The War in Ukraine as a Critical Juncture: China, Russia, and Arctic Collaboration up to 2035

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The outbreak of the war in Ukraine in February 2022 marks a major watershed in Arctic politics. Declining West-Russia relations have transformative implications for the region's stability, practices of governance, and economic policies, including a potentially rapid green transition. Moreover, China's 'neutrality' in the West-Russia axis adds on to the high level of uncertainty about the future of the Arctic. Unsurprisingly, this dynamic has sparked a newfound interest in mapping the region's futures in an analytical and rigorous manner, and, consequently, spawned a growing pool of scenario analyses. Unlike most of these exercises, this article abandons the business-as-usual style of reasoning that guides the envisioning of predominantly alarming futures. Instead, it uses the futures research technique of backcasting to construct three scenarios on the continuation of the Arctic cooperation with Sino-Russian relations as the focus. More specifically, the article produces a set of alternative futures that – despite the differences in their actual content and ethos – all picture an Arctic of 2035 where at least the eight Arctic states collaborate regularly, and in which climate change mitigation and adaptation constitutes a key driver of collaboration. With this research strategy, the article seeks to contribute to the efforts to alleviate regional tensions by immersing the readers into a future world of possibilities and hope – despite our deep condemnation of Russia's war in Ukraine.

Introduction

Hardly any Arctic analyst could have imagined that the Arctic Council (AC), the key intergovernmental regional forum, would halt its work in early 2022. Although Russia's war in Ukraine has not spread to the Arctic, it nevertheless marks a major watershed in Arctic politics. Declining West-Russia relations will have transformative implications for the region's stability, governance, and economic policies, including a potentially rapid green transition. Moreover, China's complicated status in the West-Russia axis adds to the high level of uncertainty about the future of the Arctic. Due to these reasons, there is a growing need to map the possible dynamics of the post-February 24 Arctic region, which can be seen in a newfound interest in scenario-building (e.g. Riedel et al., 2022; York, 2022). Given the dim prospects for peaceful coexistence, it is unsurprising that these scenarios offer little, if any, hope for the advocates of the global Arctic.

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Yet, and despite our deep condemnation of Russia's brutal war in Ukraine, we argue that cooperation is a *necessity* in a global world. Therefore, we offer a different take and construct three scenarios for the Arctic collaboration up to 2035 with the Sino-Russo relations at the core. This way, we seek to empower Arctic stakeholders to consider different means that could enable more encompassing Arctic cooperation to continue in the future.

Although China does not possess sovereignty in the Arctic, it has emerged as one of its key stakeholders during the past decade (e.g. Bisley, Gad & Zeuthen, 2018; Kauppila & Kopra, 2021; Koivurova & Kopra, 2020). Moreover, its engagement can be anticipated to *alter* the Arctic dynamics by the mid-century (Kauppila & Kopra, 2022). Against this backdrop, and given that Russia is the largest Arctic country, it is clear that Sino-Russo relations have decisive implications for the entire region's dynamic (e.g. Kirchberger et al., 2022). Yet, until now, rigorous futures-oriented studies mapping the alternative ways in which their changing relationship might affect Arctic politics have been missing – a particularly striking gap in the literature of the post-February 24 world. By treating the outbreak of the war as a major yet different watershed in all three scenarios, we ponder, in a pluralistic manner, various directions into which the Sino-Russo relations in the Arctic may develop and that way, shape the regional collaboration within the next 13 years.

To escape the business-as-usual trap that currently colours most Arctic scenarios with realist undertones, this study utilizes a futures research technique of backcasting, which encourages imagination and anticipation of great changes clearly different from what seems probable from today's vantage point (Tuominen et al., 2014). Implicitly, backcasting thus defies the attempts to *foresee* the future and offers a 'recipe for people who hate to predict' (Robinson, 1990). By using 2035 as the endpoint of our exercise, we build scenarios that constitute medium- to long-term futures in global politics. This way, we ponder sequences of events that have a considerable scope of time to unfold, and which are cognitively manageable for readers. In terms of data, we base this intellectual exercise on our previous Arctic research, related scenario work, and media materials.

Our argumentation proceeds as follows. Next, we introduce our five-step scenario-building methodology and theories that form the backbone of the alternative futures. Then, we review the Sino-Russian relationship in the Arctic and beyond and briefly introduce the geopolitical dynamics of today's Arctic. Next, we proceed to formulate the scenario endpoints by identifying the key elements of alternative Arctic futures in 2035. After that, we seek pathways – 'logical sequences of events' (Jantsch, 1967) – from 2035 to 2022, and present the scenarios in a narrative form. Finally, we conclude that the technique of backcasting is an empowering tool to discuss – and hopefully advance – desirable Arctic futures.

Methodological and theoretical framework

Our scenario-building approach is based on a futures research technique of *pluralistic backcasting* (Tuominen et al., 2014), which starts by defining several possible scenario endpoints and then constructs logical pathways from the future to the present. To cover cooperation-based futures only, we also drew inspiration from a specific backcasting method, *participatory backcasting from value principles*, whose very first step is to draft a set of minimum requirements that characterize all endpoints (Kauppila, 2018). This way we crafted an approach that produces a set of scenarios that all meet certain shared defining principles but which yet differ from each other in their actual

content. In formulating the endpoints and bridging the gap between the future and the present, we relied on the methodological insights of our previous study (Kauppila & Kopra, 2022), in which the particular backcasting method, in turn, was inspired, *inter alia*, by Tuominen et al. (2014) and O'Neill et al. (2020).

We implemented the scenario-building process in five steps. In Step One, we identified forces of change that may shape the futures of the Arctic collaboration and the Sino-Russo relations in particular by 2035. Without these insights, it would have been impossible to formulate the scenario endpoints in Step Two and Step Three: it was necessary to understand what could plausibly take place during the timeframe of the exercise. In Step Two, we defined collaboration and the shared commitment to climate change mitigation as the guiding principles of our scenarios, and in Step Three, we used the futures table method to build three alternative hypothetical futures of 2035. In Step Four, we 'worked backwards' (Robinson, 1990: 820) from 2035 to the present (2022) by pondering imaginary future developments that would 'signpost' (Bengston, Westphal & Dockry, 2020) the path from the future to the present. In Step Five, we turned the futures table and the signposts into narratives with immersive elements to facilitate 'mental time travel' (Cuhls, 2017).

To create a variety of scenarios for the Arctic collaboration of 2035 with a special focus on Sino-Russo relations, we relied on insights from three IR theories: realism, liberalism, and relationalism. These theories – or, rather, *families of theories* – offer coherent explanations for social change by suggesting alternative models of interaction between states. As we have suggested elsewhere (Kauppila & Kopra, 2022), together they form a nuanced and pluralistic take on global life. First, realism assumes that international politics is about struggles for (hard) power and hence the potential for conflict can never be avoided. Although diplomacy is an important tool in balancing states' competing interests, military force is the most important asset in a system of self-help; states rely on their own capabilities, especially in terms of military resources, in their attempts to maximize their national interests. In such a system, solidarist cooperation among states is rare, if not impossible (e.g. Mearsheimer, 2001). Second, liberalism assumes that human beings are perfectible and ideas matter in world politics. Liberalism is interested in both state and non-state agency in politics and economics and believes that states can cooperate – and it is indeed in their interest to do so to resolve wicked global problems (e.g. Keohane & Nye, 2012). Third, relationalism emphasizes the significance of establishing, maintaining, and sustaining actor-to-actor relationships by, for example, managing one's reputational profile (e.g. Kavalski, 2018). The Chinese faction of the relational school departs from inherently Eurocentric bias and collective memories of the postwar United States embedded in the mainstream IR theories (e.g. Qin, 2018), and thus offers a fruitful starting point for anticipating possible future developments with China at the core.

Building the scenarios

This section provides a step-by-step take on the process of building scenarios for the Arctic collaboration up to 2035 with a special focus on the Sino-Russo relations.

Step 1: Scanning the present: China and Russia in the Arctic and beyond

Today, three key megatrends – climate change, globalization, and power transition – make the future of the Arctic open to alternative developments (Kauppila & Kopra, 2022). As the outbreak of Russia's war in Ukraine has sadly demonstrated, the Arctic collaboration is not isolated from

global developments and tensions. Particularly, the seven other Arctic states paused their collaboration with Russia, the current chair of the AC, in early March 2022 as a form of critique of Russia's illegal military actions (Ministry for Foreign Affairs of Finland, 2022a). In early June 2022, however, seven Arctic states announced that they will resume the AC's important work on environmental protection and sustainable development without Russia's participation (Ministry for Foreign Affairs of Finland, 2022b). Moreover, Finland and Sweden applied for NATO membership in May 2022 – a clear signal of the changing security dynamics of the Arctic (e.g. Urban, 2022). As this paper elaborates on the future Arctic collaboration with a special focus on the Sino-Russo ties, this section reviews the key aspects of that relationship in the past and the present.

In the first half of the 1900s, socialist movements strengthened in Eurasia, and the Soviet Union (1922) and the People's Republic of China were established (1949). Despite the bilateral Treaty of Friendship, Alliance and Mutual Assistance (1950), the relationship between the newly founded socialist states was complicated due to Mao's distrust of Stalin, and his successor Khrushchev (Shen & Xia, 2015). In the 1950s and 1960s, the Sino-Soviet relations deteriorated due to different interpretations of Marxism-Leninism and Mao's 'manipulation' and exaggeration of these differences for domestic gains, and the two countries had political disagreements over the Korean war, the Sino-Indian border war, and the Cuban missile crisis, for instance (Li, 2012). What became known as the Sino-Soviet split continued until the 1980s, when Gorbachev sought to normalize the relationship. Yet, the Chinese were skeptical of Gorbachev's *perestroika* and *glasnost* policies, and the collapse of the Soviet Union was seen as a warning example of what could happen in China (Radchenko, 2014: 159–197).

Due to historical distrust, the relationship between China and Russia remains complicated. Driven by shared antipathy toward the West and NATO, however, they have organized bilateral naval exercises since 2012 (cf. Paul, 2019). On the one hand, Russia has welcomed China's increasing economic interests in the Russian Arctic; on the other hand, Moscow does not want to let China play a strong political role in its northern backyard (e.g. Sørensen & Kilmenko, 2017). Following Russia's illegal annexation of Crimea in 2014, however, Russia had to cope with economic sanctions that stopped Western cash flows to its Arctic energy and infrastructure projects: it turned to the Chinese and started to emphasize its pivot to Asia (e.g. Gabuev, 2016). In 2013, China National Petroleum Corporation invested in the Novatek-run Yamal Liquefied Natural Gas (LNG) Project, and in 2016, China Silk Road Fund also joined the scheme (Novatek, 2020a). Since China added its vision of the Polar Silk Road (冰上丝绸之路) to Xi Jinping's Belt and Road Initiative in 2017 (State Council of the PRC, 2017), the two countries have intensified their economic and scientific cooperation in the Arctic. For example, in 2017, Chinese companies joined the Arctic LNG 2 Project (Novatek, 2020b).

Since the late 2010s, the increasing great power rivalry between China and the United States has tightened Sino-Russo relations. In early February 2022, Vladimir Putin visited Beijing for the inauguration of the Winter Olympics and discussed a wide range of global issues with Xi Jinping. In particular, Putin and Xi released a joint statement reassuring that their strong partnership has 'no limits' and unveiled new deals on energy and wheat ~~imports~~. The Arctic was also explicitly mentioned in the document, which emphasized the devotion to intensify 'practical cooperation for the sustainable development of the Arctic' (President of Russia, 2022). In contrast to the West,

which very soon strongly condemned Putin's illegal invasion of Ukraine, China found it difficult to choose its side in the war, and emphasized 'objectivity' (e.g. Qin, 2022). While Putin's aggression was clearly a violation of Ukraine's sovereignty and territorial integrity – some of China's key foreign policy principles – China has criticized Western sanctions against Russia and Belarus (Xi, 2022). In line with China's rhetoric support for Moscow, many Chinese corporations continue their operations in Russia.

Step 2: Drafting the basic principles

In Step Two, we formulated rough frames that make our scenario endpoints/future states of 2035 different from what current business-as-usual scenarios would suggest. More specifically, we identified two conditions that all scenario endpoints should meet: 1) Arctic collaboration at least among the Arctic Eight (A8)[1] as a precondition, and 2) a shared interest and commitment to mitigate and adapt to climate change as a (pragmatic) primary driver for the collaboration.

In the spirit of the United Nations Charter, states have a general responsibility to cooperate and contribute to the solutions of common problems and to promote international peace and security, prosperity, and well-being (Perrez, 2000). Since the end of the Cold War, collaboration has indeed constituted the key organizing element of the Arctic, and environmental protection has lied at the core of it (e.g. Exner-Pirot, 2013). As the collaboration among A8 has stopped altogether due to Russia's war in Ukraine, they currently cannot fulfill this 'responsibility' at a regional level. This state of affairs does not only increase the risk of an outbreak of military conflict in the region but also makes the dealing with essential ecological and social problems, such as those of Indigenous communities living across the Sápmi, and the reduction of black carbon, very difficult, if not impossible. Therefore, the resumption of regional forms of collaboration constitutes a necessary condition for solving the key concerns of the Arctic. Notably, the general responsibility to collaborate does not entail *how* states should act or organize their relations and, therefore, drivers of collaboration vary from scenario to scenario.

Furthermore, we pondered what could plausibly enable the resumption of collaboration among A8, and more broadly, among the key Arctic actors. Climate change mitigation seemed the most likely driver for interstate collaboration in the future Arctic, where climate change proceeds much faster than in other parts of the globe and constitutes a critical security threat, causing 'extreme consequences for Arctic communities and local ecosystems' (Landrum & Holland, 2020: 7). Since the end of the Cold War, concerns over environmental degradation have already constituted a key driver of regional cooperation in the Arctic, as the mandate of the AC illustrates: the council focuses on sustainable development and environmental protection, and excludes military matters (AC, 1996). Simply put, the Arctic community would not start from scratch in terms of elevating climate change mitigation and adaptation into a cornerstone of collaboration, which could, in turn, plausibly spread to other contexts and that way reduce the risk of war. Most importantly, this functional basis for cooperation would also appeal to authoritarian states, such as China and Russia, who have pledged to pursue carbon neutrality by 2060 (cf. Russian News Agency, 2021; Xi, 2020).

Step 3: Constructing alternative futures with a futures table method

In Step Three, we organized different elements of our scenario endpoints into coherent wholes by utilizing the futures table method. Developed from a Field Anomaly Relaxation method (e.g.

Coyle, 2020), futures table is a basic matrix with variables (key uncertainties) on the vertical row and 'values' – alternative entries for variables – organized under a common denominator (here IR theory) on the horizontal row. Our futures table builds on the matrix created by Kauppila and Kopra (2022) and elaborates on the composition of regional life in the Arctic of 2035 from political, economic, and normative perspectives (Table 1).

Variable 1: The ethos of regional life

The ethos of regional life stems directly from the core tenets of those IR theories that each scenario endpoint reflects. In a realist Arctic of 2035, *competition* and *state survival* guide state behavior, whereas in a liberal scenario, *cooperation* is the order of the day: states collaborate extensively and not only to make selfish gains benefiting their government and nation. In a relationalist Arctic of 2035, states collaborate by returning favors in the spirit of *reciprocity* – or the Chinese idea of *guanxi*.

The nature of the Sino-Russo relationship in the Arctic of 2035 varies significantly depending on what the ethos of regional life is like. In the realist scenario, the primacy of competition and state survival means that although the bilateral relationship between the two Eastern powers may be tight, it is not necessarily based on genuine trust or even true like-mindedness. Instead, their partnership seeks to promote the survival of both authoritarian states but does not bind them together to advance anything that is beyond either side's immediate national interests. In the liberalist scenario, the Sino-Russian relationship is more cooperative, and the two countries seek to institutionalize Arctic forms of collaboration. In a relationalist Arctic of 2035, the Chinese and Russian Arctic actors – and especially the leading elites of both countries – have thick interpersonal relations which they utilize to seek trade-offs in Arctic economies and governance.

Variable 2: Regional power distribution

A realist Arctic of 2035 is characterized by *bipolar regional order*: the balance of power between the West and the East Arctic, i.e. the US-led camp and Russia. Due to the shared security risks caused by climate change, however, there are no military conflicts but states are bound to manage these risks together. In a liberalist Arctic of 2035, regional power is more *evenly distributed*: in addition to the US and Russia, also smaller Arctic states are influential in regional institutions seeking to facilitate cooperation on climate change mitigation, for instance. In a relationalist Arctic of 2035, *China's role* is *most decisive* due to its status as the largest greenhouse gas emitter and one of the largest economies, which gives it unrivaled leverage to participate in 'games of guanxi' (Solomon, 1995) in global climate politics and beyond. Yet the region itself is *multinodal*: it is a fabric of actor-to-actor networks whose nodes can be located either within or outside the geographic Arctic region (cf. Womack, 2014; Kauppila, 2022).

As for the Sino-Russian relations, the realist scenario pictures an authoritarian partnership motivated by shared antipathy against the West. Given the rather deep distrust between China and Russia, however, Moscow does not allow China to increase its political role in the Arctic. In a liberalist Arctic of 2035, regional power is distributed via institutions in which especially Russia, but potentially also China, bargain over the means and costs of climate actions. In a relationalist scenario, China's extensive leverage allows it to pave the ground for its authoritarian partner Russia's participation in Arctic governance.

Variables 3 and 4: The key value of regional life and the driver of climate change mitigation and adaptation

Each of the chosen IR theories suggests a distinct take on the key values that guide regional life: *national security* (realism), *individual liberty* (liberalism), and *value pluralism* (relationalism). These ideals explain why a shared effort to mitigate and adapt to climate change has emerged into a cornerstone of states' coexistence in each scenario. In a realist Arctic of 2035, *prevention of climate-related hazards* drives states' commitment to climate change mitigation: states realize that it is in their selfish interests to collaborate to prevent global ecological catastrophes that pose risks to national security. In a liberalist Arctic of 2035, *pursuit for human wellbeing* is a fundamental motivation for states to jointly advance climate change mitigation: it is realized that liberty of individuals is globally at stake if the effects of the climate crisis on humankind, nature, and the global markets cannot be mitigated. In a relationalist Arctic of 2035, actors advance climate change mitigation to facilitate *harmonious coexistence of civilizations*, on the condition that all states can engage in global life in a manner that manifests their individual and distinct foundational values.

As for the Sino-Russian Arctic relations, the realist key value of national security in the Arctic of 2035 implies the continuance of the business-as-usual path. In response to accelerating climate change, the Eastern powers maintain bilateral cooperation for broadly understood security reasons, especially to manage and adapt to climate-related hazards. A Sino-Russian relationship based on the liberalist value of individual liberty and the pursuit for human wellbeing, in turn, assumes that in 2035 health and social impacts of climate change are recognized in both countries. Although this may feel unlikely from the vantage point of today, we underline that democratization is not a necessary precondition for this kind of future to unfold: environmental awareness is already growing rapidly in China (e.g. Sternfeld, 2017), especially among the middle-class that is politically the most important group in the country. In the relationalist scenario, China and Russia do not necessarily share a common normative basis but they maintain that recognition of value pluralism – and not choosing sides based on normative arguments – gives them the most room to maneuver in international affairs, including in Arctic politics.

Variables 5 and 6: Key actors and regional governance

From the viewpoint of realism, states are the key actors in international politics at a global and regional level. Therefore, in a realist Arctic of 2035 *states possessing sovereignty over waters and lands above the Arctic Circle* constitute the key actors of Arctic collaboration. Motivated by the shared interest to prevent climate-related hazards and conflicts, the A8 are compelled to establish *bilateral and minilateral agreements* to manage geoengineering projects and other necessary means to mitigate the impacts of climate change. Although non-Arctic China is not formally included in all these minilateral arrangements, the country's status as the world's biggest carbon emitter means that it is often accepted as an observer. While liberalism finds the agency of states important, it also emphasizes the role of international institutions, corporations, and non-governmental organizations in global politics. In a liberalist Arctic of 2035, thus, key actors include *states (both Arctic and non-Arctic)*, *non-governmental organizations,* and *local communities*, whose cooperation to mitigate climate change is institutionalized with the establishment of *multilateral treaties* and

intergovernmental forums. Given the respect for liberal values, the voice of *Indigenous peoples* can be expected to be heard in those forums. Relationalism, in contrast, does not fully subscribe to the idea of Arctic/non-Arctic states, and, therefore, not only the *traditional Arctic* but also (geographically) *external actors* can be imagined to advance collaboration based on climate change mitigation at a regional context. *China's role* is *decisive:* given its unrivaled ability to mitigate climate change, China is powerful in those *formal and informal forums* and *actor-to-actor networks* in which Arctic affairs are debated.

As for the Sino-Russo Arctic relations, the realist scenario proposes that Russia seeks to collaborate with China whenever it is in Russia's own interests to get back up from its eastern partner: for Russia, China is either a key Arctic stakeholder or a non-Arctic country. In a liberalist Arctic of 2035, China and Russia contribute actively to the establishment and workings of regional institutional arrangements on climate change mitigation and adaptation, but their mutual collaboration is somewhat downgraded from its golden days since the newly-elected liberal government of Russia is, again, pivoting to the West. In a relationalist Arctic of 2035, in contrast, the Sino-Russian partnership is particularly influential putting together various informal actor-to-actor networks shaping regional dynamics.

Variable 7: Regional economic policy/ideology

In the spirit of self-help, states advance *protectionism* in a realist Arctic of 2035. Given their pursuit to prevent dangerous climate change, states invest in their domestic battery industry and non-fossil energy, and compete for critical minerals needed in green technologies. In a liberalist Arctic of 2035, a *mixture of liberal and welfare capitalist* economic policies is guided by the shared commitment to mitigate climate change, and companies seek to make profits via investments in low-carbon technologies and renewables needed for the green transition. Traditional livelihoods, virtual tourism, and scientific cooperation also play an important role in the diverse regional economy. In light of the strong global role of China and the participation of an equally authoritarian Russia in the relationalist scenario, the economy of the Arctic of 2035 is shaped by a *mixture of authoritarian, welfare and liberal capitalisms*. Especially the Chinese government uses carrots and sticks to guide its companies toward green practices and to develop sustainable Arctic technologies. Although reputational gains motivate all companies to mitigate climate change, they invest extensively in Arctic shipping, exploitation of natural resources and tourism.

As for the Sino-Russo Arctic relations in 2035, the realist scenario anticipates a marriage of convenience advancing both states' economic greed: more specifically, China's interest in Russia's LNG, minerals and shipping lanes via the Northern Sea Route, and Russia's dependence on Chinese Arctic investments. At the same time, the competition over critical minerals embedded in the Arctic Ocean's seabed intensifies, which inflames traditional distrust between Beijing and Moscow. In the liberalist scenario, Chinese and Russian companies collaborate in resource extraction, on the basis of market mechanisms that support investments in green growth. In a relationalist Arctic of 2035, Chinese and Russian companies collaborate to develop green technologies for Arctic shipping, for instance. For reputational reasons, the Chinese government allows its companies to collaborate only with those Russian companies that have a 'green label'.

Table 1. The political, economic, and normative foundations of the Arctic of 2035

Variable	**1. Realism**	**2. Liberalism**	**3. Relationalism**
1) The Ethos of Regional Life	Competition, state survival	Cooperation	*Guanxi*, reciprocity
2) Regional Power Distribution	Bipolarity	Multipolarity	Multinodality, China as a global superpower
3) The Key Value	National security	Individual Liberty	Value pluralism
4) The Driver for Shared Efforts to Mitigate and Adapt to Climate Change	Prevention of climate-related hazards	Pursuit for human wellbeing	Pursuit for harmonious coexistence of civilizations
5) Key Actors	Arctic states	Arctic and non-Arctic states, non-governmental organizations, Indigenous peoples	Non-Arctic (especially Chinese) and Arctic governments, companies
6) Regional Governance	Issue-specific bilateral and minilateral contracts	Intergovernmental forums, multilateral treaties	Informal and formal forums, actor-to-actor networks
7) Regional Economic Policy/Ideology	Protectionism	Mixture of liberal capitalism and welfare capitalism	Mixture of authoritarian capitalism, welfare capitalism and liberal capitalism

Step 4: Working backwards: Identifying key changes

In Step Four, we identified key changes that make each scenario endpoint plausible. Given the scale of change – an evolution from halted cooperation to the resumption of (all-encompassing) Arctic collaboration – suggested in our scenarios, we considered this task as the most important phase of the process.

To construct a plausible path that entails elements of the Sino-Russo relations and the Arctic dynamics in particular, we identified necessary and sufficient changes in Russia, China, and the

Arctic West, that is, the US-led A7. While we found it necessary that a *leadership change in Russia* would take place in all scenarios, the content and timing of this key event varied across our alternative futures. Although radical changes shaking the status of the current political elites and factions in China were not needed, we considered it necessary to imagine chains of events that explain why China-Arctic West-relations are functional enough in 2035 – given the growing mistrust that characterizes the current dynamic.

Scenario One (Realism)

- Notable Chinese investments in the Russian Arctic
- Levying of long-lasting Western sanctions on both Russia and China
- Emergence of a widespread (health) crisis caused by melting of the Arctic
- Signing of a Ukraine peace deal with concessions made by the Russian authoritarian government
- Establishment of bi- and minilateral forums of collaboration on climate change mitigation

Scenario Two (Liberalism)

- Withdrawal of Chinese companies from Russia
- Collapse of the authoritarian regime in Russia
- Radical reversal of Ukraine policy by a liberal Russian government
- Acceleration of China's greenification and rise into a global climate leader
- Intensification of Sino-Russian collaboration in more sustainable industries
- Establishment of new multilateral Arctic forums on climate change mitigation

Scenario Three (Relationalism)

- (Non-radical) leadership change in Russia
- Gradual resuming of business collaboration through China's active mediating role
- Growing climate-consciousness of the Chinese middle-class
- China's large charm offensive campaign
- China's rise into a global climate leader

Step 5: Writing up the scenarios: Narratives

In Step Five, we formulated narratives by writing up and integrating the futures table (Step Three) and the identified necessary changes (Step Four). Since scenarios are more than sums of their parts, it is only at this stage that the plausibility of each alternative future can be evaluated. Adding a

fictional component makes this task easier: by facilitating mental time travel, fictive immersion helps to forget the present reality that narrows one's cognitive ability to think beyond business-as-usual pathways.

Scenario One: Climate hazards? Not in our backyards!

The Arctic of 2035 is a theatre of fierce competition between the US-led Arctic West, Russia, and the rest of the world. Because the extreme temperatures and weather patterns make the Arctic livelihoods and operations very risky, Arctic countries have negotiated limited issue-specific bilateral and minilateral arrangements to manage geoengineering and other technology-driven efforts to hurriedly mitigate the impacts of climate change on their national security. Although an external actor in the Arctic, China – Russia's authoritarian partner, a technology superpower and the biggest carbon emitter in the world – is often invited to these negotiation tables, especially if Russia needs backup. Although more comprehensive collective mitigation strategies are rare and protectionist economic policies further limit the scope of their mutual collaboration, Arctic stakeholders seek to secure the survival of the state by investing in regional early warning systems and other means for the prevention and adaptation to climate hazards harming social stability in their respective countries. As the outbreak of an armed conflict would severely downplay these efforts, states take drastic actions to prevent the escalation of military tensions despite notable ideological clashes and tensions arising from resource extraction.

After Russia attacked Ukraine in the early 2020s, the relationship between the West, Russia, and China deteriorated sharply for many years. Due to long-term economic sanctions, the economy of Russia was close to collapse. Infuriating the West, Chinese state-owned companies made notable investments in the energy and mineral projects of the Russian Arctic to secure the supply of critical raw materials for the country's industry and military. Although the war did not spread to the Arctic, the new kind of Cold War period characterized by frequent hybrid influencing operations made all international collaboration, including the Arctic, very troublesome. While unprecedented heatwaves in both polar regions caused alarm among climate scientists, and local communities struggled with extreme weather events, governments were occupied with strengthening their military capabilities. In the late 2020s, however, a lethal virus – often called the 'Siberia virus' – unknown to humanity emerged from the thawing permafrost in northern Russia and tens of thousands of people died within a month. Recalling the huge economic and humanitarian losses caused by the prolonged Coronavirus pandemic in the first half of the decade, the Russian government had no choice but to make concessions to hostile operations started by their predecessors and invite their Arctic neighbors and China to discuss strict collective means to stop the emerging pandemic. After Russia signed a Ukraine peace deal and agreed to fund the reconstruction of Ukrainian society, issue-specific Arctic collaboration continued especially in the field of deep-sea mining and the reduction of black carbon. Some Western companies were also eager to resume their investments in Russia.

Scenario Two: Let humankind enjoy green prosperity and peace

Driven by a shared goal to advance human well-being in the face of a pressing climate crisis, the Arctic collaboration of 2035 is characterized by the spirit of multilateralism among the Arctic and non-Arctic states and non-governmental organizations. The willingness to mitigate climate change underpins vivid political and economic cooperation in many newly established intergovernmental forums, economic platforms, and other institutional arrangements. Local Arctic communities, and

especially Indigenous groups, enthusiastically seek to get their voices heard in public debates about desirable political and economic means to reduce emissions. As the Chinese government pursues global climate leadership as a key component of its status as a responsible great power, and the Republic of Russia's newly elected liberal majority government seeks to consolidate its relations with the rest of the world, Beijing and Moscow also actively contribute to these discussions. Both seek to introduce their best practices to other Arctic states, with whom they have well-functioning economic relations. All in all, social norms related to climate change have instigated a global 'we-feeling' and shared understandings of the urgency to protect humankind from ecological crises.

While Russia's attack on Ukraine stopped Arctic collaboration for a few years in the early 2020s, the situation started to normalize in the mid-decade with an uprising and the collapse of the authoritarian regime in Russia. A central driver for these developments was a large-scale withdrawal of Chinese companies from economic collaboration with Russia, motivated by their fear of Western sanctions and security concerns. This not only closed the door on tourism but also stopped the flow of luxury products for Russian elites. To respond to the vocal demands of elites to get back to their consumption-based lifestyles, the new government sought to normalize its international relations as quickly as possible. Therefore, they agreed to establish the International Criminal Tribunal for the Ukraine War to investigate and prosecute suspects for the genocide. Deeply concerned about the projected impacts of climate change on China's food security and societal stability, the Chinese government intensified its active measures toward green transition and, by the end of the 2020s, sought climate leadership at a global level. In the Arctic, the Chinese companies never resumed their participation in Russian fossil energy projects but the two countries looked for opportunities in Arctic science, renewables industry, and tourism, and in the extraction of critical minerals needed for green transition. To respond to global concerns over the future of the melting Arctic, the *Global Arctic Forum* was established in the early 2030s to coordinate scientific, political, and economic efforts toward just green transition.

Scenario Three: Snow dragon's charm offensive

The Arctic collaboration of 2035 is characterized by the strong role of China, a country with the most to offer in the games of guanxi in a world of climate crisis. It uses its economic leverage and unrivaled ability to shape the implementation of climate change mitigation efforts as a currency in its relations with all Arctic states, sometimes to secure the inclusion of its authoritarian partner Russia, the largest Arctic country whose collaboration with the West is still somewhat plagued by the disastrous wars of the 2020s. Generally, Arctic stakeholders make their foreign policy choices on regional affairs less on normative but more on functional grounds: this makes it possible to coexist in a world of value pluralism. Although the shared interest in climate change mitigation has brought all key actors together to the same Arctic table, enabled East-West collaboration in formal and informal forums and actor-to-actor networks, and mitigated the risk of an Arctic war, clashes of values and related occasional tensions between the authoritarian and democratic states – and even among them – cannot be avoided.

After a successful but not radical leadership change in Russia in the context of the early 2020s war in Ukraine, limited business collaboration between the Arctic West and East gradually resumed. China's mediating role was crucial, as the country's companies collaborated with both sides throughout the process. Although the 'neutral' stance on Russia's war in Ukraine had deepened the damage to China's already questionable reputational profile, the country managed to prevent

an outright collapse of its overseas public image in the Arctic: in the mid- and late-2020s, it carried out an unprecedented charm offensive, a massive ecotechnology campaign *Green Innovation 2030* (绿色的创新2030) targeted at small Arctic communities and developing countries, which updated China's panda diplomacy to the age of the climate crisis. Domestically, China's ever-growing middle-class became more conscious of the health, economic, and social impacts of climate change, and consequently, put pressure on the government, which soon emerged as a global leader in the war against climate change. In the early 2030s, the new-found climate leader China was able to bargain and pave the ground for its authoritarian partner Russia to return to forums of Arctic governance, which, by then, were primarily organized around climate change-related norms.

Conclusion

In a response to Russia's war in Ukraine, the seven other Arctic states have concluded their (environmental) cooperation with Russia. When peace in Ukraine will be re-established, Arctic interstate cooperation must be resumed. Otherwise, the future of the Arctic may be catastrophic given the accelerating pace of climate change, looming health security crises, and other risks whose tackling requires all-encompassing collaboration, including advancing Indigenous rights. We have anticipated three alternative sequences of events through which extensive Arctic collaboration could resume by 2035. We have focused, in particular, on the role of the Sino-Russo relations in this process since it constitutes one of its key driving forces.

To understand the potential for a regional transformation in a rigorous, analytical and pluralistic manner, we utilized a backcasting-based scenario methodology, which allows for radical changes to be imagined and their plausibility to be tested by pondering whether – and how – they could actually unfold. Although this approach can produce a wider variety of scenarios, and perhaps more optimistic ones, it is important to underline that not all *paths* leading to Arctic futures with resumed collaboration are desirable themselves: sometimes a change for the better is not possible without drastic actions, crises, and shocks that themselves are undesirable. In this exercise, especially Scenario One has highly undesirable elements.

Ultimately, this article is an effort to facilitate peaceful future coexistence in a region that has once been considered a rare international zone of peace. The future is not predetermined but something that human actions profoundly shape – even if its course seems grim and coloured with shades of gray only.

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Notes

1. Canada, Denmark via Greenland, Finland, Iceland, Norway, Sweden, Russia, and the United States.

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