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Worldmaking on shifting ice: Chinese and Indian cultural geographies of Antarctica

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Research Article

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Abstract

This article examines the parallel yet divergent histories of India's and China's Antarctic programmes, exploring their geopolitical, scientific, and cultural dimensions. Both nations, initially excluded from the Western-dominated Antarctic Treaty System (ATS), joined in the 1980s, marking a shift in their approach to the southern polar region. India, driven by post-colonial solidarity and environmental concerns, has focused on scientific research and conservation, while China has expanded its activities to include resource extraction and satellite surveillance, aligning with Russia to influence ATS policies. Both countries have leveraged their Antarctic presence to reinforce civilisational narratives—India's *Akhand Bharat* and China's *tian xia*—extending their cultural and geopolitical spheres. This article highlights their shared ambivalence towards ATS governance, their evolving strategies, and the role of Antarctica in their broader worldmaking projects. It argues that understanding these intertwined histories is crucial for addressing the conceptual clash between Global North-led environmental restrictions and Global South approaches to common resources, with implications for global climate and environmental governance.

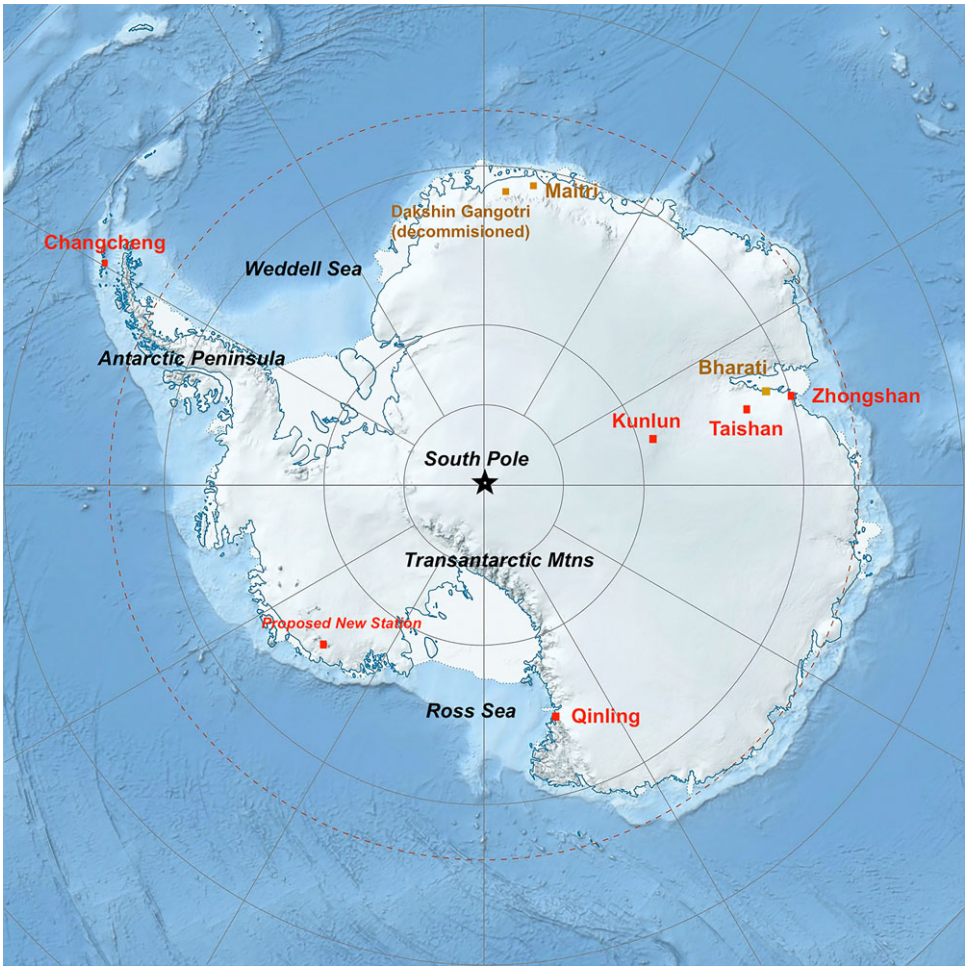
Article

On 6 December 1981, the Norwegian icebreaker *Polar Circle* quietly left Goa, India, carrying the 21 scientific and military members of India's first Antarctic expedition, Gangotri 1. The Indian government, not yet part of the Antarctic Treaty System (ATS), kept the expedition covert. Members were instructed not to reveal their destination to anyone except their immediate families, and there was no official farewell. They sailed south via Mauritius and sighted Antarctica on 2 January 1982. By then, the Indian government had informed ATS members about the journey, and a diplomatic storm was swirling. India, a leader of the Non-Aligned Movement (NAM), declared the expedition a triumph for the Third World[1] (Agnihotri, 2002). The British science magazine, *New Scientist*, captured the restrained fury of Western nations at India's perceived impudence with one headline: "Indians quietly invade Antarctica" (Agarwal, 1982).

While Indian politicians managed the diplomatic fallout, the expedition got to work. They established an uncrewed weather station, mapped Queen Maud Land's coastline and discovered an uncharted oceanic mountain off its coast. They named the mountain "Indira" to honour their most prominent supporter, the Indian Prime Minister, Indira Gandhi. Supply issues shortened the expedition, but with Gandhi's backing, they returned the following year. By India's third expedition in 1983, it had joined the ATS and that year established India's first permanent Antarctic station, Dakshin Gangotri. Ice disabled Dakshin Gangotri six years later, and they replaced it with a new station, Maitri, which they built further inland. They maintained this single base until the 2010s, when they began to expand their activities. In 2012, they built the controversial Bharati Station in the Larsemann Hills (O'Reilly, 2011). In 2023, they announced an India–Russia collaboration to build multiple icebreakers (Linganna, 2023), and in 2024, planned to replace Maitri with a larger Maitri II (Jayaram, 2024) (see Map 1).

Three years after *Gangotri 1*, on 20 November 1984, China's first Antarctic expedition departed from Shanghai. The Chinese government, which had joined the ATS before finalising the expedition, dispatched 591 personnel, most of whom were construction workers, and held an elaborate ceremony to send them off. The expedition travelled aboard two government-owned ships, the *J121* icebreaker and *Xiang Yang Hong* 10. Its mission was to build a permanent, year-round station, Changcheng (Great Wall), on the Antarctic Peninsula (see Map 1), but as *Xiang Yang Hong 10* was not an icebreaker and needed to leave the polar region before winter ice trapped it, they had only one summer to complete the station. After working fourteen to sixteen-hour days, they finished it on 20 February (Chen et al., 2017). Four years later, in 1989, the

[1]The article uses the term "Third World" in its historical context, as the term with which China and India identified themselves until the end of the Cold War. It uses the term "Global South" to refer to post-colonial countries after this time.



Map 1 Chinese and Indian Research Stations in Antarctica. Chinese stations are marked in red. Indian stations are marked in brown. Map adapted from ATS base map by the authors.

Chinese Antarctic Programme built a second station, Zhongshan, near India's Bharati base. Like India, they maintained but did not expand their programme in the 1990s. They built their next summer base, Kunlun, in 2009, inland from Zhongshan, and have expanded exponentially since then with another base, Taishan (2014), then Qinling (2024), a year-round base in Eastern Antarctica and – in 2025 announced that they are building a sixth summer base in Marie Byrd Land (Gibson, 2025) (see Map 1). China's polar programmes also operate four icebreakers, are finishing a fifth and are developing new-generation Polar Class Two ships capable of year-round operation (Eiterjord, 2025).

Although some Southern Hemisphere, Global South countries – South Africa and several South American nations – have Antarctic bases, India and China are the only Global South, Northern Hemisphere nations with permanent bases in the Antarctic. Most previous studies of the Indian and Chinese Antarctic programmes have focused on instances where they disrupted the polar region's geopolitical order: India's 1950s destabilisation of the ATS status quo (Chaturvedi, 2013; Dey, 1991; Joyner, 1990; Howkins, 2008), and their controversial 2014 decision to establish a new base in a planned Antarctic Specially Managed Area (ASMA) (O'Reilly, 2011), as well as China's growing influence in the twenty-first century (see, e.g. Andersson, 2021; Bergin & Press, 2020; Brady, 2017; Buchanan, 2024; Jiang, 2022). This article takes a different approach in multiple ways.

Its first departure from these other studies is the sources it examines. These include English, Chinese and Hindi language government statements, media reports, opinion pieces, partisan scholarship and memoirs focused on the Antarctic. Drawing on insights from these materials, the article offers a comparative analysis of the two countries' Antarctic engagements, tracing their parallel trajectories over time rather than focusing solely on moments of friction with Western interests. This extended analysis demonstrates how underlying cultural geographies have shaped China's and India's programmes, and how their spatial imaginaries differ from those shaping the continent's Anglosphere, African and Latin American programmes (see, eg. Antonello, 2019; Howkins & Lorenzo, 2019; Lavery, 2019; Roberts, et al., 2016).

The article's comparative, long-term, cultural analysis of multilingual sources reveals a recurring theme: Chinese and Indian ambivalence towards Antarctica's Western-dominated governance systems. This ambivalence persisted over decades as the two countries' discourses evolved through four distinct phases: Third World self-representation (1950s–1960s), balancing resource access and environmental protection (1970s–1990s), scientific progress (1980s–2000s) and geopolitical reimaginings (2010s–2020s).

The two countries' antagonism towards the Antarctic governance system took shape in the 1950s, as each sought to assert its leadership among non-aligned "Third World" countries. India

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pursued this criticism through the 1960s, while the Chinese state focused on perpetual revolution. In the 1970s, China re-entered global debates, and both countries joined NAM calls for the ATS to reclassify Antarctica as a global commons, granting Global South countries access to its resources. Although both acquiesced to the ATS in the 1980s, their subsequent economic growth has only intensified their need for polar resources, and their growing global influence has enabled them to articulate this need more forcefully. In 2024, for example, India hosted the 46th Antarctic Treaty Consultative Meeting in Kochi under the banner *Vasudhaiva Kuumbakam* ("the world is one family"), invoking a shared inheritance (Kakodkar, 2024). In 2017 at the United Nations (UN) in Geneva, China's President Xi Jinping was more direct, outlining China's plans to explore "strategic new frontiers" (*zhanlue xin jiangyu*) – the deep sea, outer space, cyberspace and the poles – which he insisted were "humanity's common heritage" (*renlei mingyun gongtongyi*) (Tsang & Cheung, 2023).

The other side of their ambivalence is their stated and enacted willingness to operate within the ATS and the wider Western-led global political and economic system, despite their colonial histories. This has produced a paradox in which Chinese and Indian representations of Antarctica in the late twentieth and early twenty-first centuries – portraying it as a new frontier for heroic exploration, resource extraction and geopolitical power – uncannily echo the imperialist narratives European powers used to describe their exploits in Asia during the nineteenth and early twentieth centuries.

Although they have both expressed frustration that their status as "latecomers" has limited their influence in Antarctic governance, their diplomats and administrators have helped shape Antarctica's governance frameworks (He, 2016; Jayaram, 2024). Their Antarctic programmes have enabled their scientists to pursue scientific breakthroughs and their engineers to develop dual-use technologies with strategic significance, including independent satellite navigation systems. China has already used its Antarctic bases to establish the BeiDou Navigation Satellite System, which can operate independently of the United States (US) military-owned Global Positioning System (GPS) (Buchta et al., 2025). India only operates a regional satellite navigation system but plans to extend it by establishing an Antarctic base (Kasat & Hari Krishna, 2022).

These technological achievements carry particular significance for two nations seeking to challenge a persistent colonial slur, formulated and even legislated in the nineteenth century, which insisted that they were technologically backwards and, therefore, "uncivilised" (Stroikos, 2020). Yet again, they are not seeking to dismantle this colonial paradigm's enduring hierarchy of knowledge and scientific achievement, but to improve their own positions within it. Along with the evidence of their impulse to extract from Antarctica, their pursuit of heroic (scientific) discoveries supports Roberts and Mancilla's (2024) argument that enduring colonial logics underpin the Antarctic system. We argue that this logic has also ensnared the globe's two largest self-identifying anticolonial states.

We also show that, since the 2010s, the Antarctic programmes of these two states have been integrated into developmentalist frameworks that move beyond postcolonial redress, serving instead as platforms for parallel worldmaking projects. These projects have extended the ideas of China and India temporally and geographically, constructing unified civilisational narratives with longer-than-colonial histories and extended geopolitical spheres. The Indian concept of *Akhand Bharat* (Greater India), like much of its foreign policy, is regional, focusing on the Indian Ocean zone while China's conception of *tianxia* ("all under heaven") reflects its globalism. This article explores Antarctica's role in these frameworks, arguing that polar programmes function like civilisational positioning systems – analogous to GPS – reorienting cultural and geopolitical perceptions. This cultural positioning works in two directions: extending national maps southward and asserting symbolic claims on the continent through naming, policy, media and personal narratives. This shift from historical reckoning to worldmaking has not erased but enhanced the ambiguity in Chinese and Indian discourses on Antarctica. Neither country has backed away from its assertions that Global North-led institutions like the ATS need to become more inclusive, but they do not agree on how this should be done. As the article highlights, India has adopted a more conciliatory and multipolar stance in both its foreign policy and its collaboration with other countries in the Antarctic, in contrast to China's assertive efforts to position itself as a great power.

The other conceptual argument this article makes is to connect this ambiguity towards Antarctica with the multidirectional essentialisation that proliferates in both Chinese and Indian worldmaking and discourse on Antarctica. We understand this essentialist discursive tendency to be conceptually linked to Antonello's (2016) observation that Antarctica is often presented as a singular entity, rather than a complex network of places. Just as Antarctica is often presented as a singular continent or a generalised global commons, it also represents a space in which Indian and Chinese nationalists can essentialise theirs and other nations, and in which their countries, in turn, continue to be essentialised as "threats" in other conversations.

Representing the Third World (1950–1970)

Comprehending China's and India's approaches to Antarctica begins with recognising how colonial legacies and historical memories have shaped their environments, societies, cultures, and politics. Colonisation, perpetuated primarily by the British in India and various European states and the Japanese in China, brought many humiliations. One of the most enduring of these was the transfer of wealth to the colonists. As multiple Chinese and Indian commentators on the Antarctic have noted (Wang, 2024; He, 2016; Jayaram, 2024), this wealth transfer directly funded polar exploration and enabled European and Japanese explorers, sealers, and whalers to begin exploiting this remote *terra nullius* ("nobody's land"). And, as the colonies were part of a newly globalised imperial trading system, goods that the whalers and sealers extracted from the Antarctic were sold in Shanghai and Madras (Basberg & Headland, 2008).

Alongside wealth extraction, colonists imposed an international order that debilitated Indians, Chinese, and other colonised peoples. This order exported European ideas of "nation" and "race," and imposed a global hierarchy of peoples based on the perceived "natural" hierarchies within them. Industrial technology became a key marker of progress, and nineteenth-century laws classified nations as "civilised," "barbarian," or "savage" depending on the visibility of their industrial technology. Through "techno-scientific orientalism," Europeans promoted the idea of science as a universal civilising force, suggesting that non-Europeans could attain modernity by developing of science-based technology but strictly controlled access to science's elite, European core (Stroikos, 2020).

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The structures of techno-scientific orientalism were evident during the First International Polar Year (IPY, 1882-83), when a European and US scientific consortium invited colonised nations to aid but not participate in their global pursuit of polar knowledge (Tammiksaar, Sukhova & Lüdecke, 2010). The Qing and Japanese imperial courts made minor monetary contributions; Western scientists coordinated geomagnetic research from within China at Sheshan (Tang, 2022). This first IPY not only displayed the established global techno-civilisation hierarchies but also how much those excluded sought entry to its core. The newly established Indian Congress urged explorers worldwide to undertake Antarctic expeditions (Yao, 2021), and the Japanese explorer Shirase Nobu (1861–1946) was inspired to join the race to the South Pole. Appealing to the Japanese parliament for funds to join the race between Norwegian Roald Amundsen and British Robert Scott, Nobu said, "The powers of the world ridicule the Empire of Japan, saying we Japanese are barbarians who are strong and brave in warfare, but timid and cowardly when it comes to the realm of science" (quoted in Stevenson, 2011, 160).

Though the parliament denied him funding, he raised support independently and set off for Antarctica. Unfortunately, he was delayed in Australia for a year, and did not reach the Antarctic until the race for the South Pole was over, but he and his team did travel to and carry out scientific experiments on Antarctica (Stevenson, 2011). Along with their post-World War I humiliation in the Treaty of Versailles (Stevenson, 2011), this hesitation to expand their Empire into Antarctica represents another example of Japan's difficulty entering the European techno-nationalist core in the early twentieth century.

As Chinese scholars repeatedly mention in their histories of the Antarctic (Wang & Wang, 2021; Wang, 2024; He, 2016), European countries had no such qualms. Britain, France, and Norway relied on the "principle of effective occupation" from the Scramble for Africa to justify their claims on the southern continent (Howkins, 2017; Wang & Wang, 2021). Chile and Argentina cited Papal rulings legitimising Spanish and Portuguese colonisation, and the British relied on their imperial realms in the Southern Atlantic to counter the South Americans' claims (Turchetti et al., 2008; Howkins, 2016; Dodds & Collis, 2017). By 1942, these nations, along with Australia and New Zealand, had delineated around eighty per cent of Antarctica, bolstering their claims by supporting year-round "colonising" research and whaling stations (Roberts & Mancilla, 2024; Dodds & Collis, 2017). After these nations had mapped and claimed the Antarctic, they turned their attention towards its scientific investigation. The Second IPY (1932–33) aimed to expand Antarctic research, focusing on meteorology and the jet stream's global impact. However, the Great Depression and the threat of war hindered their expeditions. Research within the Antarctic Circle was limited, and the data collected was not processed until after World War II (Laursen, 1949).

By then, global geopolitics had been profoundly reshaped. Former allies, the US and the Soviet Union, led opposing Cold War blocs but managed to collaborate to encourage a global wave of decolonisation. India and China were among its first beneficiaries. After decades of Indian protests against British rule, Britain gradually withdrew from India, beginning in the early 1940s, allowing it UN membership in 1942, and independence in 1947, under the leadership of Indira Gandhi's father, Jawaharlal Nehru (1889–1964). Three years later, in January 1950, partitioned and devastated, it became a republic. China's post-war transformation was equally traumatic. The civil war between the Republic of China (RoC) and the Communist Party resumed after World War II, ending with Mao Zedong's founding of the People's Republic of China (PRC) in October 1949. Despite the RoC's defeat and exile in Taiwan, the US held the UN "China seat" for the RoC, including a position on the Security Council. Nehru refused India's seat on the Security Council in solidarity with the PRC (Roy, 2018).

Despite intense post-colonial challenges, both the PRC and the Indian Republic pursued leadership in global politics. The PRC joined the Soviet bloc, but Mao also sent his deputy Zhou Enlai (1989–1976) to the 1955 Asia-Africa Conference in Bandung, Indonesia, which launched the NAM. NAM nations, which called themselves "the Third World," were unaffiliated with either Cold War bloc. China's relationship with NAM was complicated by its alliance with the Soviets, but Nehru became their unofficial leader, shaping India's foreign policy around NAM's principles (Chaturvedi, 2013).

While both nations promoted post-colonial solidarity, they also claimed the vast territories they inherited from their colonial predecessors and aggressively territorialised the lands of minoritised nations within their borders. In 1962, their overlapping territorial claims in the Himalaya led to war, finally severing their tenuous NAM solidarity (Guyot-Réchard, 2016). These dual legacies—colonial subjugation and imperial expanse—positioned them as the two most influential nation-states in the Third World, two of only a few nations able to challenge Western and, to a lesser extent, Soviet hegemony.

While the Indian and Chinese people founded new states, Cold War geopolitics reshaped Antarctica. This process started in 1946, when the Soviet Union claimed Antarctic rights based on a Russian imperial General, Fabian von Bellingshausen's 1820 sighting of the continent (Dodds, 2018). Five years later, in 1951, Australia and New Zealand demanded Japan renounce future claims to Antarctica in its Peace Treaty with the Allies, and Antarctic claimants began using permanent research bases like frontier outposts to strengthen their territorial claims. "Substantial scientific activity," which required technological and economic strength, became the most widely accepted reason for an Antarctic presence (Dodds & Collis, 2017). The British used it to support their territorial claims against Chile and Argentina in the South Atlantic, suggesting their scientific approach to Antarctic governance was superior to the South Americans (Howkins, 2017). Speaking for many NAM countries, India voiced concerns that these geopolitics reflected Western imperial values and would make Antarctica a Cold War zone (van der Watt & Swart, 2016; Yao, 2021). In 1956, its permanent representative at the UN, Arthur Lall (1911–1998), proposed a debate about Antarctica in the UN General Assembly, citing fears of nuclear testing and Antarctica's "considerable strategic, climatic and geophysical significance" (quoted in Chaturvedi 2013, 305).

Rather than permitting the debate, Western and Soviet powers launched the third IPY, renamed the Geophysical Year (1957–58), with Antarctica as its focus. Australia, the US, France, Belgium, and Japan established new Antarctic bases, and apartheid South Africa built a sub-Antarctic base (van der Watt & Swart, 2016). India made a modest contribution to several scientific projects, but its activities did not extend to Antarctica (Dey, 1991). The US blocked the PRC's proposal to send a team, instead favouring RoC participation. PRC activities were limited to collecting domestic comparative data, echoing the Qing's contribution to the first IPY (Wang & Zhang, 2010; Tang, 2022). Following this research, the Antarctic powers formed the Scientific Committee on Antarctic

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Table 1. List of Parties to the Antarctic Treaty System. (Secretariat of the Antarctic Treaty 2024 and United Nations 2022).

Consultative Parties	Non-Consultative Parties
Global North: Australia, Belgium, Bulgaria, Czechia, Finland, France, Germany, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Spain, Sweden, United Kingdom, and United States (17)	**Global North**: Austria, Canada, Denmark, Estonia, Greece, Hungary, Iceland, Monaco, Portugal, Romania, San Marino, Slovakia, Slovenia, and Switzerland (14)
Economies in Transition: Russian Federation and Ukraine (2)	**Economies in Transition**: Belarus and Kazakhstan (2)
Global South: Argentina, Brazil, Chile, China, Ecuador, India, Republic of Korea, Peru, South Africa, and Uruguay (10)	**Global South**: Colombia, Costa Rica, Cuba, Guatemala, Democratic People's Republic of Korea, Malaysia, Mongolia, Pakistan, Papua New Guinea, Türkiye, and Venezuela (11)

Research, which became the "primary knowledge broker" for Antarctic activities (Chown et al., 2024).

India tried to revive the Antarctic debate at the UN in 1957, but claimant countries Chile and Argentina—aligned with the US—blocked it and distanced themselves from NAM. Indian officials altered their petition, allowing Antarctic claims to stand so they could gain Chile and Argentina's potential support, but this did not work (Chaturvedi, 2011; Dodds & Collis, 2017). Instead, the US invited Chile, Argentina, the Soviet Union, and nine other countries it considered to have scientific interest in Antarctica (Australia, Belgium, France, Japan, New Zealand, Norway, apartheid South Africa, and the United Kingdom, see Table 1) to negotiate the ATS in Washington (Howkins, 2008; Chaturvedi, 2013). The Soviets requested India's inclusion, but the Americans refused (Yao, 2021).

The Antarctic Treaty demarcates Antarctica and regulates polar activities. It "freezes" territorial claims—though the US and Soviet Union reserve future rights to make them—and forbids militarisation. It encloses Antarctica as a "zone of peace and science," where only "rational use" of both biotic and abiotic resources is allowed (Haward & Cooper, 2014). As Joanne Yao (2021, 996) states, the ATS is "often celebrated as a model of international cooperation through scientific research" but has also been widely criticised for using "science as a hierarchical tool of exclusion." Echoing nineteenth-century imperialist hierarchies, it creates a core group of elite "consultative" countries with the economic and logistical means to perform science in its restricted zone. Its requirement of a "substantial contribution" to Antarctic science—understood as a permanent base—to join this group has proved too high a barrier for most Global South countries. Moreover, as He Liu (2016) points out, the logic underpinning this governance structure is deeply flawed. Only allowing nation-states to become consulting countries by building bases encourages all of them to build a base, which is both logistically untenable and environmentally devastating. The ATS founders clearly never intended to make access to the continent as open as their treaty claimed. In practice, ATS members continued to use science to undermine ex-colonies' Antarctic interests. For instance, when India warned that nuclear testing in Antarctica might affect the weather, the British dismissed the claim as "scientific rubbish," telling India to "send scientists instead of making trouble" (Howkins, 2008, 39).

Neither China, India, nor any other NAM country had the means to establish an Antarctic base in the 1960s. Having lived through colonialism, they were preoccupied, as He (2016) explains, "achieving independence and feeding their people." China followed a revolutionary, state-planned development model that resulted in the disastrous Great Leap Forward and the Cultural Revolution (1966–1976). India adopted a planned economy, building large state-owned industries and pursuing the Green Revolution to increase food production. Despite these turbulent times, both nations remained committed to "modernisation" and continued to equate scientific achievement with national strength. They were also determined to "catch up" to their former colonisers (Stroikos, 2020).

Global Commons and Planetary Ecologies (1970s–1980s)

Despite or perhaps because of these challenges, both countries continued to advocate for the Third World in international negotiations related to Antarctica. In the 1970s, India led a consortium of NAM nations demanding that the new Convention on the Law of the Sea (UNCLOS) cover the Antarctic. After assuming the "China seat" at the UN in 1971, China joined these discussions (Westad & Chen, 2024). Led by China and India, the Global South countries negotiating UNCLOS aimed to designate the deep seabed and high seas as a "common inheritance of humanity" (Yao, 2021; Liu, 2020; Wang, 2024). These negotiations coincided with a broader Global South push to access Antarctic resources, including advocacy for the UN's Food and Agriculture Organisation (FAO), which had begun exploring Southern Ocean biological resources. At the 1976 FAO conference, Guinea challenged ATS consultative states, asking why the Southern Ocean's resources were not considered a global commons (Wang & Wang, 2021; Everson, 1978). Subsequently, India and China both adopted this idea of the Antarctic as a "global commons."

Ultimately, neither UNCLOS nor the FAO succeeded in dismantling the ATS. The ATS changed its protocols and focus, but many Global South commentators remained sceptical of its intentions. Wang (2024) describes the ATS reforms as them "pretending Antarctica was a global commons (*quanqiu gong yu*) but treating it as a *terra nullius*." Nonetheless, the dual challenges embedded the idea of a "global commons" in international discourse and transformed NAM-nations' attitudes towards international trade. It was also the first time independent India and China showed a concerted interest in accessing offshore resources.

Although Chinese and Indian economies pursued remarkably different paths to the late 1970s, their historical economies shared characteristics. Tasked with feeding the world's two most populous countries, their governments relied on planned economies. China's planned economy had been far more restrictive than India's licensing system, but the Chinese state was opening its economy earlier than India. India would only finish dismantling its restrictive system in the 1990s at the directive of the World Bank. Both post-colonial economies had also sustained the imperial periphery-core extraction model, drawing resources from their territorial edges to support their populations and political centres.

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China's enforced inclusion of minorities within extractive communist systems (Kinzley, 2018; Yeh, 2013) was more destructive than India's displacement of its Indigenous peoples' lands (Gergan, 2023), yet both territorialising projects were exploitative. Their 1970s interest in Antarctic and Southern Ocean resources marked an early extension of their extractive interests beyond their borders. From the late 1970s, both nations began seeking resources and markets abroad to support their populations and infrastructure development (Bhattacharjea, 2022), prompting a major shift in the global economy and accelerating ecological change.

India and China were by no means the first nations attempting to exploit the Antarctic and Southern Ocean. Imperial adventurers began extracting multiple mammal species from the region in the seventeenth century and decimated fur seal populations; these practices were so destructive that even the British Falkland Islands Dependencies banned the Southern Ocean sealing industry in 1909 (Hofman, 2017). Commercial "whale harvesting" surged from 1904, peaking between the late 1920s and the 1950s. For decades after it formed, the ATS did little to curb Antarctic extraction. Its only early environmental restriction banned nuclear activities, and this resulted from concerns about world peace rather than environmental protection (Antonello, 2019). By 1964, the ATS introduced some measures for the Conservation of Antarctic Fauna and Flora, but they were limited, banning loud sounds and flying aircraft near wildlife and insisting that dogs be restrained.

The balance between resource extraction and species protection shifted further towards extraction in the 1970s when the Soviet Union developed technology to harvest Southern Ocean Patagonian toothfish (*Dissostichus eleginoides*), Antarctic toothfish (*Dissostichus mawsoni*), and most transformatively, Antarctic krill (*Euphausia superba*). Krill became the Southern Ocean's most lucrative catch, and its conservation has remained one of the region's most urgent ecological issues (Antonello, 2019). Antarctic krill's main products, fish meal and fish oil, are highly nutritious and easily transportable, but this species underpins the Southern Ocean's ecosystem, providing food for other animals and fertilising the ocean with its shells. With an estimated biomass of 379 million tonnes, it is the planet's largest wild species by organic mass (Atkinson et al., 2009).

Scientists and conservationists responded with alarm to the Soviet fishing surge, adding their protests to some ATS members' ongoing concerns about whaling and sealing. However, the ATS's consensus-based structure slowed its response to the unfolding crisis. It adopted the Convention for the Conservation of Antarctic Seals in 1972, but only established a comprehensive fisheries management system during the 1980 negotiation (and 1982 enforcement) of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). CCAMLR stopped 1970s levels of overfishing but permitted the "rational use" of fish stocks (Rothwell, 1990). Managing whaling in the Antarctic took even longer, with the International Whaling Commission stakeholders only agreeing to a commercial whaling moratorium in 1982.

Indian and Chinese elites observed these 1970s developments from outside the ATS. Chinese scholars, intrigued by the debates, conducted their first research into Antarctica, noting how the Soviets' new fishing technology could increase food supplies (He, 2016; Wang & Wang, 2021; Wang, 2024). Tensions over Antarctica continued into the early 1980s when NAM, this time led by Malaysia, reintroduced "the Antarctica Question" to the UN. Malaysia's 1983 complaint echoed earlier Indian and Chinese critiques that the ATS served "the privileged few" (Dodds & Collis, 2017; Beck, 2006). Yet this time, China and India responded ambiguously to Malaysia's provocation: while indirectly supporting Malaysia's stance, they broke ranks with their Global South peers and joined the ATS. China joined in 1983 and became a consultative member in 1985. Despite concerns about the impact of its decision on NAM members, India joined in 1983 and became a consultative member the same year (Imam, 1982). Its accession raised suspicion among ATS members and disappointed its NAM allies (Dey, 1991). Following Malaysia's appeal, "the Antarctica Question" remained on the UN agenda for twenty-two years. The ATS collaborated with the UN Secretary-General to produce reports aligning its efforts with UN principles—initially issued annually (1983–1994), then biannually (1996–1999), and triennially (1999–2005)—until the question was removed from the agenda in 2005 (Beck, 2006). As this oversight continued, Malaysia also shifted its stance on the ATS. Like many other NAM members, it launched its own Antarctic Research Programme and became a non-consultative member in 2011.

While Malaysia and other NAM nations challenged the ATS at the UN, China, and India began to negotiate within it. Their entry preceded a new round of complex talks on Antarctic resource management, this time focusing on minerals. At the ATS's eleventh meeting in Buenos Aires (June 1981), disagreements over minerals governance led the members to form a committee to draft the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA). While the committee deliberated, India (1983), Brazil (1983), and China (1985) all gained ATS consultative status, and global attitudes towards Antarctic mining started to shift. Australia was the first to change its stance on mining, breaking the CRAMRA consensus, and calling for Antarctica to become a "wilderness park." An influential Greenpeace campaign increased the pressure, advocating for it to become a "world park." When the Exxon Valdez spilt oil in the Arctic in 1989, opposition to Antarctic mineral extraction grew even stronger. ATC consultative countries, including Belgium, France, and India, supported Australia's call for CRAMRA to be renegotiated (Jackson, 2021). India, which joined CCAMLR the same year it was granted consultancy status in 1985, was particularly effusive in its support for Australia's stance. However, documents suggest that longer-term ATS members doubted its motives, suspecting it still favoured a "commons" approach (Jayaram, 2024).

The ATS dropped CRAMRA and began negotiating a Protocol on Environmental Protection to the Antarctic Treaty (AEP). ATS members eventually signed the protocol in Madrid in 1991 (it is also called the "Madrid Protocol"), and it came into effect in 1998. The protocol did not establish Antarctica as a "world park," or even a "wilderness park," but it did designate it a "Natural Reserve, Devoted to Peace and Science" (Jackson, 2021). Article 7 prohibits activity related to non-research mineral resources, and Annexe V calls for a "systematic environmental-geographic framework" to identify areas for protection and management. It also requires stakeholders and other visitors to Antarctica to undertake environmental impact assessments and waste disposal.

Unlike their Indian counterparts, the Chinese government was reluctant to sign CCAMLR, only doing so under pressure in 2007 after it had been held primarily responsible for a spike in illegal fishing, particularly of krill, throughout the 1990s (Bergin & Press, 2020). While English-language studies, including those from India and China, have generally presented the Madrid Protocols as a historical positive, not all Chinese-language studies agree. Wang (2024), for instance, decries the "political correctness" of post-Protocol discourse, complaining that Antarctic mineral and

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resource development has rarely been raised since the Protocol's inception and seldom studied.

Despite outpacing its Western competitors in some environmental arenas, China's environmental record in the Southern Ocean has not been impressive. Since signing CCAMLR, it partnered with Norway to increase its krill extraction capacity within CCAMLR's "rational use" guidelines (Liu & Brooks, 2018). With growing demand—especially from China and India—the total krill catch has quadrupled since the early 2000s (CCAMLR Secretariat, 2023), and the Chinese share of the catch is growing. In the early 2020s, Norway still accounted for 63.2% of the Southern Ocean krill catch, but China's share had increased to 16.4%. Chinese-language opinion pieces in government-sponsored media outlets encourage Chinese fishery firms to exploit Antarctica's "oceanic gold mine" (*haishang jink uang*) (*Sohu.com*, 2024) and "blue granary" (*lanse liangcang*) (Yang, Wang & Wei, 2023). Along with this increase in krill production, Chinese state representatives have also worked with Russia to block the creation of new Marine Protected Areas (MPAs) in the Antarctic. ATS members have proposed a network of MPAs at every CCAMLR annual meeting since 2009. Only two have been approved: the South Orkney MPA (2009) and the Ross Sea MPA (2016). China and Russia blocked the approval of the Ross Sea MPA for five years from 2011, and only approved it after the protected area was reduced by two-thirds, and the total catch volume were left unchanged (Brooks et al., 2020).

In 2018, several ATS members proposed three new MPAs in East Antarctica, the Weddell Sea, and the Antarctic Peninsula. China and Russia blocked these proposals and have blocked them every year since, including in 2024, when the CCCAMLR meeting coincided with the mass deaths of emperor penguin chicks and news that a variant of avian flu had reached Antarctica (Amos, 2023; *The Guardian*, 2023). Multiple analysts attribute China's resistance to these measures to their reliance on Southern Ocean fisheries (Press, 2023). However, analyst Nengye Liu (2016) proposes a more historical explanation. He attributes it to an "anxiousness for commons," analogous to "cartographic anxiety" about borders, which views MPAs as a symbol of locked global commons, which the Chinese people may need in the future.

Joining the Elite Antarctic Club (1980s-2010s)

Along with contributions to ATS diplomacy and their eventual involvement in Southern Ocean fisheries, the Indian and Chinese accession to the ATC also enabled them to expand their on-the-ground Antarctic scientific activities significantly. Both nations had to develop their Antarctic scientific capabilities before sending expeditions to the continent. Prime Minister Gandhi personally facilitated the inclusion of Indian scientists on two polar expeditions, one led by Australia (1961) and another led by the Soviet Union (1971–73) (Dey, 1991). The Indian Emergency (1975–1977), during which Gandhi suspended democracy and ruled by decree, interrupted India's Antarctic ambitions, but she reignited them shortly afterwards. In 1981, she established the Department of Ocean Development (DOD), appointing herself as its first director, and authorised the "unauthorised" Gangotri 1 expedition. In the Lok Sabha, the lower house of the Indian parliament, she described it as "a proud moment for India [as] we were able to break the monopoly of the rich and developed countries over Antarctica" (quoted in Agnihotri, 2002).

India was still not a treaty member when the second Gangotri expedition spent 77 days in Antarctica during the 1982-83 summer. This expedition established a camp called Dakshin Gangotri and installed Intelsat telex and telephone links to India (Imam, 1982). Gandhi told the Lok Sabha that this was "one more proof… that Indian scientists and technologists have the capability to undertake the most hazardous and complex tasks" (Beck, 1983, 106). After India finally joined the ATS in 1983, it increased the programme's size and the duration of its expeditions. The third expedition set up an all-season base at Dakshin Gangotri, with several members wintering there, creating a permanent colony (Khadilkar, 2017; Beck, 1983). These scientists' memoirs reveal how demanding the programme was on India's resources; they faced cold, equipment failures, and health issues (Khadilkar, 2017; Qasim, 2019). However, the memoirs also convey a sense of nationalist and even globalist purpose. This dual sense of duty was also evident when the Indian Antarctic Programme's head, Sayed Zahur Qasim (1926–2015), outlined India's four main objectives for joining the ATS: (1) gaining access to the polar region's resources; (2) environmental preservation; (3) investigating India-Antarctic geophysical links, including the monsoon "from which [India] derives most of its fertility and energy"; and (4) "India's intention to project her own views as well as those of the non-aligned countries" (Qasim, 1983, 74–78). In 1988, the programme added a larger second research base, Maitri, which housed 25 people year-round and 40 in summer. At this base, it focused on climatological and geological studies, including drilling the Central Dronning Maud Land ice-core, data from which Indian scientists utilised to analyse the monsoon, the Southern Oscillation Index, and the El Niño Southern Oscillation (Walawalkar, 2005) (Figure 1).

After "invading" the continent on its first expedition, India's subsequent activities on the continent raised few complaints until 2006, when its announcement at that year's Antarctic Treaty Consultative Meeting (ATCM) that it intended to build a new base revealed ongoing cultural, if not geopolitical, divisions within the ATS. As Jessica O'Reilly (2011) outlined in her study of the 2006 ATCM, India wanted to build its new base in the Larsemann Hills because they held both geological and, controversially, cultural significance in India. The hills extend along a stretch of Antarctic shoreline that geological evidence shows was connected to India in the Gondwana supercontinent, around 96 million years ago. Geologists also believe that the headwaters of the Godavari River, which now flow through southern India, once descended from these hills. The connection to the Godavari was meaningful in India. This sacred river is also known as the Dakṣiṇī Ganga ("Southern Ganga"), a name connected to the programme's first base, Dakshin Gangotri, whose name means the "southern source of the Ganges." There were, furthermore, reasons Indians may have wanted to reclaim the name "Gondwana." "Gondwana" is a nineteenth-century British corruption of *Goṇḍavana*, which means "the forest of the Gonds." The Gonds are an Indigenous (or Adivasi) community from South India, in whose lands nineteenth-century geologists first found evidence of Gondwana. The colonisers named the continent for the Gonds because they regarded both this ancient continent and the Gonds as "primitive" (Chakrabarti, 2019). The Indian Antarctic programme did not, however, include this postcolonial context in its justification for the new base. Instead, its representatives focused on the geological connections between India and East Antarctica. Other, more established members of the ATS were unimpressed, especially those planning an ASMA in the Larsemann Hills. After complaining about India's ignorance of ATS processes and procedures, these countries eventually reached a compromise,

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allowing India to establish its next base, Bharati, in the Larsemann Hills in 2012 (O'Reilly, 2017). Bharati is still there, and can accommodate 47 people in winter, and an additional 25 in summer.

China's Antarctic programme developed during the same decade as India's, but from the outset, it followed a different trajectory with grander ambitions. Unlike the Indian government, the Chinese government operated within the ATS to establish its programme. Before launching its first expedition, it embedded thirty-five Chinese scientists in cooperative research teams across Antarctica and, in 1981, established the National Antarctic Expedition Committee (He, 2016; Brady, 2010). Its polar focus was part of a broader societal transformation in the late 1970s, after Mao's death. In 1978, China's new paramount leader, Deng Xiaoping (1904–1997), while committing the nation to reform and opening up, emphasised the role science and technology would play in the new China, acting as "the primary productive forces" (quoted in Zhang and Haward, 2022, 192).

After joining the ATS, the Chinese government established the Arctic and Antarctic Administration within the Ministry of Land and Resources. Unlike India's programme, China's was focused on both polar regions. Its ground activities also differed. While India struggled to maintain one Antarctic base during the 1980s, China built two that were twice as large: Changcheng (Great Wall) (1984) on King George Island, Western Antarctica, housing 25 people in winter and 40 in summer, and Zhongshan (1989), near Bharati, housing 25 people in winter and 120 in summer (*People's Daily*, 2023). These stations continued to operate at the same population levels throughout the nineties and into the 2000s without significant change (Chen, 2008), in what Chinese scholars of Antarctica call the "Consolidation Phase" of its programme. During this period, the programme continued conducting climatological, geological, and related studies, but did not actively promote its presence. This Consolidation Phase coincided with a broader Chinese foreign policy to "keep a low profile and make some contributions" (He, 2016).

Two events in the late 2000s changed China's broader foreign and Antarctic policy. The first, in 2007, was Russia planting a flag on the Arctic seafloor, claiming sovereignty over it (Dodds & Rowe, 2021). This drew Chinese domestic attention to polar affairs and encouraged their participation in the fourth IPY, which took place from 2007 to 2009 (Wang, 2024). During this IPY, China established a new summer base, Kunlun, near Dome A (or Argus), one of the continent's highest points. The second event that changed China was the 2008 financial crisis, which Chinese commentators view as a "historic shift in power" towards them (He, 2016) (Figure 2).

Along with several reorganisations of its administrative structure—which remains, according to multiple critics, too uncoordinated (Wang, 2024; Brady, 2017; Chen & Zhang, 2024)—Russia's flag planting and the West's financial woes combined to provide more support to China's Antarctic programme. The renamed Chinese National Antarctic Research Expeditions (CHINARE) launched its first large-scale ice-core drilling project near Kunlun in 2011. (It continues today, competing with other charismatic ice-core programmes such as Australia's Million Year Ice Core (MUSIC) and Europe's Beyond EPICA project.) Shortly after, the programme established another inland summer station, Tianshan (2014), and Xi Jinping travelled to Tasmania and New Zealand to sign agreements on Antarctic cooperation with Australia and Aotearoa (New Zealand) (He, 2016). The following year, the new National Security Law included polar security for the first time (Wang, 2024). This allowed money to flow to satellite navigation, upper atmosphere physics, geomagnetics, auroras, and infrared astronomy.

The programme received a further boost in 2017 when Xi Jinping used his UN speech in Geneva to announce that China's new foreign policy would focus on exploring "strategic new frontiers" (*zhanlue xinjiang yu*): the deep sea, outer space, cyberspace, and the poles. This new initiative was accompanied by increased funding for Antarctic research in China's fifth (2016–2020) and sixth (2021–2025) five-year plans (Andersson, 2021; Tsang & Cheung, 2023). The Chinese programme's growth continued into the 2020s, when they established the all-weather Qinling Station (2024) on Inexpressible Island in Terra Nova Bay, which accommodates 30 in winter, and an additional 50 in summer (Lei, 2024). The government expanded the project again in 2025, announcing plans to collaborate with Russia to drill Antarctica's deepest ice-core and to build another new summer station at Marie Byrd Land, near an abandoned Russian station, Russkaya (Gibson, 2025).

As their histories indicate, India's and China's Antarctic programmes have been closely linked to broader efforts to expand their technological and industrial capacity. Along with their Antarctic missions, these efforts have also developed their nuclear weapons and space programmes; they are two of only four nation-states to have successfully landed spacecraft on the moon. To achieve these ends, both governments have consistently fostered cultures that venerate science and engineering. Initially, these technological skills were portrayed as tools of postcolonial nation-building (Andreas, 2009; Sajjanhar, 2024). However, in the twenty-first century, in both countries, their two dominant nationalist leaders, Xi Jinping—who trained as a chemical engineer—and India's Prime Minister, Narendra Modi, have both promoted and been supported by "techno-nationalism." Modi relies on a large group of technically trained Hindu nationalist technocrats to support him (Sajjanhar, 2024), while Xi draws support from "red and expert" engineers and technocrats (Wijaya & Jayasuriya, 2024), including the growing number of engineers he has brought into the Chinese Communist Party's Politburo (Yu, 2023). Although both leaders draw on these technologist classes for support, the Chinese state's investment in technology vastly overshadows India's efforts, including in Antarctica. India continues to prioritise Antarctic scientific research and exploration and conducts annual expeditions to its bases. Its 2022 Antarctica Act aims to reduce its reliance on third-party equipment, buy a new research vessel by 2029, co-build icebreakers with Russia (Linganna, 2023), and construct a new base, Maitri II (*The Hindu*, 2024; Jayaram, 2024), but the program receives much less funding and support than China's programme. There are calls for it to encourage its fishing industry in the Southern Ocean—it is the second-largest importer of krill products after China—and, given its developed pharmaceutical industry, obtain bioprospecting—the systematic search for biological products from plants, animals, and microbes that can be produced commercially—licenses from the ATS. India has also increased navy patrols in the Indian Ocean because of concerns about Chinese activities (Sharma, 2023). However, none of this will expand its Antarctic programme beyond its current, mid-level status It is unlikely to catch up to China's programme.

Perhaps, the comparison between the two programmes is unfair. China's plans for Antarctica as one of its "strategic new

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frontiers" (*zhanlue xinjiang yu*) is, after all, unprecedented. Although the Chinese government does not state publicly that it aims to be a jidi qiangguo ("Polar Great Power") (Brady, 2017), it has indicated its intention to be both a great scientific power and influential in polar politics. These two ambitions feed into each other. It has, for example, invested so much in science and technology that many overseas-trained scientists—known as "sea turtles" (*haigui*)—have returned to conduct domestic research in fields such as ice-core analysis (Wu, 2024). It is particularly invested in developing its Arctic capacities through its Belt and Road Initiative (BRI) (Chen & Zhang, 2024), but it has also significantly stepped up its Antarctic research. President Xi Jinping has even demonstrated personal interest in the Antarctic programme, notably visiting the icebreaker *Xue Long* in Hobart, Australia, in 2015 (Perlez, 2015).

For some Chinese commentators, the poles represent another arena where China can compete with and surpass the United States. In this context, China positions itself as a counter-hegemonic force, a post-colonial "developing country" (Chen & Zhang, 2024) advocating for the "democratisation" of international relations and opposing the dominance of any single power (Tsang & Cheung, 2023). Competing with the US in Antarctica is difficult. Chen Yugang (quoted in Wang, 2024) argues that Antarctic state actors have five main strategic strengths in the Antarctic: territorial, security, scientific, economic, and symbolic strengths. He believes only the US possesses all five, but China can compete with the US by partnering with smaller, geographically adjacent countries such as Australia and Aotearoa (New Zealand).

China's emphasis on broad-based science and technological progress in its rivalry with the US is also noteworthy (Sorensen, 2024). The two trajectories of their scientific investment diverge starkly; China's government expenditure is increasing, whereas the US is shifting wealth into the private technology sector. Other Antarctic nations' concerns about China's ambitions focus on its governance structure: it is a party-state in which the military and civilian activities are integrated. These fears have intensified since the government introduced its "new national system" (*xinxing juguo tizhi*), a policy that strengthens military-civilian links to decouple China's economy from the US (Wijaya & Jayasuriya, 2024). These links have created international concerns about aspects of China's activities in Antarctica, such as satellite surveillance infrastructure at Qinling (Buchanan, 2024; Antonello, 2020), but there is limited evidence that these activities are environmentally harmful or more advanced than those of the US or Russia (Jiang, 2022).

India's role in this competition could diffuse tensions by re-engaging with China. Rather than bipolar competition between the US and China, India wants to develop a multipolar world, with it as one of many poles. To acheive this end, India has to manage difficult relationships with the United States, China, and maintain its strong historical relationship with Russia. It has also joined forums such as BRICS with both Russia and China. China, for its part, and particularly in the Antarctic context, has a habit of either ignoring India or expecting its deference. For example, its proposal to create an Asian Antarctic cooperation mechanism, which shares scientific interests and goals (He, 2016), does not mention India.

Civilizational Positioning Systems (2010s–2020s)

Another element of India's and China's developing relationship with Antarctica is its role in their new geographic imaginings. More recent Chinese and Indian worldmaking has tended to combine two senses of their nation's place in the world, which geographers have called their two geographies (Abraham, 2019) or "two (geo-)bodies" (Grant, 2018). These geographies build upon nation-state geographies or geo-bodies (Winichakul, 1997) but extend spatially and temporally beyond them. In their vastness, they overshadow their humiliation within the liberal colonial order and the creation of their modernist nations in the post-World War II nation-state world system. Instead, they create a contemporary geopolitical sphere of influence and evoke "civilisational states" with ahistorical antecedents. This civilisation heritage and its perceived far-reaching influence feed a sense of "civilisational exceptionalism" that fuels worldmaking discourses. India uses the regional *Akhand Bharat* (Greater India) concept to express this, and China uses the globalist *tian xia* ("all under heaven") to tell its story. These discourses shape the place-making of both states' Antarctic programmes, and the programmes orient these discourses

The two stories reflect earlier, post-colonial geographies, such as their national efforts to maintain "geo-bodies" large enough in space and population that they could resist Western hegemony. They also reflect both nations' "cartographic anxieties" (Krishna, 1994) about the blurred boundaries of their imperial inheritances, which contributed to India's Partition, and ultimately the Sino-Indian War of 1962 that was fought over disputed Himalayan territory. After this war, both states promoted discourses delimiting their geo-bodies between the Asian Highlands (the Tibetan Plateau and its surrounds) and oceans, the Pacific for China and the Indian ocean for India, with the mountains and seas acting as shields or boundaries to civilisational inlands.

As they advanced technologically from the 1980s onwards, both nations began reinterpreting their histories as parts of civilisational states. Within this civilisational worldmaking framework, current nation-states are depicted as the latest iteration of a great civilisation that existed before Western imperialism and is now regaining its place in the global order. These visions allow for some cosmopolitanism but tend to promote an exceptionalist and essentialist ahistorical vision of "China" or "India" as a "timeless entity" with a "fixed, single essence" (Chu, 2022, 74). Both Indian and Chinese civilisational discourses reveal long-term strategic ambitions to reclaim their historic pre-eminence in global affairs, though they express these strategies through cultural-political geographies that differ in scope and, therefore, in ambition.

India's geopolitical attention may extend globally, primarily through large Indian diasporas (Srivastava, 2023), but its cultural geographies are concentrated in its South Asian neighbourhood. In official discourse, this expanding influence is presented as a geopolitical necessity, especially in response to China's growing influence in the Indian Ocean (Bhatti, Kharl & Butt, 2020). However, it is framed culturally, emphasising India's historical civilisation links to this region. In non-official discourse, particularly that produced by Hindu nationalists, culture is given even greater importance, and rhetoricians frequently refer to *Akhand Bharat* or "Greater India." In some extreme contexts, *Akhand Bharat* is presented as a call for Indian imperial expansion, but mainly, the term signifies a desire to centre India within a reframed South Asia that stretches beyond territorial borders to unify the region through its "shared civilisational history" (Srivastava, 2023, 466).

The borders between India's territorial nation-building, official regional-focused geopolitical worldmaking, and the civilisational geography of *Akhand Bharat* are blurred and changeable. They often extend across the Indian Ocean and occasionally reach

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Figure 1. Left, The first Indian expedition to Antarctica, *Indian Express*, 2023. Right, Bajaj at the South Pole, 1989, Creative Commons.

Antarctica. Over the course of India's Antarctic programme, both official and personal rhetoric have repeatedly used scientific—geological, climatological, and hydrological—referents to link India and Antarctica. The geological-cultural links that commentators made between the Godavari River and Bharati, exemplify this, but there are others. Early in the Indian Antarctic programme, its first leader, Syed Zahoor Qasim, highlighted India-Antarctica connections by suggesting the Himalaya and Antarctica served as geographical boundaries within which India and the Southern Ocean "communicate" (Taneja, 2016). Indian Antarctic scientists have also made repeated connections between the Himalayan and Antarctic cryospheres in their reports and reflections. In 2022, the National Centre for Polar and Ocean Research emphasised India's need to increase its role in the poles, citing the "tri-polar connection" between the poles and the "'third pole' in the Himalaya" (Suryanarayanan, 2022). Many military support personnel working in Antarctica, including the first Indian to reach the South Pole, Colonel Jatinder Kumar Bajaj, trained at Himalayan mountaineering institutes before travelling to Antarctica (Sharma, 2001, 251–252). Moreover, those involved in the Himalayan frontier and Antarctica are often depicted similarly: as national, hyper-masculine heroes with frozen moustaches (see Figure 1).

China's twenty-first-century civilisational worldmaking extends well beyond its geo-body and India's regional ambitions. It is most notably supported and bolstered by the BRI, which includes the development of a "Polar Silk Road" (*Bing shang sichou zhi lu*) to transport goods by sea between northern China and Europe via Russia's Arctic (Woon, 2020). However, writers discussing the Antarctic Programme eschew the BRI framing for a more moralistic and adaptable political-cultural concept, *tian xia*. *Tian xia*, literally "sky (or heaven) beneath," is typically translated as "all under heaven." It is a broad term encompassing all humanity and their environments, and this expansive character has allowed it to become a floating signifier, used in multiple ways across different historical and contemporary contexts (Rigby, 2013). Its two most common contemporary uses are as a general term meaning "the entire world" or "world-beating." However, in geospatial or international relations theory, it denotes a more spatially defined and morally infused version of the English term "world society" (Babones, 2020). Some Chinese international relations scholars present *tian xia* as an alternative to the Western-centric, Global North-dominated world system, which they describe as "epistemic colonialism" (Chu, 2022, 59). According to these scholars, *tian xia* represents "an institutionalised system to promote universal well-being, not simply the interests of some dominating nations" (Rigby, 2013, 1). Unlike many Western territorial perspectives, *tian xia* encompasses both physical (territory) and psychological (national sentiment) realms, and includes a cooperative institutional framework. Such a framework, they argue, would be inherently more effective at fostering stability and peace than the current nation-state-based international system (Chu, 2022).

The concept of *tian xia* differs from the older European worldview that shaped Antarctic visions in that it is more horizontal than vertical, and therefore not properly hegemonic. However, it is still based on problematic assumptions that influence both it and China's Antarctic programme. Instead of positioning China as a hegemon, it adheres to an older Chinese tradition and reorders the globe with China—or *Zhongguo*, the "middle country"—at its moral centre. In pre-modern models, the imperial capital was the centre, and the "level of civilisation gradually [falling] as one travelled farther away from the centre" (Babones, 2020, 134). Great civilisational states were known by how far their influence extended. As Sinan Chu (2022) explains, this centre-to-periphery vision does not critique the nature of power or who holds it, but aims to order the world from an unconscious Chinese (or Han), male, and urban viewpoint. In this framework, journeys by Chinese urbane men to frontiers are considered a "civilising mission" on behalf of amorphous categories of beings such as "all Chinese," "Global South countries," and indeed, all humankind.

Like their Indian counterparts, Chinese imagery and literature depicting journeys to the Antarctic frontier repeatedly align Antarctica with the Asian Highlands and present their journeys as a hyper-masculine adventure. Guo Kun, the leader of China's first 1983-4 expedition, recalled that they were all asked to sign "a death warrant" (*shengsi zhuang*) before departing, but were moved to travel because of their love for China (*Sina.com*, 2021).

While Chinese and Indian Antarctic rhetoric has been remarkably similar in some respects, it also differs in other ways. For example, twenty-first-century Chinese state-run media reports have been much more jingoistic than their Indian counterparts. Some recent exemplary headlines have read: "My country's polar mapping has become a force that cannot be ignored in the world" (*Woguo jidi ce tu yijing yuesheng chengwei shijie shang buke hushi*

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Figure 2. Left, The inauguration of Changzheng Station, Antarctica 1983. Right, a stamp marking the thirtieth anniversary of the Antarctic Treaty in 1991, featuring Zhongshan. Station, Creative Commons.

Figure 3. International Yoga Day in Antarctica *NDTV*, 2016.

de liliang) (*China Today*, 2006), and "Striving for a Strong Country in Science and Technology: *Zhongshan* Towers in the Antarctic Ice and Snow" (*Bingxue nanji weiwei "zhongshan": keji qiangguo fen dou zhi lu*) (*People's Daily*, 2023). These headlines began appearing around the time the Chinese state began intently promoting its civilisational state narratives in the late 2000s, and increased as they rolled out their strategic frontiers policies a decade later.

As this last headline highlights, rhetoric also has a symbiotic relationship with on-the-ice place-making. This place-making includes "banal nationalism" (Billig 1995), like the use of flags, plaques, national holidays, languages, food choice, the group practice of *tai chi* and yoga—a particular cultural export of India's current Prime Minister, Narendra Modi (see Figure 3)—along with the layout and architectural style of the programmes' buildings. The latest Chinese building, Qinling Station, for example, was designed in the shape of the Southern Cross to honour the Ming-dynasty general Zheng He (1371–1433), who used the constellation to navigate through the Indian and Pacific Oceans (Lei, 2024) (see Figure 4). Arguably, however, the most apparent way both programmes have extended their cultural geographies into Antarctica is through names.

Naming and the right to name directly reflect either imperial control or resistance to it (Williamson, 2023). European states are easily world leaders in claiming land by naming it, and they have continued this practice into the twenty-first century, with Britain renaming a disputed section of the Antarctic Peninsula "Queen

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Figure 4. Qinling station, Antarctica. *Xinhua*, 2024.

Elizabeth Land" to celebrate Queen Elizabeth's fiftieth year as sovereign in December 2012. Chinese scholars such as Wang Wanliu (2024) interpret these cultural naming practices as the continuing colonisation of supposedly neutral spaces. However, this insight has not stopped either China or India imitating this Western tradition . All the names the Chinese and Indian Antarctic programmes have given to their expeditions and stations are loaded with cultural significance.

The Indian programme's naming practices have followed two trends. The first explicitly links India to Antarctica by naming places after significant Indian sites. The most obvious and repeated of these is Gangotri, the glacial source of the Ganges River in the Himalaya, and a sacred site associated with the goddess Ganga. The name of the expedition's first station, Dakshin Gangotri (Southern Gangotri), makes the Himalaya-Antarctica link explicit. Jagadish P. Khadilkar, who led Dakshin Gangotri for several years until it was decommissioned in 1990, described the station's name as "taking the flavour of our cultural icon to the bottom of the earth" (Khadilkar 2017, chapter 1). As previously mentioned, situating Bharati Station among the headwaters of the primaeval Godavari River, which is also known as Dakshin Ganga (or Ganges), plays with the links between the two rivers and the two continents.

The second trend has been to name sites after religious beings and concepts. The first expedition discovered an underwater mountain, which they named Indira Mount after Prime Minister Indira Gandhi, who was, in turn, named after a goddess. India's second station was named Bharati, after the Hindu goddess of knowledge and music. The third station's name, Maitri ("love and kindness"), is also the name of a Hindu goddess, but the term is more usually associated with Buddhism, a religion that has become one of the prime signifiers in India's civilisational state and *Akhand* Bharat discourse. All these terms, like the promotion of yoga practice, reflect India's spiritual soft power. When these stations were built, these allusions were generally low-key, but in the age of Modi's Hindu nationalism, the government's promotion of India's spiritual heritage has become more aggressive (Srivastava, 2023).

Chinese naming in Antarctica has also followed two trends. In the early stages of the programme, the stations were named for well-known Chinese icons. The first, Changcheng Station, was built as China emerged from isolation in 1985 and was named after the Great Wall. The second Zhongshan, meaning "middle mountain," was the pen name of nationalist revolutionary Sun Yat-sen, whose political vision referenced *tian xia*, "all under heaven for the public" (*tian xia wei gong*) (Rigby, 2013). The rest of the stations, all built this century, were named after sacred mountain ranges that shape and connect China's contemporary geo-body to Antarctica. Kunlun Station is named for the Kunlun Mountains that form the Tibetan Plateau's northern boundary and the outer limits of pre-Qing Chinese empires. The Kunlun Mountains are also the source of the Yellow River and, like Gangotri, are the residence of deities. Taishan Station is named after Mount Tai, China's most famous sacred mountain, home to a two-thousand-year-old imperial cult. Qinling Station is named after the Qinling Mountains, which run through central China and separate the Yellow and Yangzi River catchments. In an official naming statement, China's General Secretary Xi Jinping demonstrated how civilisational state narratives work, saying: "The Qinling Mountains unite the north and the south, benefitting the whole world. They are my country's central water tower, the ancestral vein of the Chinese nation, and an important symbol of Chinese culture" (Huo, 2024). Journalist Huo Xiaoguang (2024) was more specific. "Kunlun, Taishan, Qinling," he wrote, "our mountains are in China, in Antarctica, and the dreams of the descendants of the Yellow Emperor [an archetypal national ancestor]."

Conclusions

Although India and China's Antarctic programmes developed in parallel, as this article has shown, their ambitions and intentions have diverged considerably since their inception. In the 1980s, India was openly critical of the structures underpinning the ATS, but it has since embraced them, concentrating its programme on scientific research and environmental conservation. China, by

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contrast, initially accepted ATS norms but has gradually adopted a more assertive stance, expanding its activities to include resource extraction and satellite surveillance. It often aligns with Russia to influence ATS policy, reflecting its broader geopolitical ambitions and its distinctive approach to managing a region it still considers a global commons. In addition to strengthening their strategic interests through dual-use technology, both countries have utilised their Antarctic presence to reinforce national and civilisational narratives that reshape global perceptions. As self-identified "civilisational states," India and China assert that their identities transcend modern nation-state boundaries, drawing on historical continuity and exceptionalism.

As the article has outlined, one of the difficulties these intertwined geopolitical and cultural histories have created is a tendency to essentialise the actors involved in this story, "China," "India," and "Antarctica." The civilisational state narratives exaggerate this essentialisation, as do descriptions of Antarctica as a "global commons" and a "strategic frontier." Historically and in contemporary discourse, the tendency to describe India or China as a "threat" is also essentialising. This last example is significant as we collectively face a changing climate. As Wang (2024) notes, it is not uncommon for recent articles to frame Chinese activities in Antarctica as its greatest threat, ignoring climate change. Given the range of skills needed to investigate the story, it is challenging to move beyond these essentialisations and address the complexities from all perspectives. This is part of the reason why this article combines the stories of both China's and India's Antarctic programmes; by comparing and contrasting them, it aims to reveal areas of commonality and difference.

Understanding both nations' strategic interests in and cultural affiliations with Antarctica will be vital for managing the region in the coming century. This involves addressing the historical and cultural tensions that separate China and India from other Antarctic nations, especially the conceptual clash between the Global North's imposed environmental and scientific restrictions on Antarctic extraction and the Global South's approach to its common resources. A balanced North–South approach to resource and environmental governance in Antarctica will have worldwide implications. The continent is crucial in regulating the Earth's climate system, carbon cycle, marine thermohaline circulation, food webs, and the albedo effect. Its ice sheet contains about 90% of Earth's surface freshwater (British Antarctic Survey, 2024). Ecological failure in Antarctica would be catastrophic, especially for the third of humanity living in China and India, who are among the most vulnerable to climate and environmental crises (UNDP, 2023).

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