

# THE STRATEGIC IMPORTANCE OF ANTARCTICA FOR CHINA AND INDIA UNDER MEARSHEIMER'S OFFENSIVE REALISM

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## Introduction

This article aims to analyze the role of China and India in the Antarctic Treaty System (ATS). The growth of Chinese protagonism at the global level is certainly one of the great occurrences of the 21st century and susceptible of altering the equilibrium of the multipolar system. Considering this context, it is a matter of questioning the future that awaits the ATS concerning the strategic interests of these two emerging global powers. Will the process of international cooperation between ATS member countries remain stable or can it recede and lead to the end of the regime?

In the field of International Relations it is not possible to foresee the future of the international system, but the observation of certain variables allows us to conjecture about plausible scenarios. The article aims to investigate to what extent the new leadership exercised by China and India in the international system can interfere in the balance of power achieved by the ATS. The issue has been raised by some specialized researchers in Antarctic policy, most notably Anne-Marie Brady (2017). Brazil, although a signato-

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ry and an advisory member of the ATS, does not pay much attention to the political issues surrounding the sixth continent. The authors consider that the geographic proximity to Brazil, the relevance of Antarctica to two of our neighbors (Argentina and Chile with sovereignty claims), the strategic and climatic importance of the continent, the possible revision of the Protocol of Madrid (2048) a greater understanding on the subject<sup>3</sup>.

The first part of this article aims to contextualize the ATS as well as to present the circumstances surrounding the adherence of the two countries mentioned. In the second half of the article, we analyze the current transformation of China and India and ponder the consequences that their growing need for natural and energetic resources may entail for the maintenance of the ATS. The theoretical framework is the offensive realism as conceived by John Mearsheimer. This author's reflection does not directly address the Antarctic question, but its conceptual guidelines can be used to examine this issue because they point to the effects that the emergence of new *hegemons* can have on the international balance of power.

In the final considerations, it is argued that, while differences may arise in the aspects that regulate the inviolability of the continent and the permanence of the regime, there is no evidence that it will result in conflicts. Increased competition does not necessarily entail the termination of the Antarctic Treaty System, but it will require changes to sustain it.

## Presentation

Antarctica is the most inhospitable continent on the planet and so it is the only one ever to have had an autochthonous population. The average temperature in summer is  $-30^{\circ}\text{C}$ , while in winter it is  $-60^{\circ}\text{C}$ . The lowest temperature ever recorded was  $-89.2^{\circ}\text{C}$  at the Russian Vostok Station in 1983. About 98% of the continent is covered by ice (average thickness of 2,600 m). The continent is also the driest on Earth, with an average rainfall of 150 mm per year (as dry as the Sahara Desert). It is the highest continent, with an average altitude of 2,160 m. The total area is 13,661,000 km<sup>2</sup>, larger than Canada, and equivalent to 1.6 times the total area of Brazil.

Unlike the Arctic, which is nothing more than an ice cap, Antarctica rests on a land surface that in the past belonged to the mega-continent Gondwana and which, as it fragmented, also gave rise to South America, Africa and Oceania. Based on geological inferences it is estimated that Antarctica is

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<sup>3</sup> Environmental protocol prohibiting the exploitation of mineral resources in Antarctica. It may be reviewed by a simple majority and a minimum of 20 advisory members.

abundant in oil, gas, copper, uranium, among other minerals of great commercial value. However, the technological difficulty of extracting these resources still makes their commercial exploitation unfeasible. At a time of major advances in the field of bioprospecting and biotechnology, the continent's great biological diversity points to the continent's potential wealth. Antarctica is the main reservoir of fresh water on the planet with 70% of the total volume and contributes to refresh it preserving the balance of global temperatures.

The great challenges to human survival imposed by Antarctic geography and climate reduce the continent's permanent population to the teams of scientists who set out there to conduct research. In the summer there are about 5,000 people among researchers and logistical support staff at scientific stations, but in winter this number is only 1,000.

## History

The Greeks already assumed the existence of a territory that opposed the arktos, whose presence was indicated by the polar star of the constellations of the great and small bear. In search of the *antiarktos*, the English captain James Cook crossed the Antarctic circle between 1772-75, travelling across the region in vain. At the beginning of the nineteenth century, the Russian expedition led by Captain Fabian Von Bellinghausen took up again in a more comprehensive way the trajectory navigated by Cook and in 1820 sighted for the first time the *Earth Incognita*.

Early explorations of the Antarctic region led to the emergence of an important and predatory seal skin business that was later replaced by whaling. The intense traffic of commercial vessels in the region stimulated the mapping of the area and to this movement were added several expeditions of scientific nature that had as objective the research of the local phenomena (Hatherton 1986). In 1911, the South Pole was reached by the Norwegian Roald Amundsen in victory against the British Robert Scott, who passed away, along with all his expedition.

The twentieth century presents the first territorial claims on the continent. The countries with some history of expedition in the region or bordering were the first to make their claims of sovereignty alleging geographical proximity, discovery, inheritance rights, etc. Between 1908 and 1940, the United Kingdom, Australia, New Zealand, Norway, France, Chile, and Argentina claimed the equivalent of 2/3 of the Antarctic territory and some of these claims were in overlapping areas<sup>4</sup> (Quadri 1986).

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<sup>4</sup> This is the case of Argentina, Chile and the United Kingdom that present a superposition

During World War II, the military potential of Antarctica was uncovered and it served as the basis for submarines and German ships to attack allied merchant ships (Ferreira 2009). The polar routes and their surroundings were recognized as a strategic objective and became an alternative route for global transport between Asia, Europe and America (Couto and Silva 2003). After the war and from a bipolar international perspective, the fate of the continent was decided by the two great antagonistic powers: the United States of America (USA) and the Union of Soviet Socialist Republics (USSR).

Two proposals were presented in this period and both faced resistance. The first project consisted of the internationalization of Antarctica and was faced with the opposition of some countries that refused to renounce their territorial claims. The second alternative, the creation of a condominium of countries under the direction of the United Nations was also discarded, since it meant the inclusion of the USSR and its satellites in the understanding, a fact that contradicted the US government. Faced with the difficulty of reaching a consensus on the legal status of Antarctica, the *International Council for Scientific Union* (ICSU) decided to promote a worldwide research project, the International Geophysical Year (IGY).

IGY has brought together researchers from sixty-six countries around the world in an international research and scientific cooperation effort. Held between June 1957 and December 1958, he contributed to making science a continuation of politics by other means (Elzinga 2011) and instigated the US to convene an international conference to definitively resolve the legal situation of the continent. Twelve countries were summoned to the meeting in Washington DC in 1959: the host USA, the superpower rival USSR and nations that had set up a scientific base in the region during the IGY and thereby demonstrated their interest in Antarctica: South Africa, Argentina, Australia, Belgium, Chile, France, Japan, Norway, New Zealand and the United Kingdom (Ferreira 2009)<sup>5</sup>. The urgency of resolving the legal status of Antarctica stems from the fact that India, the leader of the non-aligned nations, had tried since 1956 to declare it - in the United Nations Assembly - as a common

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of territorial demands. The United Kingdom's claim states that all land and islands of latitude 50°S between longitudes 20°W and 80°W are British due to the continued British presence in the Falklands. Argentina requires territory between longitudes 25°W to 74°W. Overlapping the previous claim, Chile, in turn, requires the longitude 53°W to 90°W.

<sup>5</sup> When IGY was carried out, it was not known that this would be the requirement for future negotiations. Brazil participated in the IGY and even made several graphical ocean surveys, but because they were conducted on the Brazilian coast without sending an expedition to Antarctica, the country was not included in the debates. In an official note sent to the US ambassador to Brazil (July 1958), the country protested that it had not been included in the Washington D.C Conference.

patrimony of humanity. The Soviet determination not to undo its scientific stations and remain in Antarctica at the end of the International Geographical Year also weighed heavily on the decision.

Starting from a proposal presented by the Chilean jurist Julio Escudero Guzman, a model of partial internationalization of the continent was conceived, accompanied by a territorial moratorium and aiming at the preservation of the area south of 60°S latitude. Entry into Antarctica would only be allowed for expeditions and scientific bases with exclusively peaceful purposes in order to prevent the area from becoming “a scenario or object of international discord” (SAT 2015a). All the countries belonging to the UN or with the acquiescence of the original members could accede to the Treaty.

The Treaty was signed on 1 December 1959 and entered into force on 23 June 1961. The Convention for the Conservation of Antarctic Seals (1972), the Convention for the Conservation of Antarctic Marine Living Resources (1980) and the Madrid Protocol (for the protection of the environment - 1991) originating the Antarctic Treaty System (ATS). Since then, 41 countries have joined the ATS, the most recent of which is Iceland in October 2015. At present there are 29 consultative member countries which have voting rights in the *Antarctic Treaty Consultative Meetings* (ATCMs).

Brazil adhered to the Treaty in 1975 under the foreign policy of the “responsible pragmatism” of Ernesto Geisel’s government (1974-1979). During João Figueiredo’s government (1979-1983), Brazil became an advisory member of the ATS (September 1983) and inaugurated the Antarctic station Comandante Ferraz the following year<sup>6</sup>.

## Theoretical Considerations

The question of how Antarctica fits into the international interests of China and India will be approached from the neorealist perspective of John Mearsheimer. The realistic paradigm starts from the tradition inaugurated by E.H. Carr and Hans Morgenthau, but acquires a structuralist bias with the contribution of Kenneth Waltz. This author argues that it is the structure of the international system that determines the behavior of states and not the re-

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6 In February 2012, a major fire destroyed the Brazilian station, and since then, the Brazilian Antarctic Program has continued its research being carried out from the ships of MB, “Ary Rongel” and “Almirante Maximiano”, and the Antarctic Modules Emergencies (Mattos 2015). The new station began to be built in January 2017 at a cost of US \$ 99.6 billion and should be ready by 2018. The Chinese Corporation for Imports and Exports was the bidding winner and is responsible for installing the modules (MCT 2017).

verse. This “from outside to inside” perspective contrasts with the first realists who attributed the dynamics of the international system to what happened at the level of unity. According to Waltz (1979), the behavior of states does not stem from the internal politics or aggressiveness of their leaders, but from structural factors such as anarchy and the international distribution of power.

To deny the influence of unity on the structure or, from domestic politics on the international system, is a question that raises a great deal of controversy. The structural authors, Mearsheimer inclusive, are aware of the simplification of their approach, but believe this to be the price to pay for the creation of a parsimonious theory. When a theory commits itself to dealing with the particular, it runs the risk of losing its explanatory capacity and remaining on the descriptive plane. The authors recognize the complexity of reality, but consider that the goal of a theory should be to extract and analyze regular patterns, although selection may lead to theoretical discrepancies.

Mearsheimer considers that the international system is anarchic, there is no central authority that contains states. Realists disagree with institutionalists when they argue that multilateral institutions can play the role of coercion of States by imposing sanctions. It is from the lack of security that comes the uncertainty and the need to ensure their own survival. As rational actors distrusting one another and ignoring how much is needed to prevent, states seek to maximize their power. From offensive motivation comes offensive behavior. In a competition scenario, the most effective way to ensure one's security is to become a hegemon. Mearsheimer notes that the great powers are not content with the status quo: they are revisionist because of the insecurity of the international system (Mearsheimer 2001).

International anarchy and the quest for maximizing power are rules that concern all states, yet not all hold the military (including nuclear) capacity and sufficient economic and demographic resources to become a *hegemon*. The international system is dominated by the great powers whose actions drive international relations, making the less powerful states to develop other strategies of survival.

When a great power emerges, the tendency of the other states is to articulate to contain this rise. Often, fear and lack of information lead states to dodge a direct confrontation and resort to the subterfuge of “buck-passing”. In this case, and just like in the card game that names this behavior, the state passes on its turn. The most emblematic case of “buck passing” occurred in the years before World War II when Western countries avoided reacting to Nazi Germany's territorial offensives (Kaplan 2012).

It is within this theoretical context that Mearsheimer analyzes the rise of China as a superpower. As a state in the process of becoming a regional *he-*

*gemon*, it threatens US interests in Asia and more specifically in the east of it. Mearsheimer's reflection focuses on the Sino-American relationship and how the United States must reconsider its liberal ideology to assume a position of *Realpolitik* in the field of foreign policy (Mearsheimer 2001b).

According to this perspective, the ties that the United States has sought to expand with strategic partners in the region such as India and Japan should be interpreted. The defense cooperation agreement with India (*The Logistics Exchange Memorandum of Agreement* - LEMOA) (Rapp-Hooper 2016), celebrated in the Barack Obama administration, is part of the recognition of this new strategy, as well as the annual naval exercises conducted by the US Navy with some of the ASEAN (Association of Southeast Asian Nations) countries.

Mearsheimer's theory explores the consequences - for the United States - of China's rise, but it does not take into account how this fact can impact the rest of the world. Nor is India or the Antarctic question part of its analysis. His reflection, however, points to a paradigm shift in the current regional and global geopolitical balance. Although his view on the inevitability of a conflict between powers is controversial, his analysis is pertinent in signaling to the reconfiguration of power in course and the emergence of new actors in the international scene. It is within this realistic picture of states driven by insecurity and systemic pressures that we allow ourselves the exercise of speculating on how ATS can be affected by these new power relations.

## China in Antarctica

China, as well as India, was not represented at the 1959 Washington DC Conference and only acceded to the Antarctic Treaty in June 1983. The country intended to participate in expeditions to Antarctica during the International Geophysical Year, but beyond of the Chinese government's meager budget resources for science, its plans were directly frustrated by the influence of the US that wanted to prevent the entry of communist countries into a continent of indefinite sovereignty and regulation. China came to participate in the AGI, but did not send an expedition.

In 1964, the Ocean State Administration of the State of China was created, which had as one of its objectives to organize polar expeditions. The Cultural Revolution (1966-1976), having as one of its targets the scientists - taken largely to farms of the interior of the country - prevented the continuation of the activities in the area. In the 1970s, *rapprochement* between the United States and the People's Republic of China allowed him to join the UN and the Security Council as a permanent member to replace Taiwan. The new

orientation of Chinese foreign policy came after the break with the Soviet Union and the need to reformulate the strategic balance of the region. The country decided to join multilateral organizations and in 1983 it was STA's turn. The following summer (1984-1985), China sent its first expedition to Antarctica. The country was accepted as an advisory member with the right to vote, in October 1985, on the occasion of the XIII ATCM held in Brussels, Belgium (Brady 2017).

Since 2008, the Chinese Antarctic Program has been under the Ministry of Land and Natural Resources. The Shanghai-based Polar Research Institute is the body that coordinates the polar expeditions<sup>7</sup>, including the maintenance of scientific stations and the "Xue Long" icebreaker, as well as all scientific research conducted in both the Arctic and Antarctica.

Although it has started its Antarctic program after Brazil, China already has four stations on the continent being two of permanent occupation:

a) Great Wall (1985), on Rei Jorge Island, where there is also the Brazilian station named Comandante Ferraz, with a maximum capacity of 80 people;

b) Zhoughshan (1989), in the Larseman Hills region, near the Russian scientific station Progress II, with a maximum capacity of 60 people and prepared to operate fixed wing aircraft;

c) Kunlun (2009), used only in summer and with a maximum capacity of 24 people. It is worth noting that Kunlun is 4,087 meters high, being the highest scientific station in the Antarctic, and is 1,200 km from the coast (more precisely, from Zhoughshan Station, where "Xue Long" arrives, bringing material and personnel to the stations Chinese). Its position, in the so-called "Dome A", one of the last points of that continent that had not yet been explored, is considered one of the best places in the world for astronomical observations. The Chinese plan to be able to operate this station uninterruptedly from 2020. From Kunlun to Zhoughshan, a Chinese aircraft takes about four hours of flight time; and

d) Taishan (2014), also operating only in the summer, with the main mission being to serve as a logistical support point for Kunlun Station, which is difficult to reach, since it is situated on the way between it and Zhoughshan.

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<sup>7</sup> China also has growing interest in the Arctic, having achieved observer status with the Arctic Council in May 2013, consisting of the eight countries that face that ocean (Canada, Denmark, USA, Finland, Iceland, Norway, Russia and Sweden). The country operates a permanent scientific station in Ny-Alesund, Svalbard Archipelago, Norway, since 2004. Available at: <http://www.chinare.gov.cn/en/>. Accessed on: 05 May 2015.

Chinese expeditions take place every year. On the occasion of the 31st expedition (summer 2014-2015) and to commemorate 30 years of Chinese presence on the continent, a site was set up for the construction of a fifth station to be established, initially, on a Ross Sea island, in region where the United States, New Zealand, Italy, South Korea and Germany also have stations. The new Chinese station is scheduled to be ready by 2022 (Guo 2017)

The political commitment to the Antarctic program was reinforced by the signing of a Memorandum of Understanding between China and Australia for the creation of a joint commission responsible for dealing with issues of common interest on that continent (November 2014). The agreement, in addition to logistical issues, also signals an important political movement on the part of China, as it is the Australians who are most concerned about the increase in Chinese presence in Antarctica. Of the four Chinese stations, three are located within the area formally claimed by Australia and, according to Brady (2017), China has been carrying out military activities and mineral prospecting in the region in disagreement with the 1959 Treaty and the 1991 Protocol. The researcher, Australia “must rethink its assessment of risk in Antarctica and devise a strategy to protect its interests there” (Brady, 2017, p.6) China is Australia’s largest economic partner, and it is on the island of Tasmania that is the city of Hobart, the main logistics hub for the Chinese Antarctic Program (The Guardian 2014).

The growing Chinese presence in Antarctica also appears in the numbers of Chinese tourists visiting that continent. Between 2016 and 2017, 5,145 Chinese were in Antarctica representing 15% of the total. China was the second most sending country to that continent, only behind the USA (40%), and slightly ahead of Australia (14%) (IAATO 2017).

The Chinese Antarctic Program, following the country’s economic growth, saw a significant increase in its budget, reaching US \$ 44 million in 2010, which was the fifth largest budget among Antarctic programs. That year it lost only to the budgets of the US, Australia, UK and Russia. In 2014 it became the largest budget in Antarctica and is the second country with the highest number of citizens there after the US (including scientists, tourists and fishermen) (Brady 2014).

In its latest five-year plan (2016-20), China has stated that it has the political intention of becoming involved in the governance of new fields of activity, including in the polar regions, in order to be considered a polar power. In addition to hosting the ATS consultative meeting in Beijing for the first time in May 2017, the country is also building a new ice break at the Jianguan shipyard in Shanghai, scheduled to operate from 2019 onwards. “Xue Long 2” (Liu 2017).

## India in Antarctica

India was one of the countries that, even before the International Geophysical Year was held, insisted that the question of the internationalization of Antarctica be discussed in the United Nations Assembly. It vigorously opposed the Antarctic Treaty and only acceded to it in August 1983, under very controversial circumstances. It was from its independence in 1947 that Indian foreign policy became involved in issues of worldwide concern. Under the government of Prime Minister Jawaharlal Nehru (1947-1964) and considering the claims of sovereignty as a vestige of the colonizing and imperialist mentality of the First World, India stood in favor of an international solution under UN determination. His attempt to discuss the case at the UN and form an anti-imperialist coalition ran up against the combined resistance of Argentina and Chile, which although they were colonial nations, had strong territorial interests in the sixth continent (Chaturvedi 2013).

When the Treaty was drafted and ratified despite its objections, India relegated the subject to second place and turned to its regional issues. Between the 1960s and 1970s, the country faced conflicts with neighboring Pakistan, China, and also with Portugal on account of the state of Goa. Under the second Government of Prime Minister Indira Gandhi (1980-1984), the Antarctic geopolitical question reemerged. At the occasion, in the forum of non-aligned countries, the theme was raised again and the country expressed itself in favor of the internationalization of the continent (Villa 2004).

The strategy used by India to reach Antarctica was unconventional and aroused mistrust among the signatory members of the Treaty. In the summers of 1981/1982 and 1982/1983 two scientific expeditions were sent to the continent. The two expeditions had as main objective to choose an area to erect the first scientific station of the country in that continent. The Indians, in previous years, had already been on reconnaissance missions in Antarctica with the help of the Soviets. The current procedure, although not illegal, did not obey the usual behavior of adhering to the Treaty first, and then organizing an expedition. The Indians knew that their attitude was politically reprehensible, but they supported the principle that the Treaty was open to all UN countries as long as for peaceful purposes (Sharma 2001).

For Indira Gandhi, the expeditions were the "fulfillment of a lifelong dream", making India stand out as a power of international weight (NYT, 1982). Since the two expeditions took place after the XI Consultative Meeting (June/July 1981), at a time when the parties only met every two years, there was no official discussion to address the matter.

The *New Scientist* newspaper (1982) even published an article entitled

“Indians quietly invade Antarctica”. On the eve of the twelfth meeting, on 19 August 1983<sup>8</sup>, India acceded to the Treaty and achieved consultative status in the course of the Treaty on 12 September 1983. It was the fastest process of promotion of the whole history of the regime, an unprecedented episode that never reproduced again. In February 1984 the Dakshin Gangotri<sup>9</sup> scientific station was built, built by Indian Army military personnel, from the support of a British company with experience in construction on that continent (Khadilkar 2017).

The admission of India as a consultative member of the ATS served to defuse criticism of the regime and signal to the world that the previously exclusive club recognized the new balance of international order. Nevertheless, the suspicion remained that the country had as hidden agenda, the intention to implode the group, maneuvering its internal contradictions. There was also nonconformity among non-aligned countries: some interpreted the Indian attitude as “defection” and - an indication of their co-optation by the interests of the great powers and a turnaround in favor of political conformism (Beck 2014; Chaturvedi 2013).

It is important to note that the Treaty is relatively (and purposely?) vague about the requirements that must be fulfilled for the change of status. It refers only to the need to promote “substantial scientific research activity, such as the establishment of a scientific station or the sending of scientific expedition” (Article IX, paragraph 2). Until then, the only countries outside the original twelve members to gain consultative status had been Poland in 1977 and West Germany in 1981. The first took sixteen years and spent \$ 3 million to build its station while the second he invested US \$ 100 million in activities on the continent (Buck, 1998). India was thus the first country in the Third World to win such a prerogative, followed closely by Brazil.

When analyzing the circumstances surrounding the accession of China, India and other countries to the ATS, one must also consider the supposed revision of the Treaty foreseen for 30 years after its ratification. The two oil shocks (1973 and 1979) had shown the extent of dependence on this natural resource, and it was anticipated that the ban on the exploitation of mineral resources would be suspended in 1991. Between 1982 and 1988 sev-

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<sup>8</sup> It is important to note that Brazil has become an advisory member of the Antarctic Treaty System in the wake of the Indian movement. India’s candidacy enabled the Brazilian request and inhibited any objection against, since the incoherence of accepting one developing country and refusing another.

<sup>9</sup> Dakshin Gangotri was abandoned in February 1990 because of the constant displacements of the mass of ice on which the station was built. Currently, the facility serves as a deposit of material in support of Maitri station that is 85km.

eral meetings took place to elaborate the regulatory framework of what would be the new exploitation regime, the Convention for the Regulation of Activities on Mineral Resources (CRAMRA). During the 1980s, many countries (18 in all) joined the ATS and/or sought to become an advisory party in order to participate in the CRAMRA negotiation process.

CRAMRA was signed but never ratified and eventually abandoned due to pressure from environmental movements. Australia and France led the bloc of those who opposed ratification of the convention. In 1991, it was replaced by the Madrid Protocol, which strengthened Antarctica's environmental protection by prohibiting any commercial mineral exploration on that continent for the next 50 years from its ratification date (1998).

India has two permanent scientific stations:

- a) Maitri (1989), with a maximum capacity of 40 people, located about 100 km from the coast, in Dronning Maud Land; and
- b) Bharathi (2012), with a maximum capacity of 72 people, located 3,000 km east of Maitri station, right on the coast of Larsemann Hills.

Indian expeditions to the mainland have annual frequency and the thirty-sixth was carried out in the summer of 2016 to 2017. However, dependence on external logistical support is one of the great weaknesses of the Indian Antarctic program. The country does not yet have a polar ship and has leased foreign ships since the beginning of its program. Another limitation occurs for airplanes and helicopters, all contracted with specialized companies. The Indian Navy and Air Force even participated with their helicopters and airplanes, but only until 1994. Even the military presence of the three Forces, which was significant in the 1980s and 1990s, has now become almost zero. According to Khadilkar (2017: 318), "There is an urgent need for a wider debate to determine a national vision towards Antarctica and its relevance to the strategic interests of the country." According to the same author, Indian society, even the most educated classes, knows little about that continent, which demands of the government changes in the educational system, introducing the subject from an early age.

## Examining the Advance of China and India

In 2010, when Secretary of State Hillary Clinton recognized the emergence of China and India as two new hegemonies in the Asia Pacific region, capable of altering not only the regional but also the global balance.

(...) we know that much of the history of the 21st century will be written in Asia. This region will see the most transformative economic growth on the planet. Most of its cities will become global centers of commerce and culture. And as more people across the region gain access to education and opportunity, we will see the rise of the next generation of regional and global leaders in business and science, technology, politics, and the arts (US Department of State 2010).

Clinton's speech points to a reality still under construction. By 2016, the United States maintained its global superpower status with a GDP of \$ 18.6 trillion and a growth of 1.6% which should stabilize at that level in the coming years. The Chinese economy, despite the reduction in its growth rate, increased by 6.9% (2016) and its GDP reached US \$ 11.2 trillion (2016) (WB, 2017). Although GDP is not a complete indicator, since it measures more the industrial production of an economy than its production of knowledge, it is still relevant to know the situation of a nation. Maintaining an average growth of 3 to 4% per year, the Chinese economy is expected to surpass the US by 2030.

The Chinese development strategy emphasizes major infrastructure works related to the project called "one Belt, one Road" (a belt, a road). The new "Silk Road" aims to serve the geoeconomic interests of China by connecting the country, by land and sea, to the rest of Asia, Africa and Europe. The financing of the works is being carried out through the Asian Infrastructure Investment Bank (AIIB) created in 2015 by Chinese initiative as an alternative to the World Bank.

India's GDP in 2016 reached US \$ 2.2 trillion and is on an upward curve with an average growth of 7% per year (2016). As the Indian population is around 1.3 billion (2015), per capita income is US \$ 1,600, which places the country in the low middle income category. As a comparison, Brazil - with an equivalent economic dimension - has a per capita income of US \$ 9,850 (2015). By 2013, only 1% of the Indian population had sufficient resources to be targeted for income tax.

In terms of its international status, China is already a global powerhouse, while India is in the way of becoming more than a regional actor. Of the 180 countries with which China has trade relations, it became the main partner of 124 (Ghemawat and Hout 2016). Although economically asymmetric, India is considered a strategic player to counter Chinese hegemony in Asia. The needs and rivalries of both countries tend to have repercussions globally. While the deepening of the Sino-Asian economic framework is seen by India as an obstacle to its own ambitions, China considers the Indian rise

a geopolitical threat. If the China-Pakistan economic corridor contradicts the Indians, the same can be said of the India-United States defense cooperation for the Chinese. In the political arena, Indian democracy is the opposite of the Chinese single-party model.

The peaceful rise of China has, since 2010, revealed a turning point. China's foreign policy, particularly with regard to geopolitical interests in the South Sea, manifests more assertiveness in its projection of power and leads to the destabilization of a region highly sensitive to international interests. The actions combine the construction of artificial islands lined with military bases with the claim of maritime sovereignty based on the Convention on the Rights of the Sea, the positioning of oil rigs in disputed waters with Vietnam, the disrespect of an unfavorable international decision in litigation with the Philippines, the non-observance of the right of free passage of vessels and the dispute with Japan by the Diaoyu / Senkaku Islands, the latter in the East Sea. China rubs itself against all those countries that, directly or indirectly, oppose its growing search for protagonism.

India, on the other hand, has distanced itself from the legacy of non-alignment that has governed its foreign policy since independence and has assumed a posture of greater pragmatism in its international relations. New Delhi, within a multipolar and globalized world perspective, seeks international insertion through material power and rejects as obsolete the model that served as an alternative route during the Cold War. It is in the light of this understanding that the recent strategic rapprochement with the United States should be analyzed.

Until near the end of the twentieth century, the economic advance of a state placed it, almost automatically, on a level of military parity with its opponents/competitors. From the moment in which the use of technology in the military action intensified the distance between the potential military of each State deepened. Mobility within the international system is not flexible when it comes to the rise of new actors and/or downsizing of the former hegemons. The success of economic growth does not necessarily fill the technology gaps. China and India continue to face the challenge of overcoming the technological gap that separates them from more developed economies (Brooks and Wolforth 2016).

Currently, more than half of Chinese exports consist of processing trade industrial goods, that is goods whose assembly takes place in the country from foreign parts and components, without the use of local technology. The production model is convenient in that it attracts foreign resources and industrial activity to China allowing foreign firms to benefit from the low cost of Chinese labor and some tariff concessions (EAF 2012). The precariousness

of local technology is revealed by the revenue received from the use of intellectual property rights (patents, copyrights, trademarks, industrial processes, etc.). While China (with Hong Kong) raised \$1.7 billion and India \$467 million in intellectual property rights in 2015, the United States received \$124 billion and the Netherlands and Japan - second and third - record a revenue three times lower than the US, US \$39 billion and US \$36 billion respectively (WB).

The discrepancy in the values collected reveals the importance of technology and scientific knowledge in the development of the countries analyzed. It should be taken into account, however, that copyright collection represents a pre-existing picture, since patents typically last for twenty years. China and India have adopted strategies to reverse their technological backwardness. Considering that a scientific article is often the embryo of a technological innovation, it is necessary to analyze the number of scientific articles published by the countries. In 2013, the United States published 412,000 articles in the field of so-called hard science (physics, chemistry, biology, mathematics, biomedical, engineering, technology and the like), while China came in second with 401,000 (WB)<sup>10</sup>. As for investments in technology and research, and recalling the economic disparities between countries, South Korea allocates 4.29% of its GDP in this activity, while Japan directs 3.58%, the United States 2.73%, the China 2.05% and India 0.82% (WB 2005/15).

Today, China and India account for 40% of the world's population. In 2016, about 26 million Indians and 17 million Chinese were born (Statistica 2016). The relaxation of China's one-child policy should further stimulate the number of births in the future. Both countries have low rates of per capita energy consumption and it is estimated that these values should rise. To meet rising demand, Indians, as well as Chinese, will have to seek new sources of energy (EIA 2015b).

The maintenance of the Antarctic Treaty, with the continent focused only on scientific research and under strict environmental control, may not be in the interest of those actors who have an increasing voice in the international system.

## Final Considerations

The rise of China as a new global actor and the expectation that India will also play this role in the near future prompts speculation about the

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<sup>10</sup> India 93 000, Japan 103 000, France 72 000, Germany 101 000, Israel 11 000, Netherlands 30 000 (2013).

continuation of the ATS regime. The theoretical matrix of Mearsheimer's offensive realism seems to point to the end of the inviolability of the white continent, not least because there is no enforcement mechanism for the regime. However, not necessarily the conflict would be military in nature.

Analyzing the most recent history of their external relations, India and China have been involved in conflicts with each other or with neighbors on issues of historical origin: border and/or ideological disputes. In the case of China, since Mao's death, the country has sought to successfully join the main international organizations. India, in turn, with the benefits of the globalization process, has been inclined to a more aligned rhetoric. Within a realistic perspective, national interests may collide with membership in international regimes and lead to a decrease in cooperation, but such an attitude does not necessarily lead to revisionism and military conflict.

We can speculate that in a not so distant future, motivated by the realistic model of seeking material security to meet the needs of its vast populations and open to the possibility of revising the Madrid Protocol (2048), China and India will lead a movement aimed at the suspension or relaxation of mineral exploration in Antarctica. So far in environmental terms both China and India have overcome their initial reluctance, taking their share of international responsibility and striving to reduce greenhouse gas emissions. Both signed the Paris Agreement of 2015 and it is to be expected that the environmental concern will also include the maintenance of the ATS and the preservation of Antarctica as an essential continent for the planet's climatic equilibrium, but such positioning may suffer a setback.

The authors believe that a possible source of tension in Antarctica has to do with the absence of specific regulation on bioprospecting. The line separating licit scientific research from biopiracy is tenuous and may give rise to international legal conflicts. A regulatory framework should be created to bring the principles of ATS into line with international legislation on the subject (Convention on Biological Diversity and Agreement on Trade-Related Aspects of Intellectual Property Rights) (Guyomard 2010). Currently, China has demonstrated difficulties in acting within the principles governing the intellectual property rights of foreign companies and its procedures cause discomfort in international relations. Diplomatic deliberation will be fundamental to protect patent rights without damaging the continent's international status as well as respecting territorial demands. In this sense, perhaps some of the contributions of the defunct CRAMRA may be used.

In an even difficult future, both Antarctica and ATS itself will become sensitive and strategic issues in the international political landscape. It is important to establish Brazil's position in this debate in order to safeguard not

only the continent, but also our national interests.

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**ABSTRACT**

The Antarctic Treaty was signed during the Cold War and intended to preserve the continent and transform it into a conflict free territory, prioritizing scientific cooperation. Despite having quadrupled the number of its signatories, the Antarctic Treaty System (ATS) faces nowadays the uncertainties of the new international order. Starting out from John Mearsheimer's realistic perspective, this paper aims to analyze, the strategic importance of Antarctica and the interests that China and India have on the continent, as well as speculate on how their rise on the international scenario can impact the future of the Antarctic Treaty System.

**KEYWORDS**

Antarctic Treaty System; Offensive Realism; China.

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