seen through this conceptual framework, and indeed, China’s National Security Law, enacted in 2015, elevated the Polar regions (among outer space and the seabed) as a subfield of security, in which China will peacefully safeguard its interests.⁶ The role of the Arctic in total national security has been mentioned in various expert comments, too. In the words of the Arctic scholars Sun Kai and Wu Hao, for example:

[The concept of] total national security advocates that we pay close attention to new security issues. Arctic security is closely connected to energy security, environmental security and national security. For protecting the stability of China’s strategic environment, China must adopt necessary measures for safeguarding its Arctic security interests. ([Sun & Wu 2016, 76](#))⁷

The strategic significance of the Polar regions rose during the 2000s, shadowing China’s economic growth and the global expansion of its national interests. The 12th five-year plan of the Chinese State Council, released in 2011, mentions the Polar regions for the first time as regions of importance (12th Five Year Plan). In 2013, the *Yong Sheng* of COSCO became the first Chinese container ship to traverse the Northeastern Passage. In the same year, China was accepted as an observer in the Arctic Council, the key intergovernmental forum in the region ([Koivurova & Kopra, 2020](#)). For Chinese scholarly debates of the period, the expansion of Chinese strategic interests into the Arctic region was considered inevitable (see, for example, [Pan & Zheng, 2013](#)).

The Arctic region has acquired a position of national prominence since Xi Jinping came to power in 2012. Notably in 2014, the Director of the State Oceanic Administration, Liu Cigui, suggested that China’s polar activities were now moving towards a new historical phase in which China

6 National Security Law of the People’s Republic of China.

7 总体国家安全观倡导我们重视新型安全问题，北极安全与中国的能源安全、生态安全和国家安全密切相关，为保障中国国际战略环境的稳定，中国必须采取必要的手段来维护中国的北极安全利益 ([Sun & Wu 2016, 76](#); See also [Dong 2021](#)).

was becoming a polar great power (极地强国; see [State Oceanic Administration, 2014](#)). Since then, the Arctic region has been defined in official documents and speeches as being part of the “new security domains” (新型安全领域) or “new strategic frontiers” (战略新疆域), in which the great power competition was projected to be expanding in the near future (see [Andersson, 2021](#)). Furthermore, China’s 14th Five-Year Plan (2021–2025) has, for the first time, a specific chapter on oceans. According to the plan, China seeks to “actively develop blue partnership; deeply involve itself in global ocean governance regarding institutional building, rules-making and implementation; foster the “ocean community of shared destiny for mankind”; participate in pragmatic cooperation in the Arctic to build the “Ice Silk Road”; and to enhance its capacity to protect and use Antarctica” ([State Council of China, 2021](#)).

In Chinese scholarly discussions, the Arctic is connected to China’s total national security through various subdomains of security. The melting of polar ice is an issue of “environmental security”: sea levels keep rising and changing weather patterns impact Chinese agriculture. At the same time, the shrinking ice makes natural resources (energy, minerals, fish) available for exploitation while Arctic sea lanes continue to open for commerce. Arctic economic potential is, thus, closely linked to the subdomain of economic security (see, for example, [Sun & Wu, 2016](#)). From the perspective of the Chinese military, this means that it must be able to maintain the security of its future commercial and scientific activities and prepare, for example, to conduct rescue operations in harsh polar conditions.

Overall, the Arctic region is seen as a crucially important region for Chinese interests and an important component of total national security ([Liu & He, 2015](#)). The Arctic is opening, and Chinese scholars estimate great power competition and military tensions, especially between the United States and Russia, to gain intensity in the region ([Meng, Gao & Wang, 2020](#); [Guo & Li, 2021](#)). Chinese Arctic strategy, then, aims to establish a comprehensive Chinese presence in the region in economic, scientific, and military domains.

While it is clear that there exists a consensus that China should establish a foothold in the region, China remains merely a “near-Arctic state” without easy access to the region and its resources. Arctic states, meanwhile, are seen in many Chinese analyses as jealously guarding their backyards, attempting to monopolize the region for their own use ([Sun & Wu, 2016](#)). Any provocative moves from China will only further the proliferation of theories of “Chinese Arctic threat” playing into the hands of the established Arctic powers and hindering Chinese objectives. Notably, the *Science of Military Strategy* echoes other scholarly arguments to propose that China should follow a multi-level and multi-layered comprehensive strategy in the Arctic. Such a strategy should combine and coordinate the use of political, economic, scientific, and military levers of power instead of putting overt emphasis on any single one (see, for example, [Li, You & Wang, 2015](#); [Sun & Wu, 2016](#); [Xia, 2018](#); [Wu, 2021](#)).

POLITICAL ARM

With the political arm of the comprehensive strategy, Chinese scholars propose that China should expand and develop its relations with the Arctic states, strengthening Chinese “discourse power” (话语权) regarding the region and its normative structure. Discourse power is understood in Chinese discussions as the ability to control the narratives and agendas of international politics, which, if successful, should lead to influence over normative and legal processes (see, for example, [Xia, 2018](#); [Li, You & Wang, 2015](#)). Against this backdrop, it is hardly surprising that China has sought to replace traditional, territorial definitions of the Arctic with more globalized understandings of the region. For example, China’s Arctic strategy states:

The Arctic situation now goes beyond its original inter-Arctic states or regional nature, having a vital bearing on the interests of states outside the region and the interests of the international community as a whole, as well as on the survival, the development, and the shared future for mankind. ([State Council Information Office, 2018](#))

To strengthen China’s discourse power in the Arctic, Chinese scholars also emphasize the role of the law of the sea and advise the political leadership to actively engage in all possible multilateral forums and negotiations on Arctic governance. A topic of particular concern would be the status of sea lanes and straits along the Northern Sea Route and the Northwest

Passage, which China would like to see defined as international waters (Xia, 2018; Yang, 2019). In addition to the state's observer role in the Arctic Council, the Chinese have indeed partaken in international negotiations that directly and indirectly govern the future of the Arctic, among them the International Maritime Organization's Polar Code regulating vessels operating in polar waters, and the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean adopted in 2018 (see, for example, Liu, Kopra & Chen, 2024). The absence of any specific Arctic treaty can be viewed, according to some Chinese commentators, as a strength since it provides China with ample opportunities for generating discourse power by "filling the white parts" of the normative structures with norms beneficial to Chinese interests (Zhang & Liu, 2021; Li, You & Wang, 2015).

Establishing internationally valid and legitimate grounds for China's Arctic presence is crucial for expanding Chinese interests in the region. This is closely connected to the political arm, with which China aims to develop its relations with the Arctic states and to mitigate the effects of China threat theories. Besides official exchanges, China emphasizes unofficial connections between elites and institutions such as universities and research institutions in order to cultivate a "circle of friends" (朋友圈) supportive, or at least neutral towards, Chinese Arctic ambitions (Jüris, 2022). Large informal annual gatherings, such as the Arctic Circle Assembly in Reykjavik and Arctic Frontiers in Tromsø, play an important role in such efforts. In May 2019, China also organized the first Arctic Circle China Forum in Shanghai. Taking place only a few days after Pompeo's exceptionally outspoken speech in Rovaniemi, the event offered the Chinese officials a good chance to explain Chinese viewpoints of the future of the Arctic.

Some Chinese scholars also point out that the relations between Arctic states are notoriously complex. In its diplomatic approach, China should, therefore, also attempt to utilize these "contradictions" to benefit Chinese interests. Already in 2015, Liu Lei and He Jian suggested that Russia's increasing international isolation might provide opportunities for the two countries to deepen bilateral cooperation on Arctic matters (Liu & He, 2015). Despite their historic mistrust, China and Russia have indeed increased their collaboration in the Arctic context, especially in the field of resource exploitation and infrastructure development. Since 2012, China and Russia have also organized annual bilateral naval exercises (Blivas, 2021). As Western sanctions against Russia following the annexation of Crimea in 2014 and, especially, Russia's illegal attack on Ukraine in early 2022 have made Russia increasingly dependent on Chinese investments, China has largely benefited from its deteriorating relations between Russia and the West. Only a few weeks before Russia started the war in Ukraine, Xi Jinping and Vladimir Putin issued a joint statement unveiling new energy deals and wheat imports. Emphasizing that their friendship has "no limit," the two authoritarian leaders criticized further enlargement of NATO and reassured their willingness to increase "practical cooperation for the sustainable development of the Arctic" (President of Russia, 2022).

At the same time, the war in Ukraine has strengthened the ties between democratic countries and caused a backlash in their relations with China, which has decided to side with Russia in the conflict. In its 2022 strategic concept, NATO mentioned both China and the Arctic region for the first time, and with Finland and Sweden joining the alliance, geopolitical borderlines in the Arctic are sharpening (NATO 2022 strategic concept; see also Puranen & Kopra, 2022). One Chinese commentator even warned of the prospect of the Arctic becoming a "NATO ocean" (北约大洋; Li 2022).

ECONOMIC ARM

The political arm of China's comprehensive approach is supported by the strengthening of economic connections in the Arctic. In 2013, the China National Petroleum Corporation invested in the Yamal Liquefied Natural Gas (LNG) project in the Russian Arctic (Novatek, 2014); in 2016, the China Silk Road Fund also joined the scheme (Novatek, 2016). Chinese investors have stakes also in Russia's massive Arctic LNG2 project (Humpert, 2019). The economic arm was made official in 2017 when the Polar Silk Road was added to Xi Jinping's Belt and Road Initiative (BRI; State Council Information Office, 2017). Before the launch of the Polar Silk Road, many Chinese scholars had already suggested that China should actively strengthen its Arctic trading networks and develop transportation and energy infrastructure along Arctic sea lanes. Through a prominent economic presence in the form of infrastructure, for example, China could claim

that it had security interests in the Arctic region, legitimizing the projection of military power (Liu & He, 2015; Xia, 2018).

The Polar Silk Road, therefore, can be seen as the geo-economic arm of China's comprehensive Arctic strategy. As with the BRI at large, its primary aim is not necessarily to establish economically viable and profitable connections but to generate political and strategic influence through interdependences. Chinese state-owned companies and funds can be ordered to develop unprofitable Arctic projects, which in the long term, could allow China to become a prominent player within the region and thus legitimize China's Arctic presence (see Brady, 2017; Almén & Hsiung, 2022). Among the most notorious projects have been the planned "Arctic corridor" – a railroad connection from the port town of Kirkenes in Norway to Helsinki, and from Helsinki through an undersea "Tallsinki tunnel" to Tallinn, and further towards European markets (Chen, 2020; Jüris, 2019). That said, both projects are on hold for the foreseeable future.

Furthermore, Russia's invasion of Ukraine in February 2022 has caused further challenges for Chinese economic expansion in the Arctic in both the Western-aligned Arctic countries and Russia. For example, the future of many economic projects and investments with Chinese stakeholders (the Arctic LNG2 project, for example) has become uncertain, with sanctions against Russia hindering their prospects. After Russia's attack on Ukraine, China reportedly even promptly ceased using the Northeast Passage for shipping in fear of secondary sanctions (Sukhankin, 2022; Daly, 2022).

SCIENTIFIC ARM

The third arm of China's comprehensive approach is the use of science and scientific cooperation – sometimes also termed "scientific-technological diplomacy" (科技外交) – in the Arctic (see Yang, 2017). China has long been interested in Arctic science for various, completely legitimate and valid, reasons. As Arctic research is important to further our understanding of the consequences of climate change and to improve the safety of shipping, Chinese contributions to Arctic science have been generally welcomed by Arctic scholars (see, for example, Smieszek, Koivurova & Nielsson, 2020). China has also invested in social sciences, as such research is seen as important for the understanding of the political and social structures of the Arctic region and for supporting China's political and governmental advances in the region (Jakobson & Peng, 2012).

That said, many Chinese sources, including the *Science of Military Strategy*, regard Arctic scientific activity as providing a useful front for expanding China's military and security interests within the region. The *Science of Military Strategy* suggests that the Chinese military should actively cooperate with Chinese Arctic expeditions by providing facilities and logistical support (Xiao, 2020). Scientific cooperation has indeed served as a useful cover for some Chinese cooperative projects with clear dual-use dimensions. Cooperation with Russia has been especially prominent, and Chinese and Russian research institutes have jointly engaged in projects in such fields as under-ice acoustics and under-sea communication (Jüris, 2022). China has also shown great interest in increasing its satellite coverage of the Arctic region for navigation and surveillance purposes. In addition to the Chinese-funded satellite ground station in Kiruna, Sweden, similar projects have been planned in Greenland, Iceland, and Finland, so far without success (Wood, Stone & Lee, 2021).

Combining and fusing scientific and military interests is part of a larger Chinese project known as "military-civil fusion" (军民融合). The project aims to increase and strengthen cooperation between civil and military sectors, such as civil and military research institutes, and private and state-owned military enterprises; this cooperation includes the transfer of technologies and know-how (Kania & Laskai, 2021). According to a document published by the State Council in 2017, the reach of military-civil fusion covers the Arctic region and Arctic technologies (State Council of China, 2017). The *Science of Military Strategy* promotes military-civil fusion as the main channel for projecting Chinese military power into the Arctic (Xiao, 2020). Liu Fangming and Liu Dahai mention the development of nuclear-powered icebreakers, aircraft designed for extremely cold conditions and the Beidou satellite navigation system as examples of such military-civil fusion projects. They also emphasize the consolidation and expansion of Chinese scientific research stations in the Arctic as an important approach to military-civil fusion (Liu & Liu, 2018, p. 18).

Acknowledging the dual-use potential of Chinese Arctic facilities, the Pentagon and many Nordic security intelligence agencies have warned about the security risks of Chinese research and infrastructure projects in the region (e.g., *Office of the Under Secretary of Defense for Policy*, 2019; Suojelupoliisi, 2020; Sakerhetspolisen, 2020). Therefore, China's efforts to purchase an abandoned naval base on Greenland (Matzen, 2017) and buy or lease an airport close to the Finnish Defence Forces' Rovajärvi firing range in Finnish Lapland (YLE, 2021) have been unsuccessful, as have a Chinese business tycoon's bids to buy swathes of land in Iceland and northern Norway (BBC, 2011; Staalesen, 2016). In Kiruna, the Chinese still have access to a satellite ground station established in 2016, but Sweden's state-owned space company is not likely to renew its contract with the Chinese (see Barrett & Ahlander, 2020). In Sodankylä, Finland, the plans to establish a Joint Research Center for Arctic Space Observations and Data Sharing between the Finnish Meteorological Institute and the Chinese Academy of Sciences have not been realized due to security concerns (Keränen, 2022). The China-Iceland Arctic Science Observatory was, however, launched in northern Iceland in 2018. In addition, China has a research station on Svalbard, and the first domestically-built research icebreaker, Xuelong 2 (雪龙2号), began operations in 2019.

MILITARY ARM

The fourth arm of the comprehensive approach, finally, is that of the military. While Chinese experts who analyze Chinese Arctic interests and strategic options emphasize, without exception, the development of Arctic military capabilities, they very rarely go into detail (see Li, You, & Wang, 2015). According to the *Science of Military Strategy*, the projection of military power towards the Arctic must progress with extreme caution and, at least initially, exploit the legitimate cover provided by military-civil fusion projects (Xiao, 2020). On the other hand, some representatives of the Chinese military suggest in a more straightforward manner that China's military strategy will officially be expanded from "far seas protection" towards "presence in the oceans and expansion towards the two poles" (大洋存在, 两极拓展; Martinson, 2019). Even if such an official change in strategy is still pending, in spring of 2023, Russia and China took the first steps towards establishing hard security cooperation in the Arctic: the Federal Security Service of Russia and the Chinese Coast Guard signed a memorandum of understanding on strengthening maritime law enforcement cooperation. Russia also invited a Chinese delegation to participate as an observer in Arctic Patrol 2023, a large-scale exercise in the Barents Sea (Nilsen, 2023). This development seems to be paving the way for entrance of the Chinese military into the Arctic.

How this expansion is to take place is another question, as Chinese sources on the topic are rare to non-existent.⁸ Liu Fangming and Liu Dahai suggest that China should begin developing military facilities in its North-Eastern regions (especially in Jilin province and the Tumen river delta) to gradually establish military bases in Arctic regions through land leases, and to actively take part in international military exercises with Arctic countries. They do not engage in speculation about specific capabilities or weapon systems, however (Liu & Liu, 2018). In the estimates of military scholars outside China, many suggest that nuclear-powered submarines could be a key capability in China's Arctic military strategy, as Chinese authors repeatedly emphasize their importance and as Chinese scientists have shown considerable interest in developing Arctic submarine technologies. Nuclear submarines, furthermore, would be more readily available for use in power projection in the Arctic compared to developing and deploying Arctic ice-resistant surface ships. Thus, a combination of nuclear submarines and state-owned icebreakers could establish a Chinese military presence in the Arctic to both secure Chinese interests and to deny control of the seas by other great powers (Martinson, 2019; Brady, 2019; Lajeunesse & Choi, 2021; Hirvonen, 2022).

Some Chinese authors suggest that the Arctic sea lanes are not only important during peacetime: during conflict, China's southern island chains and strategic straits such as the Malacca strait could be blockaded. In such a scenario, Arctic sea lanes could offer the potential of passage, and therefore infrastructure in north-eastern China, for example, around the Tumen-river delta, should be developed (Liu & He, 2015; Liu & Liu, 2018). Hence, many Chinese security scholars see the Arctic region as a "strategic commanding height" (战略制高点) or a strategic channel (战

⁸ According to Anne-Marie Brady the whole issue might have been defined as being too sensitive to be openly discussed by the Chinese leadership (Brady, 2017, pp. 36-43).

略通道), connecting all of the world's most economically advanced and strategically important states (Pan & Zheng, 2013; Liu & He, 2015; Liu & Liu, 2018). This conception is well represented in Chinese vertical world maps – also used by Chinese military forces – in which the Arctic Ocean appears as an inland sea between the great powers (see Renmin Ribao, 2016).

The Arctic region is important for reasons beyond the protection of economic “overseas interests”; various Chinese security experts emphasize the region's importance from the point of view of deterrence and national sovereignty. In Chinese military strategic discussions, Polar regions, especially the Arctic, are seen as one of the “new domains” (新型领域) of military operations in which the People's Liberation Army must prepare to engage in military competition (Zhao, 2020; Xiao, 2020).⁹ From the point of view of aerial transportation, the Arctic is defined by the *Science of Military Strategy* as an “aviation crossroads” (航空要冲) between the major capitals of Europe, Russia, Northern America, and Asia. From a military strategic point of view, this crossroads is only 8000 kilometres away from all of the northern great powers and, therefore, an optimal position from which to control the whole northern hemisphere with strategic bombers and ballistic missiles. Short distance, furthermore, provides opportunities for surprise strikes (Xiao, 2020; see also Meng, Gao, & Wang, 2020). Even without placing military force into the region, the (planned) trajectories of ballistic missiles to China traverse the Arctic region, thus making it a zone of importance (Liu & He, 2015). In the realm of nuclear deterrence, China's most pressing challenge is the United States, which is able to threaten Chinese strategic targets with missiles and bombers using the Arctic region as its base of operations. At the same time, the strategic defence systems of the United States are similarly deployed in the Arctic (Alaska). In discussing the Arctic in the context of nuclear deterrence, while Chinese writers often emphasize the excellent conditions of the Arctic Ocean for strategic submarine operations, hinting at interest towards wielding such a capability, it is very rarely straightforwardly suggested that China should consider developing it (see, for example, Liu & He, 2015; Xiao, 2020; Martinson, 2019).

DISCUSSION AND CONCLUSION

In this paper, we have sought to demonstrate that China follows a comprehensive approach designed to advance the party-state's influence in the Arctic through simultaneously challenging legal concepts of the Arctic (politics), boosting its economic interests in the Arctic (economics), fusing civil-military scientific and technological innovation (sciences), and by preparing for a military presence in the Arctic. Our analysis shows that there is a consensus among Chinese academics and security experts that China urgently needs to expand into the Arctic and prepare to protect its interests, even through the projection of military power. Still, the party-state is forced to adopt a careful and circumspect approach in order to evade any international backlash.

For now, the Chinese Arctic strategy seems to be in a *priming* phase, in which the basis of future presence is gradually being established. In his 2014 speech, Liu Cigui stated that the currently ongoing phase of establishing China as a polar great power would last from 2015 to 2035, suggesting that a prominent Polar presence would be realized decades in the future. Looking at China in the Arctic from a comprehensive approach, as this article does, reveals how the nation attempts to build international political support for its Arctic policies, especially among the Arctic states themselves. At the same time, China is developing economic connections and interdependencies within the Polar Silk Road, while in science, the scientific and technological foundations of a more robust Arctic presence, including Arctic military capabilities, are slowly being laid out. As mentioned in the beginning of the article, the details of the comprehensive approach are not likely coordinated from Beijing according to a grand plan; the strategy is emergent, being allowed to evolve and adapt into prevailing circumstances.

Overall, China's comprehensive strategy has worked relatively well, and the party-state has managed to balance international public opinion and the expansion of its Arctic interests. During the last few years, however, the Arctic expansion has faced difficulties as Chinese relations with most Arctic states have declined following the zeitgeist of intensifying great

⁹ Other new military domains include cyber, space, deep seas and the domain of intelligent technologies (see Zhao, 2020).

power competition. While such developments are hindering, or even halting, the prospects of China's comprehensive approach in the Western Arctic, Russia's war in Ukraine may, in the end, provide China with new opportunities for furthering its Arctic expansion. Just days before the war started, China and Russia underlined their strong relationship and vowed to increase their Arctic cooperation, among other things (President of Russia, 2022). Following its war of aggression in Ukraine, Russia is facing severe economic and geopolitical challenges; it is today very greatly isolated among developed economies. Russia's economic dependency on China, it is considered, may see it entering a de facto vassal relationship, possibly providing China with ample opportunities to demand more access to the Arctic region – whether Russia likes the idea or not (Gabuev, 2022; Staun & Sørensen, 2023).

It may well be that below the officially jubilant “win-win” rhetoric in Moscow and Beijing, concerns will increase in Russia if the Chinese presence drastically increases in Russia's strategically important Northern neighbourhood (Lajeunesse & al., 2023). For now, however, the two authoritarian leaders praise the cooperation potential in the Arctic. For example, in their meeting in March of 2023, Presidents Vladimir Putin and Xi Jinping proposed establishing a “joint working organ” to develop the Northern Sea Route (Staalesen, 2023a). In China's Belt and Road forum organized in Beijing on October 2023, Putin further praised the opportunities in developing transport corridors connecting the Arctic and the Baltic seaports to the coast of the Persian Gulf and Indian Ocean and invited partners to develop the Northern Sea Route (Staalesen, 2023b). Perhaps as a harbinger of this mood, a new container route operated by the now infamous Newnew Shipping company – the owner of the container ship Newnew Polar Bear suspected to have damaged a gas pipeline connecting Finland and Estonia in October of 2023 (Yle News, 2023) – was ceremonially launched as part of China's Polar Silk Road in the summer of 2023 (People's Daily, 2023). China's “comprehensive approach” is therefore adapting to current circumstances and obstacles with the A7 countries (Arctic states minus Russia) and focusing on cooperation with Russia. Since the Arctic does not constitute an exceptional sphere of China's foreign policy, we conclude that the significance of the Arctic for China's long-term security strategy is guided by Xi Jinping's thought on national security, and that future analyses of China's Arctic intentions should pay particular attention to the evolving conception of China's total security.

COMPETING INTERESTS

The authors have no competing interests to declare.

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