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Mapping Collaboration Between Chinese and Western Content Producers on the Arctic, 2007-2021

Gabriella Gricius

NAADSN Media Coordinator and Research Fellow

Increasing Chinese commercial and political interests in the Arctic raised concerns in and among Arctic states over the last decade about China's regional goals. Previous NAADSN Policy Primers have explored two aspects of China's role in the Arctic. First, they suggested the existence of a China-Arctic epistemic community given the dense and small number of scholars publishing extensively on this topic, identifying key themes and 55 top producers of content.¹ Among the many topics these scholars have written on include: shipping routes, the role of geopolitical competition in conditioning China's interest in the Arctic, cooperative and conflictual narratives on China, and energy security for China. Second, a primer investigated how expert commentators discussed China at conferences including the Arctic Circle Assembly and regional fora, Arctic Frontiers, the High North Dialogue, and the Chinese-Nordic Arctic Research Cooperation (CNARC) Symposia.² We found that: 1) themes on China's role in the Arctic tended to follow international trends on Chinese-Arctic discourse, 2) our previously-identified top 55 producers of written content on the China-Arctic nexus did not unilaterally appear at conferences, and 3) those who did talk about China's role in the Arctic at these events tended to come from key Chinese universities and Chinese-based Arctic institutions.

Given this small community and its changing appearance on the page and at conferences, I was interested in exploring instances of collaboration, specifically at examples of Chinese-Western cooperation, both within our database of written content from 2007-2021 and three examples of institutional collaboration that appeared often in the conference dataset.

Part of the drive to better understand collaboration came from the observation that of the publications written by the top 55 producers of content (341 pieces in total), only 25 were written collaboratively by Chinese and Western authors.³ Further, while many panels had Western and Chinese scholars on them together, I observed that some panels in our conference dataset were sponsored by particular Chinese-Western institutional configurations. This raises important questions. First, why are there so few instances of written collaborations? Second, when these do appear, what are these scholars writing about? Third, what can institutions that promote Chinese-Western cooperation tell us about engagement?

I find that amongst instances where Chinese and Western scholars write pieces together, the most common themes are cooperation and influence. Particularly significant is that most of the pieces in this dataset were published during an era when China's burgeoning role in the Arctic was largely perceived positively by Western commentators. I also observe that some themes seldom appear, including: conflict, great power competition, anti-China sentiment, and Indigenous issues. This may illustrate that, when Chinese and Western scholars work together, they tend to avoid more sensitive issues (such as conflict or great power competition) in favor of more positive or neutral themes such as the Polar Silk Road, economic development, and shipping.

When interrogating institutional examples of collaboration, I looked specifically at CNARC and the Icelandic Centre for Research (RANNIS) with the Joint China-Iceland Arctic Science Observatory (CIAO) as key examples of institutions that arose in our conference dataset as co-sponsors of panels or successful examples of Chinese-Western cooperation. I find that CNARC is a very active player in facilitating Chinese-Western engagement using various strategies and in increasing the diversity of their work, RANNIS is open to cooperating with Chinese institutions, and CIAO represents a material research partnership on the ground in Iceland. CNARC clearly led institutional collaboration from 2013-2019, and this was taken up by Iceland in the case of CIAO and RANNIS. There was a significant pause from 2020-2021 (explained by the COVID-19 pandemic), which has been followed by two meetings that CNARC has publicized on its website (both related to the Arctic Circle Assembly in 2022 and 2023). The topics covered at these recent events have been broad and limited, which represents a change from the vast array of topics covered in 2018. This may suggest a rethinking of China's strategy on engagement with the Arctic in the wake of the pandemic (or beginning as early as 2019).

Analysis of Written Cooperation

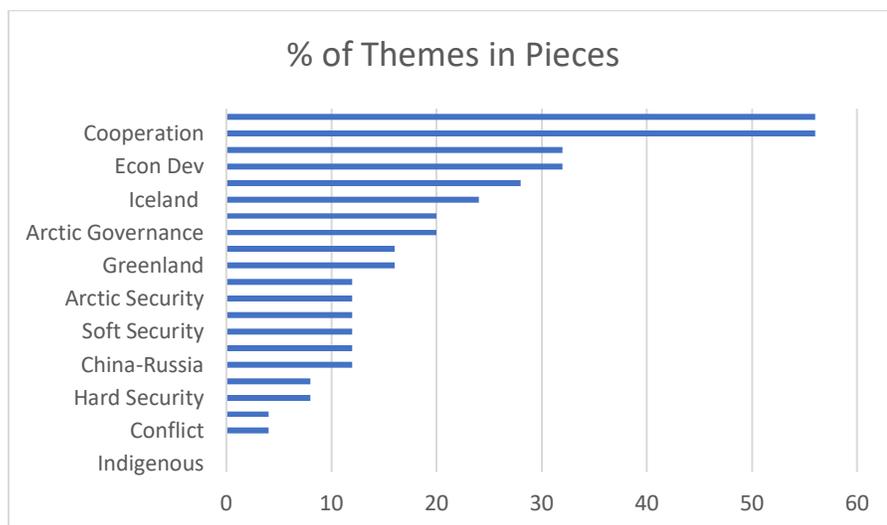


Figure 1: Percentage of Themes in Pieces

Out of the 341 pieces in the dataset written by one of the top 55 producers of content, only 25 were written by both a Chinese and Western author. Using the thematic analysis from the original dataset, I explored the

prevalence of inductively coded themes across these pieces. First, we found that the majority of pieces (56% in total) emphasized cooperation. For example, Ping Su and Maximillian Mayer highlighted the importance of China's science diplomacy in promoting cooperation and trust in the Arctic, Liisa Kauppila and others explored Finnish and Chinese cooperation in the Arctic, and Rasmus Bertelsen, Li Xing, and Mette Gregersen also emphasized Chinese science diplomacy as mechanisms for cooperation.⁴

Second, many topics that were more popular tended to highlight the positive aspects of China's role in the Arctic including economic development (32% of the dataset), the Polar Silk Road (32%), shipping (28%), and Arctic governance (20%). Some pieces, for example, cite Rasmus Bertelsen and Xing Li's article "The Drivers of Chinese Arctic Interests: Political Stability and Energy and Transportation Security" (*Arctic Yearbook* 2013) that discussed economic development and shipping.⁵ In the 2018 edition of the *Arctic Yearbook*, Lau Ofjord Blaxaekaer, Marc Lanteigne, and Mingming Shi wrote "The Polar Silk Road & The West Nordic Region" that covered themes such as economic development and the Polar Silk Road.⁶ Third and perhaps most interestingly, influence as a theme was on par with cooperation (comprising 56% of the dataset). This code was meant to incorporate mentions of or allusions to China's influence in the Arctic. It is notable that China's influence in the Arctic – for better or worse – was clearly on the minds of scholars from 2013-2021. Examples vary from Linyan Huang, Frederic Lasserre, and Olga Alexeeva writing on whether China's interest and influence in the Arctic is driven by shipping,⁷ or Marc Lanteigne and Ping Su's piece on China's Arctic policy in which they explore myths and misconceptions about China's agenda in the Arctic.⁸

By contrast, some themes did not appear very often. Four pieces focused on specific geographic areas including Greenland, Norway, and Iceland (encompassing 16% of the dataset).⁹ For example, Yang Jian and Leiv Lunde co-wrote the introduction to the book *Asian Countries and the Arctic Future*, titled "Nordic Perspectives on Asia's Arctic Interests."¹⁰ Security also was an un popular topic. Four pieces in total touched on security in some way. Two pieces emphasized hard security and three included soft security considerations, with one including both.

A relatively small portion of pieces – three in total comprising 12% of the dataset – dealt respectively with US-China relations (12%) and US-Russia relations (12%). Other less popular topics included climate change (12%), Arctic security (12%), international law (12%), and Chinese energy politics (8%). Only one piece mentioned conflict and great power competition. This was a webinar summary that was hosted jointly by the Institute for China-American Studies and the University of Alberta's China Institute on the China-US-Canada relationship in the Arctic in 2021 with Adam Lajeunesse, Sherri Goodman, and Zhao Long.¹¹ No pieces were coded with anti-China sentiment or referenced Indigenous issues. The lack of themes that allude to more negative depictions of China (such as conflict and great power competition) illustrates that, when collaborating, authors chose not to focus on these issues as cornerstones of their arguments or abstracts.

I also moved beyond a thematic analysis, seeking to ascertain whether certain individuals tended to collaborate more than others. There were 56 authors counted across the 25 pieces in this dataset. Per piece, the average number of contributors was 3.48. However, only 12 authors came up more than once. Interestingly, these individuals tended to work with one another more than once. For example, Rasmus Bertelsen worked with Xing Li twice (2013 and 2017), and Yang Jian worked with Henry Tillman and Egill Thor Nielsson twice (2018). This close-knit community of scholars suggests that these individuals not only know one another well, but also that academic collaboration here may extend into a personal relationship that spans many years.

Contributor	Appearances in Collaboration Dataset
Rasmus Bertelsen	5
Linyan Huang	5
Frederic Lasserre	5
Su Ping	5
Jian Yang	4
Olga Alexeeva	3
Egill Thor Nielsson	3
Marc Lanteigne	3
Timo Koivurova	2
Henry Tillman	2
Mingming Shi	2
Xing Li	2

Table 1: Appearances in Collaboration Dataset

Three Mechanisms of Cooperation

Outside of these examples of written collaboration, I found two notable examples of Chinese-Western institutional cooperation that merged from the conference dataset: (1) CNARC, and (2) RANNIS and CIAO. CNARC and CIAO is a primary example of strong institutional collaboration between Chinese and Western institutions from 2013-2019. This cooperation appeared to be paused in 2020-2021, likely due to the isolation brought on by the COVID-19 pandemic. While CNARC renewed its activity in 2022 and 2023 sessions, the topics under discussion appear to be broad and vague. This shifting strategy towards fewer topics under discussions at symposia may be linked to China rethinking its engagement in the Arctic in response to increasing criticism from Arctic states.

The China-Nordic Arctic Research Center (CNARC)

The most notable example of Chinese-Western institutional collaboration is the China-Nordic Arctic Research Center (CNARC). CNARC defines itself on its main webpage as an “international consortium initiated by the Polar Research Institute of China (PRIC) in collaboration with respective institutes in the Nordic countries and China to promote and facilitate China-Nordic cooperation for Arctic research.”¹² Originally launched in 2010, CNARC began with ten member institutes: four from China and six from Nordic countries. By 2024, the institute includes eight Chinese institutes including the PRIC, Tongji University, Shanghai Institute for International Studies, Ocean University of China, Shanghai Ocean University, Shanghai Jiaotong University, Dalian Maritime University, South China Business College of Guangdong University of Foreign Studies. Ten Nordic institutes are members including the Arctic Centre (University of Lapland), the Fridtjof Nansen Institute (FNI), RANNIS, Nordic Institute of Asian Studies, Swedish Polar Research Secretariat, Norwegian Polar Institute, the University of Tromsø, University of Akureyri, University of Umeå, and Nord University.

CNARC’s primary goals for facilitating increased Chinese-Western collaboration are twofold. First, its members emphasize increasing awareness and understanding on the Arctic and its global influence. Second, they promote sustainable development in the Nordic Arctic and developing China’s global role. To achieve these ends, they conduct collaborative research amongst member institutes and individual members, promote the development of research networks, convene symposia and workshops, and facilitate cultural exchanges. These two strategies

cover three research topics: (1) Arctic climate change and its impacts; (2) Arctic resources, shipping, and economic cooperation; and (3) Arctic policymaking and legislation.¹³

In their self-produced booklet “The Evolution of CNARC 2013-2018,” CNARC describes its work as building an epistemic community.¹⁴ Community-building mechanism include symposia and a fellowship program. This program appears to offer opportunities for scholars interested in engaging in research stays in Nordic and Chinese research institutes. Unsurprisingly, many of these individuals (such as Su Ping, Zhao Long, Liisa Kauppila, and Camila Sorensen) come up in our conference and written pieces dataset.

As discussed in the early NAADSN brief that explored how conference participants discussed China, CNARC’s symposia covered a wide array of topics in their 2013-2023 conferences. Topics included trade and economics, Arctic security, the environment, Ukraine, the Third Pole initiative, sustainable development, tourism, and governance. In the 2015 and 2016 symposia, thirteen different themes were discussed, followed by 12 separate themes in both 2017 and 2019. In the full conference dataset, all four individuals in leadership positions at CNARC appear often. Yang Huigen, the Director of CNARC, appears the most times in our dataset (28 times). Deputy Directors Yang Jian appears 22 times, Deng Beixi 9 times, and Peter Skold 4 times. In 2022, in a purely online panel that CNARC hosted at the Arctic Circle Assembly, only 6 topics were considered, and only 5 separate topics were covered in the agenda for the 2023 in-person symposia. This may indicate that, post-pandemic, CNARC has adopted a more cautious and limited approach.

CNARC continues to be active, as evidenced by recent symposia in December 2023 in Guangzhou, China. However, the organization scaled back from 2019-2022. This is clear in the lack of symposia in 2020 and 2021 and limited engagement in 2022. Furthermore, CNARC’s website does not indicate that the organization has recruited any new fellows since 2018-2019 (although CNARC may be doing work that is not encompassed in the yearly meetings or publicized clearly on their website).

The Icelandic Center for Research (RANNIS) and the Joint China-Iceland Arctic Science Observatory (CIAO)

Second, an active participant in many Chinese-Western collaborations is the Icelandic Center for Research (RANNIS). RANNIS is a large Icelandic research center that incorporates many different types of research as part of Iceland’s science community. The organization describes itself as hub for research, innovation, education, and culture in Iceland and works closely with Iceland’s Science and Technology Policy Council.¹⁵ Across the conference dataset, RANNIS organized three separate panels outside of the CNARC symposia that dealt with China’s role in the Arctic – all of which were co-organized with CNARC - and RANNIS came up seven times as the affiliation for individuals presenting on panels. RANNIS also has a long history of institutional collaboration, specifically with CNARC. It was a founding member of CNARC in 2013 and has participated in every symposium since then.

Material evidence of scientific collaboration between RANNIS and CNARC is clear in the agreement to collaboratively build and operate the Joint China-Iceland Arctic Science Observatory (CIAO).¹⁶ This expression of scientific cooperation intends to foster a better understanding of solar-terrestrial interaction and space weather.¹⁷ While both Chinese and Icelandic scientists work at the CIAO, the institutional arrangement is such

that RANNIS represents the interests of the Icelandic scientific community and PRIC leases the land on which the observatory is built as part of a long-term 99-year use agreement.¹⁸

This idea took seed in April 2012 when Yang Jiechi, the former Foreign Minister of China, and the Icelandic Foreign Minister Össur Skarphéðinsson signed a framework agreement during an official Chinese visit by the then-Premier of China Wen Jiabao, yielding a Memorandum of Understanding (MoU) on marine and polar science between the Icelandic Ministry for Foreign Affairs and the Chinese State Oceanic Administration. In August 2012, two additional agreements were signed: (1) the Agreement on Scientific Cooperation on China-Iceland Joint Aurora Observatory between Science Institute, University of Iceland, and the PRIC; and, (2) an additional MoU on Chinese-Icelandic Research Cooperation on Arctic issues between PRIC and RANNIS. This MoU was renewed in 2013 and again in 2018. The observatory formally opened in 2018.¹⁹ Due to pandemic travel restrictions, Chinese scientists were unable to come to the CIAO from 2020-2022, but six Chinese scientists were able to return in December 2022.²⁰

The CIAO is a specific way in which Chinese-Western collaboration appears to be supported by both Icelandic and Chinese institutions, governments, and scientists. Despite increased political tensions between China and Arctic states, this case illustrates the continued strength of Chinese scientific research relationships in the Arctic, as well as an openness to Chinese engagement in some parts of the Arctic.

Implications

Exploring both written examples of Chinese-Western collaboration and two institutional examples of Chinese-Western engagement, particular implications can be drawn. First, when Chinese and Western authors work together on articles or presentations, their work tends to focus on cooperation, positive aspects of China's role in the region, and leaves out sensitive issues (such as great power competition, security, and anti-China sentiment). Given that the majority of pieces in the dataset ranged from 2013-2021 (the height of Chinese engagement in the Arctic), it will be interesting to see if a positive sentiment continues to dominate in a world where the seven like-minded Arctic states have become much more critical of China's role in the Arctic. Second, some commentators have argued that, in the face of increased Western concern about China's Arctic strategy, Beijing has adjusted its policy to signal that it is sincerely focused on mutually beneficial cooperation.²¹ Towards this end, China may adopt strategies that signal its commitment to regional organizations such as the Arctic Council, sustainable development projects, and reducing foreign direct investment (FDI) in large-scale extraction projects. It may also draw upon longstanding examples of Chinese-Western institutional relationships such as CNARC, RANNIS, and CIAO as examples of mutually beneficial cooperation.

Notes

- ¹ Gabriella Gricius, Nicholas Glesby, Ruting Guo, and Whitney Lackenbauer, “Academic Research on China’s Arctic Interests in English, 2006-2021: Preliminary Quantitative Analysis,” NAADSN *Policy Primer*, 25 July 2023, <https://www.naadsn.ca/wp-content/uploads/2023/07/23jul-Gricius-Policy-Primer-Academic-Research-China-Arctic-Interests.pdf>
- ² Gabriella Gricius, “China’s Role in Arctic Conferences,” NAADSN *Policy Primer*, 31 January 2024, <https://www.naadsn.ca/wp-content/uploads/2024/02/24jan-Gricius-China-conferencing-NAADSN-policy-primer.pdf>.
- ³ I was particularly interested in Western-Chinese examples of collaboration and thus did not include Western-South Korean or Russian-Chinese collaborations.
- ⁴ Bertelsen, Rasmus, Xing Li and Mette Gregersen. 2016. Chinese Arctic science diplomacy: an instrument for achieving the Chinese dream? In Elena Conde & Sara Iglesias Sanchez (eds) *Global Challenges in the Arctic Region: Sovereignty, Environment, and Geopolitical Balance*, Odfordshire, UK: Taylor and Francis: 442-460; Koivurova, Timo, Liisa Kauppila, Sanna Kopra, Marc Lanteigne, Mingming Shi, Gosia Smieszek, and Matti Nojonen. 2019. *China in the Arctic and the Opportunities and Challenges for Chinese-Finnish Arctic Cooperation*; Ping, Su and Maximillian Mayer. 2018. Science Diplomacy and Trust Building: Science China in the Arctic. *Global Policy* (2018)
- ⁵ Xing, Li, and Rasmus Bertelsen. 2013. The Drivers of Chinese Arctic Interests: Political Stability and Energy and Transportation Security. *The Arctic Yearbook*. 1-16.
- ⁶ Blaxekaer, Lau Olfjord, Marc Lanteigne, and Mingming Shi. 2018. The Polar Silk Road & The West Nordic Region. *The Arctic Yearbook*: 1-19.
- ⁷ Huang, Linyan. Frederic Lasserre, and Olga Alexeeva. 2014. Is China’s interest for the Arctic driven by Arctic shipping potential? *Asian Geographer* 32(1).
- ⁸ Lanteigne, Marc and Su Ping. 2015. China’s Developing Arctic Policies: Myths and Misconceptions. *The Journal of China and International Relations* 3(1): 1-25.
- ⁹ An additional two pieces focused on Iceland.
- ¹⁰ Jian, Yang and Leiv Lunde. 2015. Nordic Perspectives on Asia’s Arctic Interests. In Leiv Lunde, Jian Yang, and Iselin Stensdal’ (eds) *Asian Countries and the Arctic Future*, Singapore: World Scientific Publishing: 1-11.
- ¹¹ Institute for China-America Studies and University of Alberta’s China Institute. China-US-Canada Relations on Arctic Governance. 26 May 2021. <https://chinaus-icas.org/event/china-u-s-canada-relations-on-arctic-governance/>
- ¹² China-Nordic Arctic Research Center, Organization. <https://www.cnarc.info/organization>
- ¹³ Ibid.
- ¹⁴ China Nordic Research Center. The Evolution of CNARC 2013-2018, https://www.cnarc.info/images/documents/CNARC2013-2018_final.pdf
- ¹⁵ The Icelandic Centre for Research (RANNIS). About Rannis. <https://en.rannis.is/activities/>
- ¹⁶ Arctic Observatory CIAO. <https://karholl.is/en/>
- ¹⁷ The Icelandic Centre for Research (RANNIS). The Joint China-Iceland Aurora Observatory (CIAO). 5 October 2016. <https://en.rannis.is/news/the-joint-china-iceland-aurora-observatory-ciao>
- ¹⁸ Johannsson, Halldor. 2020. China-Iceland Arctic Science Observatory, CIAO: Introduction. EU Interact. <https://eu-interact.org/app/uploads/2020/02/16-Halld%C3%B3r-Johannsson-CIAO.pdf>
- ¹⁹ Ibid.
- ²⁰ Lipin, Michael. 2022. China Begins to Revive Arctic Scientific Ground Projects After Setbacks. *Voice of America*. 5 December 2022. <https://www.voanews.com/a/china-begins-to-revive-arctic-scientific-ground-projects-after-setbacks-/6860756.html>
- ²¹ Wang, Yaohui and Ma Yanhong. 2024. Costly Signaling and China’s Strategic Engagement in Arctic Regional Governance. *Politics and Governance* 12. <https://doi.org/10.17645/pag.7222>