THE DRAGON'S FOOTPRINTS IN THE SOUTH POLE: A STUDY ON CHINESE STRATEGIES AND ACTIONS IN ANTARCTICA AND ITS IMPLICATIONS FOR BRAZIL

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Introduction

"It will be a new era that sees China moving closer to the center stage and making greater contributions to mankind" said Chinese President Xi Jinping in 2017 during a speech given to the Chinese Communist Party (CCP) (Xinhua 2017). This speech presents not only the position that China wants to achieve in the international scenario, but also a part of the country's strategy. Chinese growth in recent years has impacted its behavior on the international scene, which changed considerably in the 21st century and, especially, after the 2008 crisis (Zhao 2015; Oliveira 2019). The Asian giant began to explore its strategic regional maritime environment, entering into conflicts with the countries of the South China Sea and the East China Sea in the search for maritime territories and islands that could not only hold important energy resources, but safeguard its oceanic lines (Cole 2015; Oliveira 2019).

In addition, associated with the Chinese maritime strategy (Brady 2014; Brady 2017), the Asian dragon started to act more decisively in the icy regions of the planet, stimulating a geopolitical and geoeconomic race towards the future access to strategic resources and maritime transport lines. Spaces such as Antarctica and the Arctic have become the scene of geopolitical disputes between countries, especially since China started to insert itself more assertively on such international strategic theaters in the 21st century. The geopolitics of the sea and the geopolitics of ice are new themes that emerge in the academy due to the interests of great powers to strengthen their presence and explore these regions (Becker 2004; Brady 2014; 2017; Zhou 2019).

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Despite the fact that both polar territories have different characteristics, they represent regions that have not yet been fully exploited by the states of the international system. Considering the Antarctic, the focus of this article, no country has sovereignty over its territory and no war has been fought over it. About 98% of the continent is covered by ice (average thickness of more than 2,000 m), which makes it difficult to extract resources from the region under the ice layer present there. However, even so, there are studies that indicate the potentialities of the region which would be rich in strategic resources such as oil, uranium and water, for example (Brady 2014; 2017).

In the face of the increased geopolitical pressure that China has been exercising on the most diverse international chessboards, this article aims to contribute to a greater debate on the Chinese strategy for the Antarctic security strategic theater. In this sense, the starting point of this article is the following question: what are the Chinese strategies for the Antarctic region in the 21st century and what is the possibility of conflict in the region due to these interests? Furthermore, the article also aims to present a Brazilian perspective to think about the Antarctic region and the possible implications of a geopolitical race in the region for its government. In this sense, the article also seeks to answer a second question about: What are the effects of China's more active insertion in Antarctica for the world and, above all, for Brazil when the Brazilian strategic interests for the region are considered?

In order to answer such questions, the present article intends to be analytical and propose questions, understanding the geopolitics of the region and the strategy of China and analyzing its links with the rise of Xi Jinping's China. For this, the article opens with a mix of theoretical frameworks, opposing realist writers, especially John Mearsheimer (2014), of classical geopolitics, mainly Michael Klare (2008) and also José Luís Fiori's based on its theory of global power (2004; 2008; 2013; 2014). It also presents a qualitative analysis to understand the Chinese performance in the Antarctic and the relevance of this region in the foreign policy of the Asian giant.

The Antarctic and the (Re)Definition of Territory: The Geopolitics of Ice

The Antarctic is a region that geographically covers about 14 million km2, being larger than Australia and Europe, and has a coast of almost 18 thousand km2, holding approximately 70% of the world's fresh water. Also, it is a region whose surrounding seas have plenty of natural and mineral resources. Historically, from the end of the 18th century until the middle of

the 19th, the exploration of the Antarctic and its surroundings was guided by trade interests, especially by the hunting of marine mammals (Ferreira 2009, 26). It was only after the first scientific expeditions to the continent that took place at the end of the 19th century that territorial claims began to emerge, with the United Kingdom being the first country to officially claim part of the Antarctic territory. Followed by the United Kingdom, New Zealand (1923), France (1924), Australia (1933), Norway (1939), Chile (1940) and Argentina (1940) formalized their territorial interests on the continent (Ferreira 2009, 26-27; Dodds 2016, 426-427).

In the post-World War II period, it was affected by bipolarity, and a resolution around the Antarctic was defined and stimulated by the interests of the USA and the USSR for the region. Between 1946-1947, for example, the USA carried out one of the largest expeditions to the region, the so-called Operation High Jump, while the USSR organized the Slava Flotilla expedition in 1946 (Ferreira 2009).

One of the first authors to debate Antarctic geopolitics in international journals was John Andrews in his 1957 article entitled "Antarctic Geopolitics" for the Australian Outlook. The author presents the main reasons that would give a new meaning to the Antarctic territory in the post-World War II world. This reframing involved territorial representations (imaginations) and political-strategic issues (economic, trade and military) (Dodds 2016). As the demands grew in the course of the 20th century and exploratory missions to map, photograph and to establish bases in the Antarctic increased (Dodds 2016), the Antarctic region started to gain strategic importance for navigation in the southern hemisphere.

The region has gained more and more relevance, especially consider the prospects of what the region could offer in the future. As Andrews (1957, 4-5) presents, the waters that surround the continent were (and are) rich in marine life, but their exploitation was still remote and extremely difficult. Studies that pointed out the existence of resources due to geological exploration considered the possibility that significant amounts of resources such as coal, copper, iron ores and others exist in the region. However, its commercial exploitation was still risky in view of the few research that had been conducted on Antarctic soil and its surroundings (Ferreira 2009, 76). In 1973, the United States Geological Survey (USGS) presented that in the seas of Bellinghausen, Ross and Weddell Sea the existence of 45 billion barrels of oil and 115 trillion cubic feet of natural gas (Mitchell 1977, 91) could be estimated. Furthermore, there are similar indications, compared to other hydrocarbon-rich regions, based on the continental drift thesis, that could lead to a hydrocarbon's reserves.

Nowadays, the technology to explore oil in the marine environments

already exists, but the greater difficulties of exploration the Antarctic, due to deeper and turbulent waters, indicate higher costs of exploration. (Ferreira 2009, 76; Andrews 1957, 5; Brady 2017). The discovery of oil and gas on the Atlantic coast of Africa and of South America, corroborate the possibility that sediments and similar accumulations of these resources have occurred along the Antarctic coasts. Other projections are made regarding resources in the region are based on geographical history. After all, according to the continental drift thesis, the Antarctic region was a part of the other continents for millions of years (Gondwana) and it is postulated that most of the continent was linked to South Africa, India and Australia - regions known for the existence of natural resources (Ferreira 2009; Brady 2017).

The difficulty in reaching a consensus on the legal status of the Antarctic in the 1950s led the International Council of Scientific Unions (ICSU) to decide to promote the International Geophysical Year (IGY), which brought together researchers from sixty-six countries around the world in an international research and scientific cooperation effort. This event prompted the convening of an international conference to definitively solve the situation of the continent. The countries participating in the meeting were the USA, the USSR and the nations that had established scientific bases in the region during the IGY - South Africa, Argentina, Australia, Belgium, Chile, France, Japan, Norway, New Zealand and the United Kingdom (Ferreira 2009, 39-50).

At that time, the Antarctic Treaty was signed in Washington in 1959. Based on this agreement, the signatory countries that carry out activities in the Antarctic committed themselves to further the dialogue about the use of the continent "exclusively for peaceful purposes". In its fourteen articles, the Treaty comprises the prohibition of military activities (such as the establishment of military bases or weapons testing), the freedom to continue scientific research, the promotion of international scientific cooperation, and several other points. The assumptions that created the Antarctic Treaty soon expanded, inaugurating a series of rules and interconnected regulations, and a regime, creating what is now known as the Antarctic Treaty System (ATS).

Over the years, countries have become signatories of the Antarctic Treaty and participated in the international regime related to that territory. Currently, the Antarctic Treaty has 53 signatory countries and also envisage the accession of any UN member country - where 29 are consultative members for being original signatories or for conducting substantial scientific research on the continent (Brazil and China are included in this category). In the aftermath of Treaty, three conventions emerged to regulate the rational use of natural resources - the Convention for the Conservation of Antarctic Seals (1972), the Convention on the Conservation of Antarctic Living Marine Resources (1980) and the Convention on the Regulation of Activities on Resources Antarctic

Minerals (1988 - which did not come into force) (Ferreira 2009).

Andrews (1957) argues about how the region's claims and increased relevance in the period were shaped essentially by growing fears about the future, what the region could become (or could offer from a political, military, economic and commercial point of view) and not necessarily by what the region was. If Andrews' statements in 1957 pointed to predictions about a future scenario of the Antarctic economic and commercial relevance, that scenario continued to permeate the region's ideas of territoriality. It is not by chance that the evolution of the ATS culminated in the adoption of the Protocol on Environmental Protection to the Antarctic Treaty (1991), which bans mineral activities in the Antarctic and concedes to the region the status of "International Nature Reserve dedicated to Science and Peace", postponing the discussion on the commercial and resource exploitation of the region until 2048 (Article 25).

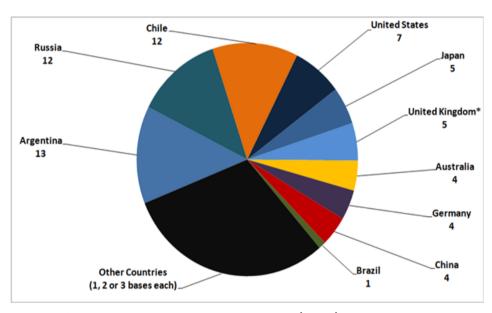
The possibility of the future exploitation of strategic resources in an international scenario where demands tend to increase in the face of the development and growth of nations is a theme commonly addressed in classical geopolitics, especially by authors like Michael Klare (2008) who presents a pessimistic world view on the access to natural and strategic resources in the long run. The rise of new powers in the international system such as China, India and others, coupled with the increase in energy requirements to meet domestic demands, have caused great instability and staggered territorial conflicts.

Until recently, the global search for vital resources had been dominated almost entirely by mature industrialized powers. Three centers of economic power - the United States, Japan and Europe - devoured most of the oil, natural gas, coal, uranium and other primary energy sources used worldwide, along with disproportionate amounts of other industrial commodities like iron ores, copper, aluminum and tin. In the past decade, however, young competitors have forced their way onto the scene with starving economies that devour huge amounts of raw materials just to sustain their explosive growth rates. The emergence of these new assertive consumers has completely changed the field of dispute over resources (Klare 2008, 63).

With the changes in the system and the rise of new countries economically and politically, regions such as Africa, South America and Southeast Asia itself received the attention of the Great Powers. After all, as Klare mentions (2008, 33), not only has the consumption and demand for energy and other vital resources reached unprecedented levels, several of the reserves in place are being drained visibly, faster than new reserves can be put

into operation. In view of this geopolitical dynamic, authors have presented the revitalization of the importance of the Antarctic region, like a promised "Eldorado" - places with stocks of natural and strategic wealth, therefore being on the range of future great powers struggles (Becker), or at least, as one last promised frontier of exploration.

Thus, there are currently 84 main research facilities on the continent, with countries such as China having more space on the frozen continent (COMNAP 2020). According to the data from the Council of Managers of National Antarctic Programs (2020), China is currently increasing the number of bases in Antarctica and today is the 4th country with the largest number of positions.



Graphic 1: Number of Stations and Fields in Antarctica by Country

Source: Self elaboration based on COMNAP (2020).

Chinese Foreign Policy and Strategic Interests Towards the Antarctic in the 21st Century

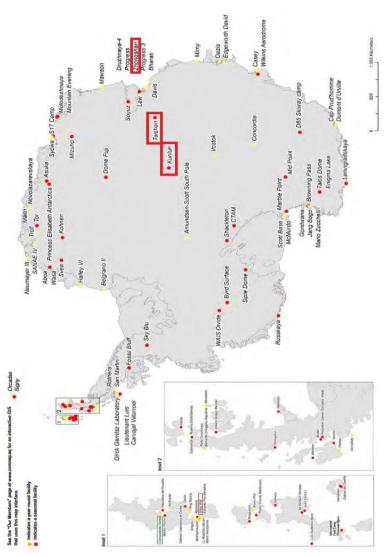
China does not formally claim the Antarctic region, but has gradually expanded its presence and operations over the years. Currently, the Chinese government spends more than any other state on new infrastructure in the region, building bases, airplanes, icebreakers, etc. (Zhou 2019; Brady 2017).

Reflecting about a future scenario of scarcity, it is relevant to analyze how the Chinese action in the region has developed and which are the future obstacles that it could bring as a possible revisionist actor (even if others may also emerge and enter the dispute) in the region.

Currently, China maintains four research stations in Antarctica, being the Great Wall (1985), the first, located on the island of King George, where there is also the only Brazilian station known as Comandante Ferraz. The other three stations Zhougshan (1989), Kunlun (2009) and Taishan (2014) are located further east in the Antarctic and are located in areas claimed by Australia. In the case of the Kunlun base, the Chinese government intends to use these bases and others in its national satellite system in the future, the BeiDou (Brady 2017).

China is seeking to build a fifth base in the bay of Newfoundland, located in the New Zealand claim region, which would establish a strategic physical location for the possibility to explore the resources of the Ross Sea. The growing Chinese presence in the Antarctic also shows in the numbers of Chinese tourists visiting the continent. Between 2018-2019, more than eight thousand Chinese citizens visited the Antarctic, representing 15% of the total tourists in the period (IAATO 2020). According to Brady (2014, 20) China is the second country with the largest number of tourists, scientists, fishermen and employees working in the Antarctic.

Figure 1: Map of the Bases of all Countries Located in the $Antarctic^2$



Source: COMNAP (2020).

The Chinese state is a key player in China's expansion into icy theaters and in recent years, especially during Xi Jinping's government, icy lands appear to be gaining prominence in China's grand strategy³. The key role of

² Locations underlined in red are China's bases. Localities underlined in green are the Brazilian bases.

³ Grand strategies involve prioritizing foreign policy goals, identifying existing and potential resources and

the State of China in this process of expansion is supported by the theory of Global Power. In this perspective, the capitalist action is coordinated by the State according to its interests in accumulating power and given the systemic pressures that it suffers in the international environment (Fiori 2004; 2008). In the case of the Arctic such a glimpse becomes more apparent with the ideas and debates on the Polar Silk Road after the launch of the White Book on Chinese policy for the Arctic (SC 2018).

The relevance of the Antarctic and the polar regions to China has grown and can be seen in the last two of the country's five-year plan: 2011-2015 and 2016-2020. China's latest five-year plan focus on building China's polar scientific credibility and infrastructure, and in the case of the 13th plan, the polar issue gained more prominence than in previous years - presenting the Chinese interest in establishing a new research station in the Antarctic, advance in ice breakers technologies, increase air capacities in the Antarctic, among others (NDRC 2020). These plans have been drawn up every five years since 1953, establishing goals and economic and social development policies to ensure that national strategies keep pace with changes over the years in China and on the international stage.

In recent years, China's perceptions of the international system have shown that the Asian giant's fears about ongoing security dilemmas. In the 2019 Chinese white paper it is pointed out that "major countries around the world are readjusting their security and military strategies and military organizational structures. They are developing new types of combat forces to seize the strategic commanding heights in military competition "(SC 2019). In addition, the document states that one of China's main objectives is to strengthen national defense and constitute a military power compatible with the country's international position and its security and development interests.

With the increase in global demand due to the growth in population, the global energy crisis and advances in technology/extraction methods, and the increase of global warming, the Antarctic region may become the epicenter of a geopolitical conflict in the future. After all, while the region is rich in biodiversity and living resources, the Antarctic also holds potential mineral resources and even the possibility of extracting resources from it. Brady (2017, 10) suggests that China has been building research bases in areas which it identifies as strategic and rich in natural resources.

selecting a plan or script that uses these resources to achieve those goals. Grand strategy is the inevitable process of classifying and evaluating these interests, threats and resources (Oliveira 2019). We consider great strategies as a calculated relationship between ends and means with the aim of increasing national power or its security.

According to Zhao (2015, 261), the changes in Chinese foreign policy since the 2008 crisis have become increasingly evident. Since the government of Hu Jintao, China has transformed its foreign policy stance and, following Xi Jinping's rise to power, it is becoming increasingly visible the change of a previous "taoguang yanghui" stance - to keep the profile low -, closely associated with Chinese politics since Deng Xiaoping ,- towards a "yousuo zuowei" - actively doing something (Masuda 2016; Zhao 2015, 261). Xi Jinping has transformed Chinese foreign policy, emphasizing strategies for the internationalization of the country and its economy, in the search for more power and wealth in the international arena.

To build a new model of relations between great powers, China has been behaving as one, especially in its close regional environment, in Asia-Pacific, and its aspiration is determined by the increase of its relative power in the international arena (Zhao 2015, 265; Oliveira 2019, 238-240). According to Brady (2017), the geopolitics of the Antarctic is undergoing major transformations and there are suspicions about China's engagement in undeclared military activities in the Antarctic. Also, according to the author, China has sought recognition for the fact that it is now a "polar state", that is, a power active in the Arctic and the Antarctic, and this point was expressed when Xi Jinping spoke in Australia in November 2014.

China's leaders see their country's expanding polar presence as a way to demonstrate China's growing global power and gain international recognition for this new status. In the Chinese political system, polar affairs are part of maritime affairs, making the great polar power an essential component of China's maritime strategy (Brady 2017, 5, our translation).

Regarding China's performance in the Antarctic, it should also be noted that the State Oceanic Administration (SOA) of China has been the government department responsible for China's polar activities since 2008. Nestled under the Ministry of Land Resources, the Administration manages activities in the Arctic and the Antarctic, dealing with tasks like supervising research, expeditions and logistics. Affiliated to SOA is the Chinese Arctic and Antarctic Administration (CAA) which performs the general function of organizing expeditions to the Arctic and the Antarctic and science programs across the country, managing Arctic and Antarctic affairs, participating in international organizations and promoting international collaboration in the polar field on behalf of SOA. In addition to it, there is also the Polar Research Institute of China (PRIC) which is an institute for polar research, logistical operation and data processing. PRIC is responsible for conducting

some scientific programs, carrying out some exploration operations and daily management of the station, as well as managing the Chinese polar science database and the publication of articles in the area (COMNAP 2020).

The Chinese National Antarctic Program is largely organized in a 5-year program called "Chinese Polar Environment Comprehensive Investigation and Assessment Programs", approved by SOA. In the Antarctic, the Program comprises three parts: the Antarctic Marine Environment Survey, the Antarctic Terrestrial Environment Survey and the Comprehensive Assessment of the Antarctic Environment. In addition, SOA coordinates the Chinese Advisory Committee for Polar Research (CACPR), which serves as an important governmental coordination body on polar issues. The State Oceanic Administration is also the interface with the UN Convention on the Law of the Sea (UNCLOS) and this administration also oversees China's maritime surveillance (SOA 2019). This department also outlines China's maritime laws and regulations and facilitates China's participation in international maritime treaties. The SOA's political position has increased in recent years largely because its maritime law enforcement agency, the China Maritime Surveillance (CMS), is one of the several fleets designated to patrol disputed waters in the Yellow Sea, East China Sea, and the South China Sea.

Although the importance of the seas surrounding China and the polar regions is not comparable in some ways, it can be inferred about how the polar affairs, being under the supervision of such an agency, connect some of the Chinese maritime interests and their continuous expansion of defense capabilities in the Indo-Asia-Pacific with the polar regions. In fact, it is too early to argue that China already has a more assertive strategy towards the Antarctic. However, considering the growing Chinese performance in the most varied strategic theaters and its interests in natural resources, its growing presence in the Antarctic would be a reflection of what the region may become in the future. From a point of view similar to realist theorists such as Mearsheimer (2014), who argue about the search for the maximization of power, and, also considering José Luís Fiori's theory of global power (2005; 2008), the search for power and wealth in the international arena brings us to a future scenario in which the Antarctic region can potentially be disputed by the great powers.

In the face of the anarchy of the international system, the rise of China is likely to cause or inevitably would cause instability and conflict (Mearsheimer, 2014). Just as Thucydides considered the Peleponesian War inevitable due to the rise of Athens and the decline of Sparta's relative power, several authors (Gilpin 1981; Farias 2020; Allison 2017; Mearsheimer 2014; Oliveira 2021) argue about the repetition of history. In this case, the rise of China and the loss of relative power in the USA will contribute towards the

trend of a new conflict - economic, technological, military and social.

In Mearsheimer's pessimistic argument (2014, 21), the author points out that the Great Powers behave aggressively not because they want to, but because they have to, in order to achieve more power accumulation if they want to maximize their chances of survival. After all, the international system creates incentives for states to seek opportunities to gain more power at the expense of their rivals. Being the international system governed by anarchy and the dynamics of accumulation of power and wealth, states are expansive and aim to improve and review their position in the international arena. According to Fiori (2004: 2008) competition and war are the engine of this power system, where all powers fight for global power and create order and disorder, expansion and crisis, peace and war.

Furthermore, the control and access to territories (mainly of those rich in resources and with a strategic geopolitical position) has always been one of the central themes of the political game between states, as an element for maintaining or increasing power or for the survival in the international arena. As Spykman (1938, 9) affirms, since the geographic characteristics of states are relatively unalterable and immutable, the geographic demands of States have remained the same for centuries and, because the world has not yet reached "that happy state where the wants of no man conflict with those of another, those demands will cause friction. Thus, at the door of geography may be laid the blame for many of the age-long struggles which run persistently through history while governments and dynasties rise and fall".

China already figures as the largest economy in terms of GDP (IMF 2020) and as the second country that spent the most on military power in 2019 (SIPRI 2020), only trailing the USA. Such Chinese economic power has been consolidated since the end of the 20th century with the strategic project, the foreign policy interests of Deng Xiaoping (1978-1990) and, mainly, after China's entry into the World Trade Organization (WTO) in 2001. In fact, since the end of the 1990s, China's growth has been vertiginous - at the beginning of the 21st century, it reached 10% per year and continued with high rates even after the 2008 crisis -, which has enabled its greater insertion and presence in the most diverse boards (Christensen 2015; Zhao 2015; Gallagher 2016).

In the 21st century, as China grew, the world as a whole felt the impacts of its growth and of its consequent demand for natural resources and new markets to supply its development, which combined urbanization and industrialization. This development model was intensive in the use of mineral, energetic and metallic commodities (Hiratuka 2018). In this sense, Chinese demands have affected the countries of Latin America and Africa directly and indirectly, due to their effect on international prices. In addition,

its growth has also resulted in an increase in the number of investments in infrastructure projects and in the provision of loans to several countries in the Global South (Hiratuka 2018; Cintra; Medeiros 2015; Gallagher 2016).

In the case of the Chinese military capabilities, in general terms, China is estimated to be the second country with the largest number of satellites, either both military or commercial. While the USA has 1,425 satellites, of which about 210 serve military purposes, China has 382 satellites in total and 114 of which are expressly used for military purposes (UCSUSA, 2020). When we analyze, for example, Chinese military capabilities from the nuclear point of view, China is the third country in nuclear warheads, with a total of 320, behind only the USA (5,800) and Russia (6,375) (Armscontrol 2020).

China has built its second icebreaker, the first being built entirely in China. The Xuelong 2 or Snow Dragon 2 together with Xuelong - the country's first polar survey vessel, purchased from Ukraine in 1994 - undertook its first expedition to Antarctica in 2019. With Xuelong 2 - operated by the Polar Research Institute of the State Oceanic Administration - China equals the USA in number of icebreakers, but lags behind Russia, which already has more than 40 icebreakers operating in the Baltic and the Arctic (Woody 2020). From the point of view of maritime capabilities, China has been investing so that its navy (PLAN) can be present all around the world. China "plans to send military units wherever its global strategic interests require" (Zhou 2019). In total numbers, China already has the largest navy in the world, with a total of approximately 350 ships and submarines, including more than 130 surface combatants (DOD China 2020, 133). In addition, the 2019 Chinese white book presented that PLAN is streamlining the transition of its operations from "defense on the near seas" to "protection missions on the far seas" (Xinhua 2019). The China Military Power Report 2020 shows that China's strategy includes the modernization program for Chinese military forces that seeks to complete this process by 2035 and transform the PLA into a highlevel military force (worldwide) by the end of 2049 (DOD China 2020, VII).

In the case of the Antarctic territory, Anne-Marie Brady (2017, 224) argues that Chinese interests are increasing in the region as the country has sought to become a polar power in both the Arctic and the Antarctic regions. In fact, the more active Chinese behavior on other international boards has been the result of a comprehensive policy pursued by Xi Jinping. According to Sorensen (2013, 376), perceptions of the enhancement of Chinese relative power have increased nationalist ambitions and expectations among people who believe that China, now, after '100 years of humiliation', should rise up and assume its position as a great power. In this sense, Xi Jinping's "Chinese Dream" policy strategy is associated with the foreign policy of the Asian giant,

consisting of an example of the recovery speech of the Middle Country when it states that the great rejuvenation of the chinese nation is the biggest dream of the chinese nation in modern times (apud Xinhua 2013).

The Antarctic region is protected by the ATS, as a multilateral treaty like we mentioned earlier, however, pessimistic speeches have emerged like that of Ellie Fogarty from the Australian Institute of International Policy in 2011. Fogarty stated that "major powers such as China and Russia have voiced their interest in the continent's resource potential, strongly suggesting the current prohibition of resource exploitation will be revisited after 2048" (Fogarty 2011). Although the Chinese government has sought to present itself as a responsible and environmentally conscious country, as stated in Xi Jinping's speech to the United Nations in late September 2020 - with a leading role in global governance (FMPRC 2020); this did not translate, for example, into a change in China's policy in the Antarctic. The country has allied itself with Moscow to block the introduction of three marine areas to be protected in the Southern Ocean at the annual meeting of the Commission for the Conservation of Antarctic Marine Living Resources in Antarctica (CCAMLR), held from 27 to 30 October. This position may be associated with the increase in Chinese interests and consumption by the Antarctic krill - a species of crustacean (Urch 2015). It should also be noted that fishing for Antarctic krill is part of the Chinese interest in expanding fishing in distant waters around the world's oceans, as presented in the 13th annual plan regarding the issue of "Fishing in Distant Waters"⁴. The Shanghai Chonghe Marine Industry (CMI), for example, has ordered the largest trawler ever built to capture Antarctic krill which will be completed in 2023 (BairdMaritime 2020). Therefore, there are fears that the Antarctic international regime will start to collapse in the face of competitive pressure from the international system.

Some researchers like Dodds (apud The Atlantic 2020) understand that the increase in Chinese demand for krill may also influence the Asian giant's interest in other resources in the region. In Dodds' words "fishing is a proxy for minerals". Furthermore, despite the existence of the treaty, a geopolitical race for the region has already taken place and it emerges in the form of a dispute for scientific leadership and for the projection capacity towards the polar regions. Between 2001-2016, for example, China invested 310 million yuan in its Antarctic program, eighteen times more if we consider the 1983-2000 program (Global Times 2017).

⁴ In general lines, there are three proposals for the creation of Marine Protected Areas (MPA) to be discussed. The oldest proposal is the protection of three blocks of ocean and ocean floor along East Antarctic, an area rich in cold water corals and penguin feeding areas. Also on the agenda was the creation of an MPA of I.8 million km2 in the Weddell Sea area. Finally, there is a proposal to create an MPA west of the Antarctic peninsula.

With the increase in the capacities of States, intentions and interests may become more evident (Zakaria 1998). This point, as mentioned, can be seen in Chinese foreign policy which has become more assertive and active internationally (Zhao 2015; Oliveira 2019). Currently, China remains in agreement with the ATS regime and the possibility of the country seeking to extract resources in the region is still remote, given that it is a signatory of the Madrid Protocol. After 2048, would China be willing to renew its commitment to the non-exploitation and mining of resources in the Antarctic? So far, this question cannot be answered as Chinese strategies for the Antarctic continue to focus on research and the exploitation of living resources, like fishing, in the region.

However, the considerable investments that China has been making at the South Pole may allow Beijing to position itself at the forefront of the resource race in Antarctica. According to Anne-Marie Brady (apud Atkin 2015), Chinese documents are clear about Chinese interests in minerals in the Antarctic. According to the author, the material includes a 2005 report by members and former members of the Polar Research Institute of China. The report itself would say that the region has potential mineral resources, and that exploration was only a matter of time. In another 2013 report obtained from a confidential source by the author, it was stated that "regardless of how the spoils are divided up, China must have a share of Antarctic mineral resources to ensure the survival and development of its one billion population". The researcher points out that for the Chinese much of the scientific research conducted in the Antarctic is a disguised form of presence and that many countries in the Antarctic are occupying bases that are not focused on scientific knowledge, but to invest in long-term strategic interests, including potential access to any resources that may be discovered (apud Atkin 2015).

The possibility of an expansionist China in the Antarctic in the horizon is one of the scenarios to be thought about the future of the icy continent. It is noteworthy that this does not mean that only China could be a revisionist actor in the region's treaty system, as far as the litigants countries themselves can unilaterally claim a part of the Antarctic territory. In the Brazilian case, the Antarctic presence is considered a geopolitical and geostrategic issue in the sphere of national interests. The South Atlantic is the main route to access the Antarctic continent and Brazil being the country with the longest Atlantic coast in the globe, the region is of vital interest to Brazil.

The Antarctic's Relevance to Brazil and the Implications of Chinese Actions in the Region

Historically, Brazil became a signatory to the Antarctic Treaty in 1975 after the recommendations of João Frank da Costa, head of the Intellectual Cooperation Division and the highest authority of Itamaraty on Brazil's Antarctic issues, and the favorable circumstances for its accession that year (Ferreira 2009, 127). Costa recommended that Brazilian policy towards the Antarctic should start with adherence to the Treaty and that Brazil should become a consultative member. The memorandum has been the basis of all Brazilian international positioning in Antarctic matters since then and guides Brazil's position on the Antarctic region in the National Defense Plans (Brasil 2005; 2012a; 2020) and in the National Defense Strategies (Brasil 2008; 2012b; 2020). Currently, Brazil has a base the Antarctic, the Commander Ferraz base that was reopened in January 2020 after a fire destroyed it in 2012, and currently has 17 laboratories in its base (Atkin 2015).



Figure 2: Brazilian Base Commander Ferraz

Source: Strategic Plan of the Brazilian Navy 2040 (2020).

The Antarctic was included in the 2012 National Defense Policy (PND) in the country's strategic surroundings. However, since the 2005 National Defense Policy and the 2008 National Defense Strategy, Antarctica was already included in the document as a region of interest to the Brazilian government. Since then, the importance of the Antarctic had grown, and this can be seen in the increasing mention of the term the Antarctic in the documents. As a brief comparison, while in the 2012 PND the Antarctic region receives a mention, in the PND launched in 2020, the region receives three mentions. In the last document dated of 2020 the Brazilian government is aware of the potential resources existing in the Antarctic continent and bases its national strategy on the need to protect such territory.

[...] the South America, the South Atlantic, the Antarctic and the African countries bordering the South Atlantic hold significant reserves of natural resources, in a world already aware of the scarcity of these assets. Such a scenario may give rise to conflicts in which the use of force or its support for the imposition of political and economic sanctions prevails. External powers have increased their presence and influence in these areas (Brasil 2020, 17).

The Antarctic has played an important role in the Brazilian geopolitical debate since the end of the 20th century, having as its main thinkers authors such as Golbery do Couto e Silva (1967), Leonardo Mattos (2014), Therezinha de Castro (1976) and Meira Mattos (1976; 2011)⁵. Authors like Therezinha de Castro emphasized the role of the Antarctic and highlighted it as a key point for interoceanic maritime navigation, highlighting the importance of Antarctica for the defense of the South Atlantic - which is the region geostrategically delimited in the North by the 16N parallel, in the South by the Antarctic Continent, in the East by the African coast and in the West by South America (PND, 2012; 2020). The South Atlantic comprises four large archipelagos and islands of different sizes and importance, as well as different nationalities. The African coast stretches from Guinea-Bissau to the Cape, comprising sixteen countries. The American coast, on the other hand, starts at Cabo de São Roque and extends to the Cape of Tierra del Fuego. Its length

⁵ In the works of Golbery, Meira Mattos e Therezinha de Castro, the Antarctic, gained relevance. Considering Castro´s thought there is a debate over the possibility of Brazil being able to project its influence in the region. In this sense, the first Brazilian movements to show some interest for the white continent, had developed in the 1950s within the framework of the "confrontation theory" (teoria da defrontação no original, nota do editor) developed by Professors such as Therezinha de Castro, linked to the Brazilian Institute of Geography and Statistics (IBGE). This theory was never able to be translated into an official Itamaraty´s position, but it had some influence on Brazilian´s foreign policy, and was able to put the Antarctic into the political agendas of some leaders.

is 9,000 km and covers Brazil, Uruguay and Argentina (Fiori 2013; Oliveira; Netto 2016, 229).

Due to its geographical characteristics, the South Atlantic basin allows the rapid maritime transport of large commercial volumes. Brazil has consolidated its position in the region through non-traditional programs of power projection with the development of public policies that encourage fishing, coastal shipping, scientific research, and tourism activities that had consolidated Brazilian participation and dominance of the territory. Approximately 95% of Brazilian international trade flows through these waters, a movement of more than US \$ 229 billion per year. In addition, 90% of the country's oil and gas production is generated on the continental shelves and 75% of Brazilian gas production comes from this maritime region (Fiori 2013; Oliveira; Netto 2016, 230).

The discoveries of these reserves in the region have generated a growing interest of countries such as the United Kingdom, the USA, Germany, France, Russia, China, and Japan. For the purpose of this article, China's interest will be highlighted. Over the past decade, the Chinese presence in the South Atlantic has grown at a quantitative level, through the expansion of trade and investments in/with the region, as well as in the diaspora of the Chinese community in Latin America and Africa; at the qualitative level, the Chinese presence has grown through its intervention in fields other than economics, such as politics, culture and security (Abdenur 2013; Abdenur; Neto 2013).

There are also multilateral strategies that have been adopted by Brazil with countries in the region in order to protect and safeguard their interests in the South Atlantic. It is worth mentioning, for example, the South Atlantic Peace and Cooperation Zone (ZOPACAS)⁶ and the training carried out in the IBSA through trilateral cooperation between Brazil, India and South Africa, with IBSAMAR. Furthermore, in recent years there has been a growing tendency to expand and deepen multilateral cooperation between South American countries, especially during the Lula government (2003-2010). This was also observed in the context of the Antarctic programs, where in addition to a wide variety of bilateral technical and logistical support agreements, there are also multilateral initiatives such as the Latin American Antarctic Program Administrators Meeting (RAPAL), already in its XXXI edition (Ferreira 2009; RAPAL 2020).

⁶ The 24 countries that are part of ZOPACAS are South Africa, Angola, Argentina, Benin, Brazil, Cape Verde, Cameroon, Congo, Ivory Coast, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, Liberia, Namibia, Nigeria, Democratic Republic of Congo, São Tomé e Príncipe, Senegal, Sierra Leone, Togo and Uruguay.

In addition to the South Atlantic issue, the Antarctic affects significant routes for Brazilian maritime transport and the main access route to the Antarctic continent passes through the South Atlantic. Currently, a large part of the world maritime trade traffic uses controlled artificial accesses, like the case of the Panama Canal (connection between the Atlantic and the Pacific) and the Suez Canal (Mediterranean and Indian). Free access to these passages is subject to possible regional turbulence, which may result in the crossing being closed or restricted. Such restrictions increased the interest and the use of accesses in the south of the South American and African continents, through the Drake Passage and Cape Agulhas. The Drake Passage, which separates the Antarctic from the South American continent, has potential value as a maritime navigation route, given the vulnerability of the others (PEM 2040 2020).

In fact, the official documents of the Brazilian government raise concerns about the uncertainties in the international arena. Issues related to the Antarctic can be seen not only in the END and PND, but also in the 2040 Navy Strategic Plan.

South America, the Antarctic and West Africa have significant reserves of natural resources. In this strategic environment, with a focus on the South Atlantic, it is essential to consolidate the region as a Zone of Peace and Cooperation (ZOPACAS), in order to avoid interference from illegitimate interests. Political motivations, social conflicts, interests of economic groups and even of an ethnic and religious nature bring, as an underlying question, the search for energy, water, rare minerals and geographic space. In this sense, maritime spaces have become the object of dispute between States, paradoxically accentuated. Armed conflicts, now hybrid, in which the perpetrators of aggression and real interests are hidden, have not yet been abolished from international relations, with the dispute over resources as a strong motivating factor (PEM 2040 2020, 28).

However, the Antarctic program is still little explored by the Brazilian government, with investments still incipient if we take into account the increase in the interests of powers like China in the region. The annual cost of the Brazilian Antarctic Program (ProAntar) reaches the range of R\$ 8 million per year, however in 2020, for example, the Brazilian budget for the program was only R\$ 3.67 million, including parliamentary amendments (Câmara 2020). In this sense, in recent years the PROANTAR has been carrying out its activities in the limit of the budget or even below (Camara 2017).

In fact, Brazil has no shortage of strategic minerals, including oil, natural gas and even water, which means that it is very likely that the country

does not need to exploit these stockpiles within a predictable time horizon (Mattos 2014). However, considering the 2048 deadline for the possible revision of the Antarctic treaty, it is expected that countries that already had claimed territories in the Antarctic and others that operate there, such as the USA, China and India, for example, will begin to understand this region as a "living space" wishing that the commercial exploitation of the Antarctic's strategic resources begin (Mattos 2014).

For this reason, investments in S&T and in the maritime projection capacity would allow the expansion of initiatives to protect the Brazilian strategic environment. A protection that could be developed through closer ties with countries in South America, like Argentina and Chile that claim the Antarctic. The Brazilian lackluster is already observed in the relations with its neighbors, as the country is dependent on other South American countries in the Antarctic. Brazil does not have an air base in the Antarctic continent and needs to use the Chilean station President Eduardo Frei Montalva for landing and takeoff. The dependence is even more significant in the winter when the waters of the Admiralty Bay are frozen - Brazil does not have an icebreaker yet⁷ - and the logistics for carrying out the polar missions need to use the ports of Ushuaia and Punta Arenas (Hernandez 2018).

In addition to the Antarctic issue, we can also add that there is an increase in economic and trade relation relations between China and Brazil. China is already Brazil's main trading partner and in recent years it has invested mainly in strategic sectors focused on mineral and natural resources and infrastructure construction closely related to the Chinese interest in increasing the capacity for the flow of Brazilian goods (export corridors) (Santos et al 2020). Not only in Brazil, but in several other Latin American countries, China is already emerging as the main export destination (Santos et al 2020; Gallagher 2016). Such Chinese interests further demonstrate the Asian country's dependence on resources, which strengthens fears that in the future its actions in the Antarctic will become more expansionist, causing an escalation of geopolitical in the region. This dispute already exists if we consider technological and scientific issues, as well as krill fishing in the region.

⁷ The Brazilian Navy is interested in building an icebreaker. If such a project translates into reality, it may bring changes to the capacity of Brazilian operations in the Antarctic. See more at: https://www.correiobraziliense.com.br/app/noticia/brasil/2019/03/II/interna-brasil,742183/marinha-construira-navio-quebra-gelo-para-pesquisas-na-antartida.shtml

Final Remarks

China's rise is changing global and regional geoeconomic and geopolitical scenarios. In the 21st century, China continues to grow and, at the same time, its demand for natural and mineral resources expanded. As a result, China has progressively projected itself internationally, increasing its capacity to act on the most diverse strategic theaters. The increase in Chinese demands for natural and strategic resources caused by its economic growth has been stimulating the Chinese presence in Africa and Latin America, as well as reviving tensions in the Eastern and Western China seas. Just as the increase in demand has been stimulating geopolitical disputes around the world, there are fears about the Antarctic regime which may collapse both in the face of the change in the balance of power, and in view of the 2048 time frame itself.

The changes in the balance of power in the international arena have revived geopolitical disputes and directed the debate towards China's behavior at a time of relative decline of American power. Concerns about a threatening and expansive China are common in Western debates on international relations and, above all, in the framework of theories that dialogue, in some way, with realism. In the present article in the light of concepts and evaluations presented by classical geopolitics, realist theories and the theory of global power, China's performance in the Antarctic and of its foreign policy may lead to looming prospects for the region. This is not to say that China could be the sole or the main disruptive player in the region as the United States, Russia and other litigant nations can offer similar pressures. The USA itself, for example, has shown itself to be an expansionist and destructive player of the pillars and regimes it had created (or helped to create) since the end of World War II. The increase in the presence of great powers in the Antarctic intensifies the dynamics of power and security in the region and can promote more evident competitive clashes. After all, following the theories presented here, all countries seek to increase their power and wealth in the international arena in the face of the anarchy of the international system.

The increase in the Chinese presence can be seen by the increasing investments in S&T, the construction of new bases, the elevation in the number of tourists and in krill fishing in the region. In this context, we note that China has invested more and more in the region and has, at times, opposed the creation of new rules for the protection of biodiversity and of the Antarctic territories - such as krills fishing. In addition, China has been investing in polar technologies and emerging as a leader, behind Russia and the USA.

The article has argued that fears that were present regarding the Antarctic issue in the past, about the clashes for resources, continue and have been intensified with the increase in the number of players in the region. This reality allows us to consider the increased competition in the Antarctic and, consequently, tensions and disputes that will involve countries in the near future. This article outlined the Chinese interests and actions that are being developed for the Antarctic. However, it remains to be seen whether the Asian giant will present a more assertive strategy for the Antarctic, just as it did for the Arctic.

Nevertheless, the increase in Chinese investments and activities in the region are already affecting the balance of power in the Antarctic and for Brazil. The expansion of the Chinese presence in the region, as well as the possible tensions involving the Antarctic may become a problem for the achievement of Brazilian strategy. After all, the maritime crossing of the South Atlantic is the main access route to the Antarctic. Conflicts that may emerge in the Antarctic would take place in the Brazilian strategic environment, affecting not only its interests, but its international security.

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ABSTRACT

The starting point of the article is the perception of the relevant role that China has been gaining in the international arena and the competitive and geopolitical pressure that it has been exercising in the most diverse international strategic theaters, including in the Polar Regions – Arctic and Antarctic. Considering the relevance of the Antarctic, the present article analyzes the Chinese strategy and its growing presence in the Antarctic and its implications for Brazil, using the theoretical frameworks of classical geopolitics, realism, and the theory of global power.

KEYWORDS

China; Antarctic; Geopolitics; Brazil.

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