THE ‘LOOSE DREADNOUGHTS:’ SOUTH AMERICA’S STRUGGLE FOR NAVAL PREEMINENCE

By

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Near the beginning of the twentieth century, the three prevailing powers in South America—Argentina, Brazil, and Chile—engaged in a naval arms race centered around the revolutionary “dreadnought” warship type, which were larger, more heavily armed, and faster than all previous battleships. In 1907, the Brazilian government, the first mover in this arms race, contracted with British shipbuilders for two dreadnoughts designed to be the most powerful in the world. The Brazilians hoped that the prestige of these new warships would spearhead their ambitious attempt to become the regional hegemon and an international power, but a plethora of skeptical British and American media outlets quickly bought into conspiratorial suspicions that the country had ordered the ships as a proxy for a great power, a move that would have disrupted a fragile naval balance among some of the world’s great powers. Once it became clear that Brazil was keeping the ships, Argentina’s decision to respond with two dreadnoughts, themselves the most powerful in the world, was seen as a necessary countermove required by the time’s prevailing naval doctrine. Notably, the method by which Argentina conducted its dreadnought’s bidding process was subjected to criticism from shipbuilders after the dissemination of their unique designs. The Argentine dreadnoughts induced the Chilean government to seek their own cornerstones of maritime strength, but their two dreadnoughts were taken over by the United

Kingdom after the outbreak of the First World War. A third Brazilian dreadnought, larger than the previous two and designed to carry the largest number of guns in a capital ship's main battery that the world had ever seen, was sold to the Ottoman Empire in 1913 and later seized by the British after the beginning of the same conflict. The five dreadnoughts that eventually reached South America, the British having sold one of the Chilean dreadnoughts back to the country in 1920, were never actively employed against a foreign power. As time went on, the major naval powers had commissioned more dreadnoughts to stronger and larger designs, something which ensured that the South American dreadnoughts could no longer affect the great power's naval balances of power and neutralized these ship's once-heightened importance in the international media.

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All the individuals and institutions who have spent indeterminable amounts of time and money to digitize historic books, journals, and newspapers, and make them available for free on the internet. This thesis was possible only because of their efforts.

TABLE OF CONTENTS

LIST OF FIGURES

Introduction

The sun did not appear over Newcastle-upon-Tyne on 10 September 1908, for it was raining. Still, the miserable weather did not deter a large group of people from traveling to the city's large shipyard, located in the ward of Elswick and owned by the major arms manufacturer Armstrong Whitworth, to attend the launch of Brazil's newest warship. Several of the people closely involved in the ship's construction—including high-ranking officers from a Brazilian naval commission created to oversee the ship's construction; Francisco Régis de Oliveira, the Brazilian minister to the United Kingdom; Andrew Noble, Armstrong Whitworth's chairman; and the company's board of directors—took advantage of a specially chartered train that brought them from Armstrong's offices directly to the launching site. Fortunately for them, the rain slackened in the afternoon, exactly when they would have to be outside for the launching ceremony.[1]

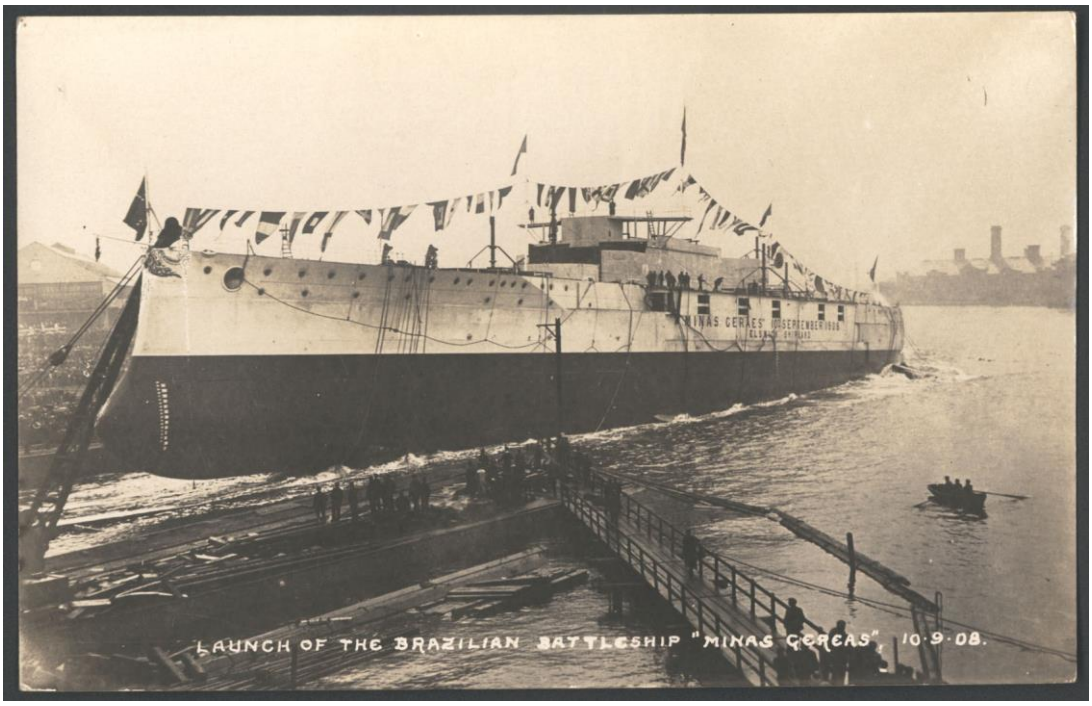
Upon arrival, these people would have seen a visibly incomplete ship that was nonetheless still composed of a substantial nine thousand tons of steel, hammered and crafted into a hull nearly five hundred and fifty feet long, and placed perpendicular to the River Tyne to facilitate a stern-first launch. It was held out of the water by temporary wooden cribbing designed to be knocked away when the ship was ready to be released, and temporary lines had been rigged above the ship's truncated superstructure to run flags along the length of the ship.

Around the scheduled launching time of 2:30 pm, the wife of the Brazilian minister stepped onto a raised platform to christen the ship. Surrounded by about a dozen people, she

[1] On 11 September, the British Meteorological Office reported a high of 53°F (12°C) and constant rain over the preceding twenty-four hours in North Shields, located a few miles northeast of Newcastle upon Tyne and the Elswick Shipyard. *Daily Weather Reports: 1st to 31st December 1908* (London: Meteorological Office, 1908), 45. The *Times* gives the additional detail that the rain slackened and picked up again later in the day. "Launch of a Brazilian Battleship," *Times* (London), 11 September 1908, 8b.

traded a bouquet of flowers for a bottle of champagne, grabbed it by the neck, and swung it through the air. It shattered upon hitting the bow of the ship, and she formally named it for Brazil's most populous state, Minas Geraes.[2] With this ceremony complete, the hull slid along two parallel and well-greased tracks into the waters of the River Tyne, being arrested by chains before it impacted the river's far bank.[3]

Figure 1.1: *Minas Geraes*' launch into the River Tyne, 10 September 1908.

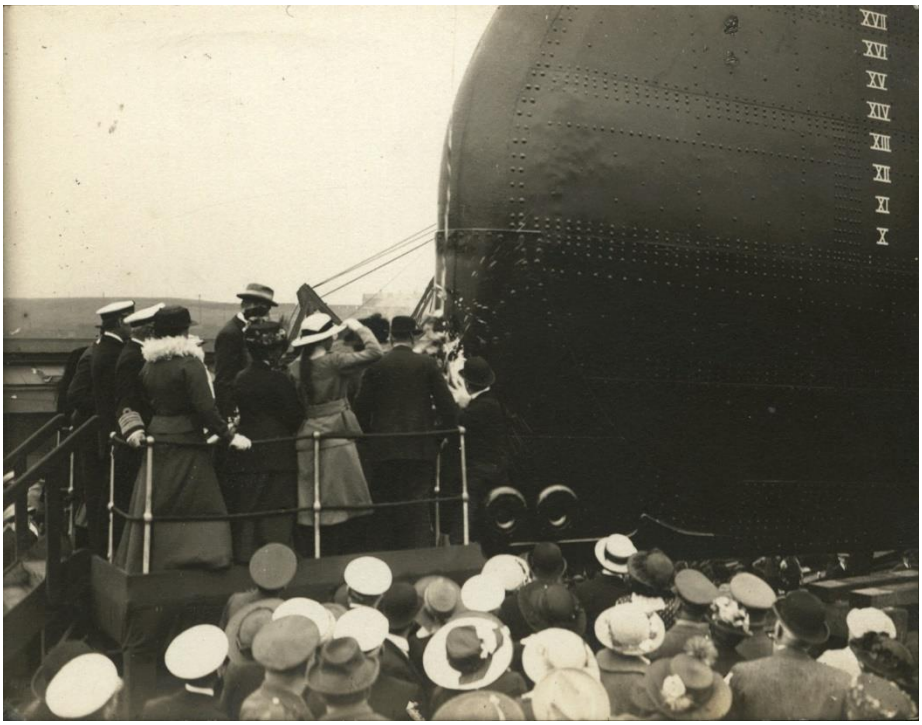


Source: Tyne and Wear Archives and Museums, DF.CLR-8-3. Public domain. https://commons.wikimedia.org/wiki/File:Brazilian_battleship_Minas_Geraes_being_launched_2.jpg.

[2] *Minas Geraes*, both the ship and state, was spelled with a second "e" until Portuguese-language orthographic changes in the mid-twentieth century depreciated it in favor of an "i," i.e. "*Minas Gerais*." In concert with primary sources, this paper uses the former.

[3] The preceding paragraphs are drawn from "The Brazilian Battleship," *Times* (London), 10 September 1908, 4b; "Launch of a Brazilian Battleship," *Times* (London), 11 September 1908, 8b; "The Minas Geraes," *Navy* (Washington) 2, no. 9 (September 1908): 38. Details of the raised platform come from figure two.

Figure 2.2: Christening of *Minas Geraes*.



Source: Tyne and Wear Archives and Museums, DF.CLR-8-29. Public domain. https://commons.wikimedia.org/wiki/File:DF.CLR-8-29_The_Launch_of_the_Minas_Geraes.tif.

The Brazilian government's 1907 naval construction program included an order for three "dreadnought" battleships: *Minas Geraes, São Paulo,* and *Rio de Janeiro*.[4] The superior armament of this warship type upon its introduction only one year earlier had made all previous battleships obsolete—so much so that the older ships would soon come to be known as "pre-dreadnoughts."[5] The potential of these ships in bolstering military strength and national prestige

[4] The program was authorized in 1904 and heavily revised in 1907. "The Brazilian Battleship," *Times* (London), 10 September 1908, 4b; David Topliss, "The Brazilian Dreadnoughts, 1904–1914," *Warship International* 25, no. 3 (1988): 242–46.

[5] Robert J. Blyth, "Introduction," in *The Dreadnought and the Edwardian Age*, eds. Robert J. Blyth, Andrew Lambert, and Jan Rüger (Farnham, UK: Ashgate, 2011), 3. Dreadnoughts had been pioneered by the eponymous HMS *Dreadnought*, which was commissioned into Britain's Royal Navy in December 1906. The key innovation of this warship type was their "all-big-gun" design, a change from previous design practices that called for a few large guns and many medium guns. This had been made practical by technological improvements, as newly designed heavy guns were able to be fired much faster than those of even a decade earlier. Moreover, mounting uniform main batteries on ships theoretically simplified fire control, as it gave naval officers the knowledge that each gun, if aimed in the same direction and at the same elevation, would fire shells that would travel roughly equal distances. Norman

was quickly and widely recognized, and Brazil was the first of several countries to catch what one writer later called the "dreadnought mania."[6] These nations scrambled to acquire their own dreadnoughts as the warship type became increasingly inflated symbols and took on leading roles in seaborne defenses.[7] As historian Robert O'Connell writes, dreadnoughts were "perceived to be the ultimate weapons of their day … among the states that owned them, dreadnoughts were generally considered the final guarantee against seaborne aggression."[8] The potential power embodied in these ships led to naval scares and arms races breaking out around Europe, including a vastly expensive duel between the United Kingdom and Germany which was a possible cause of the First World War.[9] Unlike those two countries, however, Brazil did not possess the shipbuilding facilities and technology needed to construct dreadnoughts, and so they ordered them from Armstrong Whitworth, the United Kingdom's preeminent shipbuilder. Two

Friedman, *Battleship Design and Development 1905–1945* (New York: Mayflower Books, 1978), 98; Robert K. Massie, *Dreadnought: Britain, Germany and the Coming of the Great War* (New York: Random House, 1991), 468–72; Sidney Graves Koon, "Dreadnoughts—What Are They?," *Engineering Magazine* 40 (October 1910–March 1911): 521–22. *Dreadnought* was also the first capital ship in any navy to utilize steam turbines for propulsion, although several subsequent dreadnoughts, including Brazil's, carried the tried and tested triple-expansion engines. Massie, *Dreadnought*, 474–75; Norman Friedman, *The British Battleship: 1906–1946* (Annapolis, Maryland: Naval Institute Press, 2015), 64.

[6] Gerald Ellis Cronin, "South American Sea Power," *Navy* (Washington) 5, no. 7 (1911): 29. See also "Dreadnoughts The Issue in England," *Philadelphia Inquirer*, 30 May 1909, 4; "World Warship Mad," *Washington Post*, 24 December 1911, 7. A nation's prestige was boosted to only greater heights if it could claim the "pride" of owning one of the largest and most powerful ships in the world. Koon, "Dreadnoughts—What Are They?," 536.

[7] T.G. Otte, "Grey Ambassador: The *Dreadnought* and British Foreign Policy," in Blyth, Lambert, and Rüger, *Dreadnought and the Edwardian Age*, 73–74.

[8] Robert O'Connell, *Sacred Vessels: The Cult of the Battleship and the Rise of the US Navy* (Boulder, CO: Westview Press, 1991), 4.

[9] Martin Daunton, "'The Greatest and Richest Sacrifice Ever Made on the Altar of Militarism': The Finance of Naval Expansion, c. 1890–1914," in Blyth, Lambert, and Rüger, *Dreadnought and the Edwardian Age*, 49. Other naval scares and arms races included Greece and the Ottoman Empire, Russia and the Ottoman Empire, France and Italy, and Italy and Austria-Hungary, although the intensity of the Greco–Ottoman race was far higher than the latter three. Paul G. Halpern, *The Mediterranean Naval Situation, 1908–1914* (Cambridge, MA: Harvard University Press, 1971), 184–86, 190–91, 200–08, 307–08; David Stevenson, *Armaments and the Coming of War: Europe, 1904–1914* (Oxford: Clarendon Press, 2004), 9, 89, 138–39.

dreadnoughts would be constructed immediately, while the third would follow once the first had vacated its slipway.[10]

Brazil was the third country in the world to have these innovative new vessels under construction, behind only the United Kingdom and the United States. If that held true, Brazil would possess a dreadnought before many of the world's traditional powers, including Germany, France, and Russia.[11] As such, the ships became subject to special attention; for examples, their dreadnoughts were unusually represented in the 1911 *Encyclopædia Britannica* with both a photograph and diagram, and a large model of the ship was constructed and displayed at the 1908 Franco–British Exposition.[12]

This warship order was an extraordinary move, to say the least. Neither Brazil, Argentina, or Chile—the three most powerful and wealthy countries on the South American continent—had ever possessed a capital ship that surpassed all of those owned by the major naval powers of the world, likely as much for cost as for lack of any military need for them. "It is a curious anomaly," *Scientific American* declared in a 1908 cover story, "that the most powerful

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[10] Stevenson, *Armaments and the Coming of War*, 19; Topliss, "Brazilian Battleships," 246.

[11] Siegfried Breyer, *Battleships and Battle Cruisers, 1905–1970*, trans. Alfred Kurti (Garden City, NY: Doubleday, 1973), 320; Robert Scheina, "Brazil," in *Conway's All The World's Fighting Ships, 1906–1921*, eds. Robert Gardiner and Randal Gray (Annapolis, MD: Naval Institute Press, 1984), 404, hereafter cited as *Conway's 1906–21*. Shipyard strikes would, however, delay the completion of *Minas Geraes* long enough for Germany to slip ahead. On the strikes, see Topliss, "Brazilian Battleships," 246; on the German ship's launch date, see N.J.M. Campbell, "Germany," in Gardiner and Gray, *Conway's 1906–21*, 145.

[12] *Encyclopædia Britannica*, 11th ed. (1910–11), s.v. "ship"; "The Brazilian Battleship '*Minas Geraes*'," *Engineering* 86 (11 September 1908): 352; "Brazil's Mighty Leviathans For England's Navy," *New York Herald*, 30 June 1908, 3–4; "The Minas Geraes," *Navy* (Washington) 2, no. 9 (September 1908): 38. The model of *Minas Geraes* at the Franco–British Exposition attracted a fair amount of mentions and commentary, and one magazine's round-up of the event called it "perhaps the gem of the whole collection" of ship models at the event. It was also the only ship model listed in the article to have a printed photograph. Atlas, "Models and Machinery at the Franco-British Exhibition," *Model Engineer and Amateur Electrician* 19, no. 382 (20 August 1908): 171. The National Maritime Museum holds a similar, if not the same, shipbuilder's model of *Minas Geraes*, on loan from BAE Systems. Created in 1908, it was constructed in 1:48 scale and measures nearly thirteen feet, or four meters, long. Sir W. G. Armstrong Whitworth & Co. Ltd, "Minas Geraes (1908); Warship; Battleship," c. 1908, National Maritime Museum, SLR1387, http://collections.rmg.co.uk/collections/objects/67346.html.

fighting ship afloat should belong to a South American republic."[13] From the perspective of Brazil's governing elites, navies were one of a limited number of ways in which a nation could demonstrate its power in places far from their shores. They believed that the modernization of their dilapidated and aging navy with some of the world's most technologically advanced warships would elevate the nation's profile and help put it in a position of international strength, on par with Brazil's size and location.[14] Admiral Huett Bacelar, head of the Brazilian naval commission charged with overseeing *Minas Geraes*' construction, said as much after that ship was launched. The luminaries present at the ceremony had quickly retreated to the shipyard's molding loft, an enormous room where ship plans were laid out in full scale, reaching it by 2:45 p.m. After several toasts and a speech from Sir Andrew Noble, Armstrong's chairman, Bacelar spoke about what *Minas Geraes* and the rest of Brazil's naval construction program symbolized. He described the new warship as a crucial step in advancing Brazil's nascent industrialization. The fleet his country had under construction, including the two dreadnoughts and over a dozen smaller warships, would be "no mere expression of ostentatious power, nor of any sentiment still less justifiable," he said. "It was a logical consequence of national progress, for Brazil had always endeavored to keep her armaments abreast of her material development."[15]

Despite Bacelar's words and several other public statements from the government of Brazil, the timing, factors, and circumstances involved made these ships the subject of much attention in the naval powers of Western Europe and the United States. "Never has the Navy of a minor power loomed so large on the international horizon as that of Brazil during the past year,"

[13] "Brazilian Battleship 'Minas Geraes'—Most Powerful Fighting Ship Afloat," *Scientific American* 99, no. 24 (12 December 1908): 428.
[14] Joseph Love, *The Revolt of the Whip* (Stanford, CA: Stanford University Press, 2012), 14; Robert Scheina, *Latin America: A Naval History, 1810–1987* (Annapolis, MD: Naval Institute Press, 1987), 80.
[15] "Launch of a Brazilian Battleship," *Times* (London), 11 September 1908, 8b.

proclaimed the 1908–09 edition of Britain's *Navy League Annual*. "The reason is that this nation has had the audacity to order (not merely to 'project;' this is done monthly by many insignificant powers) three warships equal in fighting value to anything afloat or building."[16] Several British and American politicians, journals, and newspapers used Brazil's "fourth"-rate status in the perceived global hierarchy to express conspiratorial suspicions that the country, acting as a proxy, had ordered the ships for a great power.[17] When the ships were subsequently handed over in international waters, they would disrupt the existing naval balances of power and raise diplomatic tension. As Winston Churchill stated in October 1913:

> The simultaneous building by so many powers great and small of capital ships, and their general naval expansion, are causes of deep anxiety to us. Germany may fall behind in the race she has herself provoked, and we may yet be left to face a great preponderance of loose Dreadnoughts, wh[ich] at v[ery] short notice, a diplomatic grouping or regrouping may range against us.[18]

The attention lavished by Western naval powers on these ships altered popular calculations of the world's naval power calculations. The resulting hysteria created an environment where yellow journalism ran amok, and the vociferous announcements of the Brazilian government were discounted amid enquiries into the state's strategic need and ability to pay for such ships. These views glossed over the potential of the purchases for international 'soft' diplomatic power, given the Brazilian government's aspirations to move up in the world's ranks, and the numerous opportunities where such authority could be employed in South

[16] Alan H. Burgoyne and Gerard Fiennes, "The South American Republics," in *Navy League Annual 1908–1909*, ed. Alan H. Burgoyne (London: The Navy League, 1908), 96–99.
[17] "Fourth rate" comes from "A Craze for Dreadnoughts," *Mill Valley Independent*, 18 June 1909, 6. The piece originally appeared in the *Toledo Blade*, and was printed in the *Independent* alongside several other editorials, all under the header "opinions of great papers on important subjects."
[18] Otte, "Grey Ambassador," in Blyth, Lambert, and Rüger, *Dreadnought and the Edwardian Age*, 74.

America, but incisively questioned the nation's ability to maintain the ships over their intended service lives.

As compared to Brazil, Argentina and Chile both possessed modern fleets thanks to an expensive multi-year naval arms race between the two that had concluded only a few years before.[19] Unfortunately for them, the new dreadnought design meant that those ships would find themselves wholly outclassed in any conflict. The Argentine legislature, governing over a country that bordered Brazil and fearing a blockade of its economically prosperous River Plate, therefore faced what a British diplomat called the "political question of the year" in how to respond to Brazil's challenge.[20] The pervading doctrine of the time was clear, both to the Argentine government and the same international observers who had criticized Brazil's purchase: only dreadnoughts could counter dreadnoughts, and as such Argentina would need dreadnoughts of its own if the naval balance of power in South America was to be preserved.[21] The legislature appropriated funds for two dreadnoughts at the end of 1908, and ordered them from the United States at the beginning of 1910.[22] Both were designed to be larger and more powerful than the Brazilian ships.[23] Argentina's dreadnoughts, named *Rivadavia* and *Moreno*, were subject to less speculation than their counterparts in Brazil because of the accepted strategy for countering rival dreadnoughts. However, the purchase proved to be divisive inside Argentina, as several bills that would have directed that the ships be sold were introduced in the Argentine

[19] George Rauch, *Conflict in the Southern Cone* (Westport, CT: Praeger, 1999), 184–87.
[20] Claud Russell to Sir Edward Grey, "Argentine Republic: Annual Report, 1908," 6, The National Archives, Foreign Office 118/287 (hereafter cited as TNA and FO, respectively). On the importance of the River Plate, see "A Message From Garcia," *Boston Evening Transcript*, 4 June 1910, 3.
[21] "The Status of South American Navies," *Engineer* 107 (22 January 1909): 90.
[22] On the appropriation bill, see Russell to Grey, "Argentine Republic: Annual Report, 1908," 3, TNA, FO 118/287; "Dreadnoughts for Argentina," *Sydney Morning Herald*, 21 December 1908, 7. On the order, see Seward Livermore, "Battleship Diplomacy in South America: 1905–1925," *Journal of Modern History* 16, no. 1 (1944): 33–38.
[23] *Encyclopaedia Britannica*, 11th ed. (1910–11), *s.v.* "ship."

legislature.[24] Although all were defeated, contemporary reports indicate that several countries would have been interested in any such sale.[25] These dreadnoughts also proved controversial for the lengthy and convoluted bidding process used to acquire them. The Argentine Navy had issued vague specifications when calling for tenders to construct a dreadnought, and upon receiving a variety of designs, they took the best aspects from each and restarted the bidding process with specifications which matched the best aspects from the earlier submissions. They then did this a second time. This unusual acquisition process drew strong protests from the shipbuilders involved; one naval designer later wrote in the *Times* that "it is exceedingly probable that a serious leakage of ideas and practice of our ships was disseminated through the world by the Argentine government."[26] The Chileans, who shared a border with Argentina measuring in the thousands of miles, followed suit by ordering two dreadnoughts of their own in 1911. The armament competition was fought fiercely, but to the disappointment of the United States and Germany the Chilean Navy's long history with the British Royal Navy all but ensured that the ships would be ordered in the United Kingdom.[27]

Meanwhile, Brazil's third dreadnought *Rio de Janeiro* was subjected to a "torturous and complicated" design history as the Brazilian government confronted the steadily increasing size and power of foreign dreadnoughts.[28] These new battleships, called "super-dreadnoughts," featured far heavier displacements and armament than their namesake, and they quickly

[24] Livermore, "Battleship Diplomacy," 46–47.
[25] "Argentine Pride Outweighs $6,000,000 Profit Greece Offers for Moreno," *New-York Tribune*, 27 April 1913, 3; Press Association/Telegraph, "Turkey and Greece; Purpose of Dreadnoughts," *Poverty Bay Herald*, 2 January 1914, 3.
[26] Livermore, "Battleship Diplomacy," 35–38; J.H. Biles, "The Argentine Battleships," *Times* (London), 25 February 1910, 4c.
[27] Scheina, *Latin America*, 84–85.
[28] Peter Brook, *Warships for Export: Armstrong Warships, 1867–1927* (Gravesend, UK: World Ship Society, 1999), 136. See also Topliss, "Brazilian Dreadnoughts," 254.

condemned even the *Minas Geraes*-class to obsolescence.[29] Several competing factors were also at play: politics, such as an unwillingness to build a ship smaller than Brazil's previous dreadnoughts; money, in that the country's rubber and coffee booms were slowing; and Armstrong, who worked to hold the Brazilians to their contractually obligated third dreadnought. Eventually, a final design emerged. Once again, Brazil would possess the largest dreadnought ever, and this time it would feature fourteen twelve-inch guns in its main battery, more than any other battleship ever built.[30] The ship, which like the *Minas Geraes* class would not hold the title of 'largest dreadnought' for very long, was under construction when the Brazilians sold it to the Ottoman Empire in December 1913, who were involved in their own naval arms race with Greece.[31] Brazil's naval dreams remained unquenched, however, as they ordered a new dreadnought in 1914.[32] They were only ended due to the beginning of the First World War, which removed their ability to acquire major warships from the warring nations.[33] Chile's naval hopes were also put on hold due to the conflict, as their super-dreadnoughts *Almirante Latorre* and *Almirante Cochrane* were still under construction when the First World War broke out, and

[29] The first super-dreadnought was Britain's *Orion* class, laid down in 1909. Topliss, "Brazilian Dreadnoughts," 255. This class displaced around 22,000 long tons and carried 13.5-inch guns in their main battery. All of these were available for broadside fire, referring to when as many as possible of a ship's main guns were trained to one side of the ship and fired. Those statistics can be weighed against the earlier *Dreadnought*, which displaced around 18,000 long tons and mounted an equal number of 12-inch guns. Only ten of its guns, however, could be used in a broadside. Siegfried Breyer, *Battleships and Battle Cruisers, 1905–1970*, translated by Alfred Kurti (Garden City, NY: Doubleday, 1973), 110, 126; Antony Preston, "Great Britain," in Gardiner and Gray, *Conway's 1906–21*, 21, 28. Between the two ships were five years, a 22.5% increase in displacement, and an over 80% increase in broadside weight—that is, the total weight of the shells fired in a single broadside. Preston, "Great Britain," in Gardiner and Gray, *Conway's 1906–21*, 21, 28; R.A. Fletcher, *Warships and Their Story* (London: Cassell and Company, 1911), 317.

[30] Topliss, "Brazilian Dreadnoughts," 247, 281–82.

[31] Ibid., 283–84; Jonathan Grant, *Rulers, Guns, and Money: The Global Arms Trade in the Age of Imperialism* (Cambridge, MA: Harvard University Press, 2007), 160–61, 182.

[32] "Dockyard Notes," *Engineer* 117 (20 February 1914): 216–17.

[33] Work on the new dreadnought, which was to be named *Riachuelo*, ended with the outbreak of war and would be formally canceled in 1915. Brook, *Warships for Export*, 152–53.

so the British purchased them for use in the Royal Navy.[34] They purchased one back from the British in 1920 and briefly considered a larger acquisition of Britain's early battlecruisers.[35]

Despite the volume generated by these ships, it is far from clear that a sale would have been able to affect the naval calculations of major powers for any significant amount of time. The great powers quickly surpassed the South American dreadnoughts by constructing an ever-greater number of ships of increasing size, firepower, and protection. Between 1911 and August 1914, when the former *Rio de Janeiro* was completed, the United Kingdom alone commissioned thirteen new dreadnoughts and super-dreadnoughts and had several more under construction.[36] Ordering or possessing one or two dreadnoughts could therefore only change the naval calculus of nations with far smaller fleets.[37]

In the end, the dreadnoughts that made it to South America had little substantive international impact over the course of their approximately four-decade-long service lives. None were sold, and the Argentine, Brazilian, and Chilean dreadnoughts only ever fired shots in anger against internal foes during revolts or civil wars; none were fired at an international enemy.[38]

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[34] "British Navy Gains," *New York Times*, 7 December 1918, 14.
[35] Philip Somervell, "Naval Affairs in Chilean Politics, 1910–1932," *Journal of Latin American Studies* 16, no. 2 (1984): 389–90.
[36] Breyer, *Battleships*, 121–36. *Rio de Janeiro* was taken over by the British in August 1914, after the beginning of the First World War. Preston, "Great Britain," 37. This ship total does not include battlecruisers, which traded armament or armor for a higher top speed. Richard Hough, *Dreadnought: A History of the Modern Battleship* (New York: Macmillan, [1964] 1975), 102. The differences between battlecruisers and battleships are tabulated in Friedman, *Battleship Design*, 168–69, which lists armor weights as percentages of the total displacement in British capital ships.
[37] Scheina, *Latin America*, 87.
[38] *Almirante Latorre*, having been taken over by the British Royal Navy and renamed HMS *Canada*, saw service in and fired shots in anger during the First World War. Having been sold back to Chile, the ship was used for neutrality patrols during the Second World War. R. A. Burt, *British Battleships of World War One* (Annapolis, MD: Naval Institute Press, 1986), 240. Brazil's dreadnoughts were not deployed overseas during either of the world wars, although they were sent to the United States to be modernized with the intention of using them in the first, while Argentina remained neutral for nearly all of both world wars, entering on the side of the Allies only months before the end of the second conflict. M.J. Whitley, *Battleships of World War Two: An International Encyclopedia* (Annapolis, MD: Naval Institute Press, 1998), 21–29.

Historiography

The English-language historiography of the South American dreadnought race is thin in quantity and depth. Military and maritime histories on the period (c. 1904–14) focus on the industrialized world powers and their preparations for what became the First World War, especially the United Kingdom and the Germany. These countries had their own naval arms race which ratcheted up in tension and cost after the introduction of dreadnoughts in 1906, and several historians have pointed to it as a contributing, if indirect, cause of the later conflict.[39] These works tend to gloss over the smaller regional arms races happening around the globe, including in South America; they either briefly summarize it or narrowly focus on the ships' design and specifications, omitting their impacts on the region.

The exceptions, including Jonathan Grant's *Rulers, Guns, and Money: The Global Arms Trade in the Age of Imperialism* and Robert Scheina's *Latin America: A Naval History, 1810–1987*, have noted that the South American race was one of several ideologically and prestige-fueled armament races around the globe, and that the dreadnoughts they ordered were quickly superseded by technology and their high maintenance costs.

There are other outliers are worthy of mention as well. Seward Livermore's "Battleship Diplomacy in South America: 1905–1925," published in 1944, examined the attempts of American diplomats to steer the lucrative Argentine warship contracts to companies in the United States. David Topliss, in "The Brazilian Dreadnoughts, 1904–1914," wrote a tightly focused design history of all of Brazil's dreadnoughts, working primarily from the records of

[39] Michael Epkenhans, "*Dreadnought*: A 'Golden Opportunity' for Germany's Naval Aspirations?," in Blyth, Lambert, and Rüger, *Dreadnought and the Edwardian Age*, 91.

British shipbuilders and the country's Foreign Office. Finally, the free online encyclopedia *Wikipedia* provides a series of accessible introductions to the topic.[40]

Other related materials include monographs by Zachary Morgan and Joseph Love on the 1910 Revolt of the Lash, where the broadly black and mulatto crews aboard the Brazilian dreadnoughts rebelled only months after the ships had been delivered to protest the navy's continued use of the lash despite its long ban in the regular population.

Given the thinness of secondary sources, this thesis—which is primarily examining American and British reactions to the South American dreadnought race—will rely heavily on primary sources. These include documents and communications sourced from the national archives of both countries, contemporary journals and newspapers, and other miscellaneous contemporary records. Secondary sources aside from those mentioned above include works that examine the impact of the dreadnought battleship, broadly scoped and encyclopedic listings of warships from around the world, and examinations of the diplomatic and political situations faced by various countries during the time period.

[40] *Wikipedia*'s articles on the South American dreadnought race are collected into four "featured topics." They include a broad overview of the arms race and ten additional articles about the individual ships and ship classes involved. "Wikipedia:Featured topics/South American dreadnought race," Wikipedia, https://en.wikipedia.org/w/index.php?title=Wikipedia:Featured_topics/South_American_dreadnought_race&oldid=740095679. The author of this thesis has significantly contributed to most of these Wikipedia articles, and thanks Jason Long for being the primary author of "HMS *Agincourt* (1913)" and "HMS *Eagle* (1918)," which will perhaps be better known to readers of this paper as Brazil's *Rio de Janeiro* and Chile's *Almirante Cochrane*, respectively.

Background: The South American context

The saga of South America's dreadnoughts has its roots in the mid-nineteenth century, when Paraguay embroiled itself in a war against Brazil, Argentina, and Uruguay. All the participating countries bolstered their military capabilities during the conflict, and the Brazilian Navy especially benefited from an influx of armored vessels.[41] Although these were quickly seen as "small and weak" in comparison to similar foreign warships, the fleet was quickly reinforced with heavier vessels in the aftermath of the war, as Brazil continued expanding its navy while at loggerheads with Argentina over the fate of a thoroughly decimated Paraguay and its territory.[42]

The Argentine government ordered a small number of warships through the 1870s, primarily in case of a war against Brazil.[43] Two monitors and two gunboats, for example, were purchased for use on the rivers extending north of the River Plate, the large estuary on which Buenos Aires, the Argentine capital, was sited. At the end of the 1870s, Argentina began to look beyond its rivers and coastal waters, and therefore procured *Almirante Brown*, a large central battery ironclad (launched in 1880), causing a brief scare that there would be a Brazilian–Argentine naval arms race.[44]

These fears were misplaced, however—instead, the arms race would be fought between Argentina and Chile, fueled by decades-long border tensions between the two nations in the Patagonian region, located in the southernmost part of South America.[45] Only once, in 1878, had

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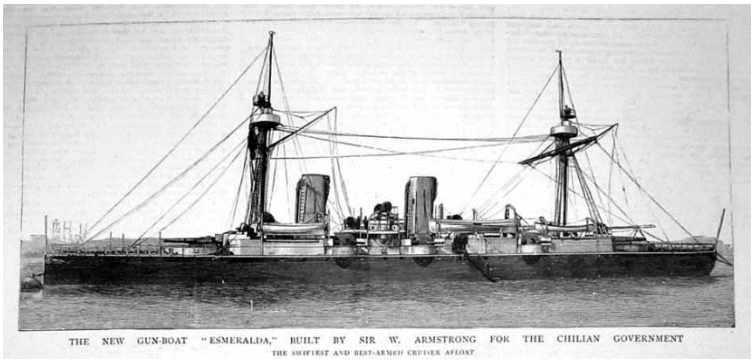
[41] Scheina, *Latin America*, 27; Hugh Lyon, "Brazil," in *Conway's All the World's Fighting Ships: 1860–1905*, eds. Robert Gardiner, Roger Chesneau, and Eugene Kolesnik (Annapolis, Maryland: Naval Institute Press, 1979), 405, hereafter cited as *Conway's 1860–1905.*
[42] *The New International Encyclopedia*, 16th ed. (New York: Dodd, Mead and Company, 1916), s.v. "Navies."
[43] Georg von Rauch, "Cruisers for Argentina," *Warship International* 15, no. 4 (1978): 297.
[44] Grant, *Rulers*, 118; Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 401.
[45] James L. Garrett, "The Beagle Channel Dispute: Confrontation and Negotiation in the Southern Cone," *Journal of Interamerican Studies and World Affairs* 27, no. 3 (1985): 85–87.

the two countries come close to war over the issue, after Chilean forces seized several Argentine ships which had been issued licenses for and attempted to remove guano from the Patagonian coast. While Argentina deployed three of its vessels to oppose the Chilean action, the Chileans had already withdrawn by the time the Argentines arrived.[46] The successful resolution of this crisis, limited naval resources, and other national priorities—namely Argentina's Conquest of the Desert against the indigenous Patagonian population and Chile's War of the Pacific against Peru and Bolivia—led to a decrease in tensions.[47]

Figure 2.1: The Chilean protected cruiser *Esmeralda*.



Source: *Graphic* 30, no. 775 (4 October 1884): 380. Public domain.

Chile emerged victorious from the War of the Pacific in 1884, a conflict in which the Chileans had faced numerically inferior odds and where the country's sea power had played a decisive role in neutralizing Peru.[48] During the conflict, they ordered what would become the world's first protected cruiser, *Esmeralda*, which was completed on 15 July 1884.[49] The ship

[46] Rauch, "Cruisers for Argentina," 297.
[47] Scheina, *Latin America*, 43, 45–46.
[48] Robert Scheina, *Latin America's Wars*, vol. 1, *The Age of the Caudillo, 1791–1899* (Dulles, VA: Brassey's, 2003), 376–86.
[49] Grant, *Rulers*, 122; Brook, *Warships*, 52–53.

type was named for the arched armored deck that protected a ship's most vital areas, including its propulsion plant and magazines.[50]

Constructed by Britain's Armstrong shipbuilders, the corporation's founder and namesake hailed *Esmeralda* as "the swiftest and most powerfully-armed cruiser in the world," and opined that its design would usher in the end of the ironclad era. For the price of one of those ships, several protected cruisers could be constructed and sent out as commerce raiders, operating similarly to the Confederate *Alabama* during the United States' civil war.[51] Armstrong, probably hoping for orders from the Royal Navy, pointedly noted that it was fortunate his company had sold *Esmeralda* to a country unlikely to ever find itself at war with the British, as he "could conceive no more terrible scourge for our commerce than she would be in the hands of an enemy. No cruiser in the British navy was swift enough to catch her or strong enough to take her."[52] Nearer to Chile, the United States' *Army and Navy Journal* published what it stated was an account of a conversation with an American naval officer, who expressed his belief that the ship could stand off San Francisco and drop shells into the city while being in no danger from the shorter-ranged shore-based batteries in the Golden Gate. "Chili [*sic*] has today the finest, fastest, and most perfectly equipped fighting war ship of her size afloat," he said, referring to *Esmeralda*. "She could destroy our entire Navy, ship by ship, and never be touched."[53] Indeed, not quite a year after Armstrong finished constructing *Esmeralda*, the Chilean government sent the vessel

[50] Brook, *Warships*, 44; "Ecuador Buys a Cruiser," *New York Times*, 2 December 1894, 9.
[51] "Home," *Graphic* 30, no. 775 (4 October 1884): 347.
[52] "The 'Esmeralda'," *Record* (Valparaiso) 13, no. 183 (3 December 1884): 5.
[53] "We Cannot Fight the Chilean Navy," *Army and Navy Journal* 23, no. 1 (1 August 1885): 16. This perspective was only one of several published during this time which intended to sound alarms about the underfunded and underequipped state of the United States Navy. William F. Sater, *Chile and the United States: Empires in Conflict* (Athens: University of Georgia Press, 1990), 51–52.

on an unusual and statement-making voyage to Panama, where it showed the Chilean flag alongside the great powers of France, the United Kingdom, and the United States.[54]

Argentine–Chilean arms race, 1887–1902

With Chile's protected cruiser commissioned into its navy, the country was able to lay claim to possessing the most powerful navy in the Americas: their fleet was centered around *Esmeralda*, two well-maintained 1870s central-battery ironclads, and two 1860s armored frigates. Moreover, they could staff them with foreign-trained officers and highly trained and disciplined sailors.[55] Presumably with the War of the Pacific fresh in his mind, Chile's President Jose Manuel Balmaceda was unwilling to relinquish this qualitative advantage over its rival Argentina. "Chile should be able to resist on its own territory any possible coalition," he said. "If it cannot succeed in attaining the naval power of the great powers, it should at least prove, on the base of a secure port and a fleet proportionate to its resources, that there is no possible profit in starting a war against the Republic of Chile."[56]

This resolve would soon be tested, as the advantages Chile's protected cruiser conferred upon the country were merely fleeting: nearly a dozen nations had commissioned Armstrong to build similar ships by the time *Esmeralda* was completed.[57] The new warship type had proved to be extremely lucrative for the company; Nathaniel Barnaby, a former Director of Naval

[54] Carlos Tromben, "Presencia Naval. El Cruero "Esmeralda" En Panamá [Naval Presence: The Cruiser Esmeralda in Panama]," *International Journal of Naval History* 1, no. 1 (April 2002): n.p. Some historians have stated that *Esmeralda* was ordered to block an annexation of Panama by the United States, which had sent marines and several warships to the area. Tromben argues that primary sources in Chile do not agree with this interpretation. See, for example, Sater, *Chile and the United States*, 52.
[55] Grant, *Rulers*, 121–23; Scheina, *Latin America*, 43–46;
[56] Sater, *Chile and the United States*, 52.
[57] Marshall J. Bastable, *Arms and the State: Sir William Armstrong and the Remaking of British Naval Power, 1854–1914* (New York: Routledge, 2017), 176.

Construction at Britain's Admiralty, would later write that it "made the fortune" of Armstrong.[58] Argentina was one such customer: its own protected cruiser, *Patagonia*, would be launched in 1886, and they already possessed *Almirante Brown*, the single largest warship in either country's navy. Still, their other major warships were comparatively smaller and less seaworthy than their Chilean counterparts, and Chile could count on its core of experienced seamen.[59]

To maintain its naval advantage, the Chilean government voted in 1887 to spend over three million pounds to expand its navy with modern warships. This disbursement represented a dramatic increase in the Chilean naval budget, which nearly doubled when comparing the average three-year percentages of the country's military expenditure (1885–87 versus 1888–90). In 1889, they ordered an ironclad battleship and two protected cruisers from a French shipyard, and two torpedo boats from the United Kingdom. Losing out on the largest and most lucrative warships came as a surprise to the British, who had expected to win based on its extensive commercial ties (especially in nitrates). Historian Jonathan Grant writes that the Chilean president may have ordered the admiral to purchase the ships in France but speculates from British diplomatic documents that the French bribed both the admiral sent abroad to order the warships and the Chilean envoy to the United Kingdom and France.[60]

In any case, the order for these warships was intended to significantly alter the naval balance of power in the Southern Cone, and therefore kindled a lengthy naval arms race and an on-again, off-again series of war scares.[61] The battleship, named *Capitán Prat*, displaced nearly

[58] Brook, *Warships*, 53.
[59] Scheina, *Latin America's Wars*, 1:376; Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 401–02.
[60] Grant, *Rulers*, 124–25.
[61] Such as in 1895, when the *New York Times* reported on "disquieting reports and rumors" in Buenos Aires and Washington D.C. "Two Republics May Fight," *New York Times*, 19 May 1895, 21.

seven thousand tons and was praised by contemporary publications as having a "most interesting character" for its strong mix of an 18.3 knot top speed, an armament of 9.4 inch guns, and "sufficient" armor, including a belt that was 11.8 inches wide at its thickest point.[62] The warship was one of the first in the world to use electricity to power its turrets and ammunition hoists, which carried shells to the guns.[63] This naval expansion came alongside a plan to modernize the Chilean army with new rifles, carbines, sabers, and artillery, with plans to purchase enough of each to arm a force of eighty thousand soldiers.[64] The Argentine government answered in the years after Chile's warship orders by contracting for their own: two small coastal defense ships, *Independencia* and *Libertad*, and two protected cruisers, *Veinticinco de Mayo* and *Nueve de Julio*.[65]

In January 1891, a civil war broke out in Chile between the country's president and congress. The congress, which had tried to remove the president from office just a month prior, had the backing of most of the navy, while the president had the backing of most of the army and hoped to take possession of the warships then being constructed and nearing completion in France.[66]

Crucially, the congressionalists were able to convince the United Kingdom, France, and Germany to remain neutral in the conflict. This meant that the presidential faction would be unable to take possession of several naval guns and shells from Armstrong in Britain, the two protected cruisers would remain in France for the duration of the conflict, and that the final

[62] *The Stateman's Year-Book*, 32nd ed. (1895), s.v. "Chile"; individual statistics from Lyon, "Chile," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 411.
[63] Godfrey L. Carden, "Chile-Argentina to Fight at Sea," *Collier's Weekly* 28, no. 13 (28 December 1901): 9, 17.
[64] Grant, *Rulers*, 123. In addition to the naval side of the Argentine–Chilean arms race, both countries made significant purchases to augment their armies as well. These acquisitions are tracked in Grant, *Rulers*, 119–33.
[65] Scheina, *Latin America*, 46.
[66] Grant, *Rulers*, 126–27.

installment of a German loan would not be disbursed.[67] Without these, the presidential fleet was unable to contest the congressionalist faction's naval superiority. The former's most effective warships were a pair of torpedo boats that had left British shipyards shortly before the civil war broke out; most of their other torpedo boats were equipped with obsolete spar torpedoes. The two newer vessels carried modern Whitehead self-propelled torpedoes, but the primitive state of torpedo technology of the time limited their success to the sinking of *Valparaiso*, a congressionalist central battery ironclad. This was the first instance of a warship sinking another with a self-propelled torpedo, although it came with the significant caveat that the ship was at anchor and its crew little prepared to defend their vessel.[68]

By holding naval supremacy, the congressionalists were able to escape Valparaiso at the beginning of the conflict, hold Iquique (a major nitrate port, which helped finance their war), attack isolated garrisons up and down Chile's lengthy coast, and obtain and receive shipments of armaments for their army.[69] They would go on to win the civil war, and with that came an increase in importance for the navy, which had carried the congressionalists to victory in the conflict and whose commander soon became the new president of the country.[70]

With the new government established, the Chileans moved quickly to counter Argentina's naval acquisitions by asking Armstrong for designs for a new protected cruiser. In need of work to ensure that no shipyard employees would be laid off, Armstrong decided to lay down a protected cruiser to one of those designs in August 1892; as anticipated, Chile purchased

[67] Ibid.
[68] H.W. Wilson, *Ironclads in Action: A Sketch of Naval Warfare from 1855 to 1895* (London: Sampson Low, Marston, and Company, 1896), 2:16–29; "The Torpedo in War," *United Service Magazine* 28, no. 903 (February 1904): 438.
[69] Sater, *Chile and the United States*, 56.
[70] Scheina, *Latin America*, 47.

the ship off the stocks two months later, naming it for the ironclad sunk during the civil war. The Argentine government purchased a protected cruiser in the same month; Armstrong had laid it down on speculation eleven months earlier.[71] Named *Buenos Aires*, the ship was paid for in part by contributions from the country's citizens.[72] During the ship's trials, it underwent a six-hour natural draught test where it achieved a speed of 23.2 knots, making it the fastest cruiser in the world.[73]

Chile countered with a new *Esmeralda* and four torpedo boats in May 1895. This *Esmeralda* was another powerful warship, being defined by one historian as "the first armored cruiser to be built for any navy," and the contemporary *Naval Annual* called it "one of the most powerful cruisers in the world."[74] Another historian, however, believes that *Esmeralda* should be classified as a lesser "belted" cruiser due to design faults present after its conversion from a protected cruiser while under construction.[75] In any case, the new ship and subsequent armored cruisers were distinguished from protected cruisers by their belt of armor along their sides, as opposed to the previous practice of carrying an armored deck and no side armor.[76] This

[71] Brook, *Warships*, 80–83.
[72] Scheina, *Latin America*, 47.
[73] "The Argentine Cruiser Buenos Aires," *Engineer* 82 (31 July 1896): 106. These results, ran on 2 November 1895, were so pleasing that the Argentines declined to run a planned forced-draught trial. In addition to a full description in the article, the ship was given a full-page illustration on page 114.
[74] For the "first armored cruiser" quote, see: Adrian J. English, *Armed Forces of Latin America* (London: Jane's Publishing Company, 1984), 146. J.R. Perrett, a ship designer at Armstrong, would have supported English's contention, writing in 1914 that the ship was the "introduction of the armoured belt in cruiser design" and that "its adoption [later] became universal." J.R. Perrett, "Some Notes on Warships Designed and Constructed by Sir W.G. Armstrong, Whitworth, & Co., Ltd," *Mechanical Engineer* 34, no. 867 (4 September 1914): 212. For the "most powerful" quote, see E. Weyl, "The Progress of Foreign Navies," in *The Naval Annual*, ed. T.A. Brassey (London: William Clowes and Sons, 1896), 55. Hereafter cited as Weyl, "Progress," in *The Naval Annual* (1896).
[75] For the question of whether *Esmeralda* was a "belted" cruiser and details on what set it apart from later armored cruisers, see Brook, *Warships*, 101–02. Brook quotes William White, the Director of Naval Construction at the United Kingdom's Admiralty and has been acclaimed by other historians as being a "great warship designer with wide knowledge of every aspect of shipbuilding and engineering," as saying that *Esmeralda* would "on paper" look like a "formidable rival," but that its listed top speed was obtainable only for short bursts, and its armor belt was of "fictitious protection." For White's background, see Ian Johnston and Ian Buxton, *The Battleship Builders: Constructing and Arming British Capital Ships* (Barnsley, South Yorkshire: Seaforth Publishing, 2013), 103.
[76] Brook, *Warships*, 99.

Esmeralda was paid for in part by selling the old *Esmeralda* for about US$1,500,000 to Japan, where it was renamed *Izumi*.[77] The older vessel, barely ten years old, had been surpassed by rapidly changing naval technology—before being sold, the Chileans had inquired with Armstrong about the possibility of modernizing the ship with a new propulsion system and armament.[78] Japan's chief concern, however, was that *Izumi* arrive as soon as possible so that it could be employed in the First Sino-Japanese War.[79]

At this point in time, the Chilean Navy still held what one historian has called a "quite apparent" superiority over their potential foes in Argentina—but in terms of completed major warships, their tonnage totals were nearly even.[80] The Argentine government changed this calculation in a major way on 14 July 1895, when they paid the "extraordinary" price of £750,000 pounds sterling (18,807,500 francs) to acquire *Giuseppe Garibaldi*, a powerful armored cruiser under construction in Genoa for the Italian Navy.[81] The first of four installments was due on the day the ship was purchased, and the last would be paid upon the ship's delivery into Argentine service, which would be hurried by the progress already made in building it.[82]

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[77] Scheina, *Latin America*, 48; Charles R. Flint, "Fifty Years a Trader," *System: The Magazine of Business* 40, no. 2 (1921): 218. *Esmeralda*'s sale to Japan was accomplished via the Ecuadorian government, where it caused significant repercussions. To remain formally neutral in the Sino-Japanese War, Chile sold *Esmeralda* to Ecuador, and although there was some speculation in press outlets that the ship was intended for use against the Peruvian Navy, the ship was only under the Ecuadorian flag from Chile to the Galapagos Islands, where it was handed to the Japanese. This arrangement had the personal approval of Ecuadorian president Luis Cordero, and Cordero's political opponents used it and accusations of bribery to bring down the government. After a short armed conflict, Cordero was forced to leave the country. George Lauderbaugh, *The History of Ecuador* (Santa Barbara, CA: Greenwood, 2012), 79–80; *Encyclopædia Britannica*, 11th ed. (1910–11), s.v. "Ecuador," "Ecuador Buys a Cruiser," *New York Times*, 2 December 1894, 9; "Speculations About the Sale; The Esmeralda Could Easily Be Transferred from Ecuador to Japan," *New York Times*, 3 December 1894, 5.

[78] Brook, *Warships*, 55.

[79] Flint, "Fifty Years a Trader," 218.

[80] Rauch, "Cruisers for Argentina," 298.

[81] Scheina, *Latin America*, 48; G.S. Laird Clowes, ed., *Naval Pocket-Book* (London: W. Thacker, 1908), 124. Ansaldo, the Genoan shipbuilder, was only given permission to sell the ship on the condition that they construct and complete another armored cruiser for Italy within their contract's originally specified timeframe. "New Cruisers for the Japanese Navy," *Marine Engineering* 9, no. 3 (March 1904): 101.

[82] von Rauch, "Cruisers for Argentina," 298.

Giuseppe Garibaldi was named for the Italian nationalist, and Argentina unusually retained his last name from the Italians in recognition of his exploits in South America.[83] With a displacement of about 6,800 tons and carrying two ten-inch guns, *Garibaldi* was launched on 27 June 1895 and was ready for its sea trials by 17 October of the same year, a feat which *The Naval Annual* called a "quick piece of work with a ship of this size."[84] The ship was accepted into Argentine service on 12 October 1896 and left quickly, arriving in Argentina in December 1896.[85] It was the first Argentine ship that, on paper, could provide an equalizer to Chile's naval power by matching up with *Capitán Prat* on a one for one basis, against which it had the advantage of speed and disadvantage of less armor.[86] Naval historian Robert Scheina writes that, between *Esmeralda* and *Garibaldi*, it is difficult to tell who was responding to who. The orders were all made around the same time, and both had been subject to lengthy negotiations before the ships were acquired or ordered.[87]

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[83] Ansaldo laid down a total of four similarly designed cruisers named *Giuseppe Garibaldi*. The first, described here, was sold to Argentina and renamed *Garibaldi*. The second was sold to Spain and renamed *Cristobal Colon*, which was sunk during the Spanish–American War. The third, described later, was also sold to Argentina, where it was renamed *Pueyrredon*. The final one was kept by the Italian Navy and retained its original name. Office of Naval Intelligence, *Notes on Naval Progress*, General Information Series no. 18 (Washington, D.C.: Government Printing Office, 1899), 93.

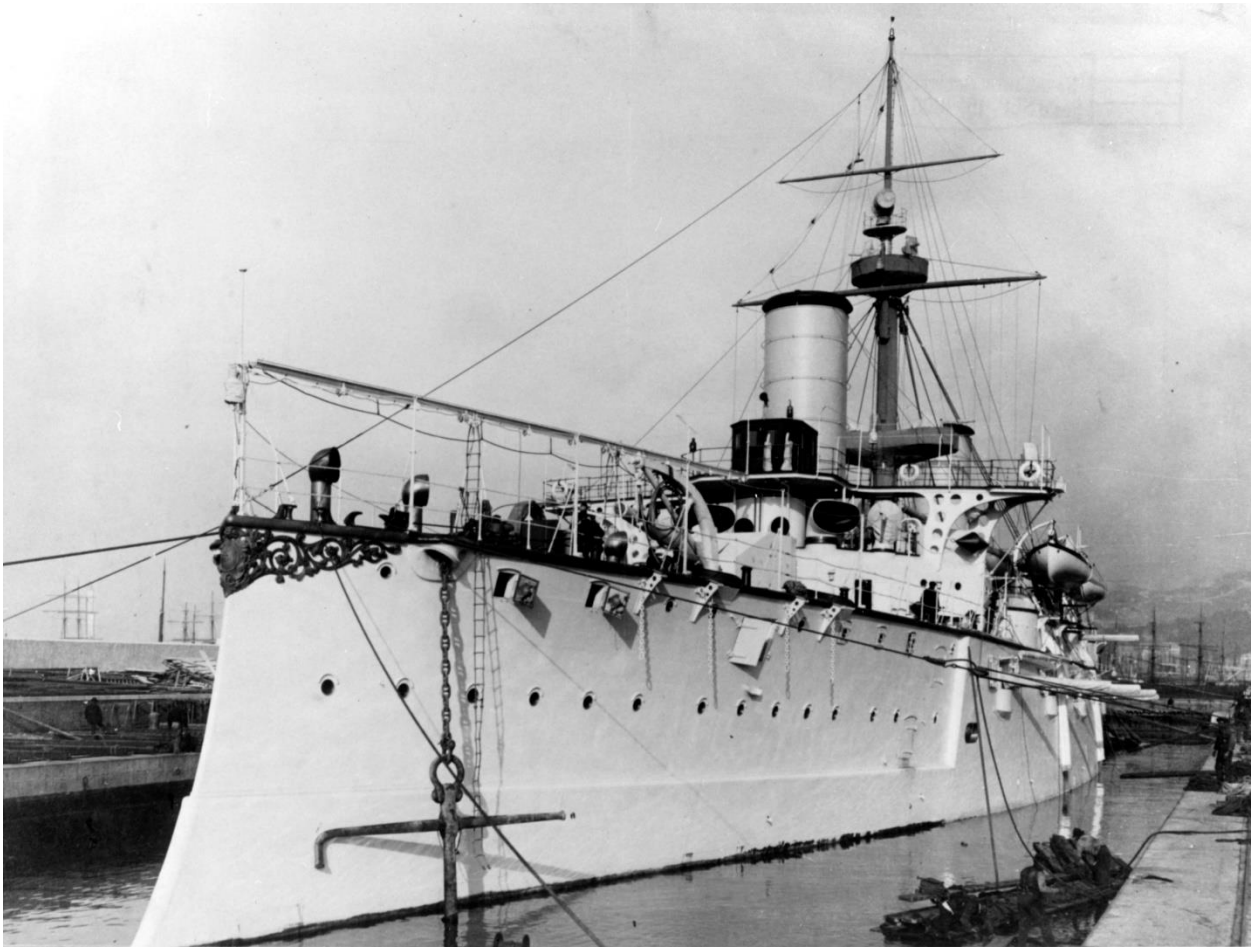
[84] Weyl, "Progress," in *The Naval Annual* (1896), 54. On *Garibaldi*'s main battery, one online source with a comprehensive year-by-year summary of the ship's service history notes that it carried 250-millimeter guns until 1899, when the ship returned to Italy to be re-gunned with the 254-millimeter guns of its sister ships. "Crucero Acorazado Garibaldi (1896)," *Historia y Arqueologia Marítima*, Fundación Histarmar, http://www.histarmar.com.ar/Armada%20Argentina/Buques1900a1970/CrucAcGaribaldi.htm. While this is not explicitly confirmed in other sources used in this thesis, a short aside in *The Naval Annual* of 1899 does state that *Garibaldi* was being refitted in Genoa with its main armament removed. J.R. Leyland and T.A. Brassey, "Progress of Foreign Navies," in *The Naval Annual*, ed. T.A. Brassey (London: William Clowes and Sons, 1899), 58.

[85] The dates in this sentence are drawn from von Rauch, who also backs up the date of the speed trials (17 October 1895). Scheina, however, notes in an appendix that *Garibaldi* was accepted on 12 October 1895 and arrived in Argentina in December 1895—not 1896. This paper follows von Rauch, given that *The Naval Annual* confirms that *Garibaldi*'s trials, which are generally ran before a ship is accepted into service, occurred before Scheina's 1895 dates. Scheina, *Latin America*, 298; von Rauch, "Cruisers for Argentina," 299; Weyl, "Progress," in *The Naval Annual* (1896), 54.

[86] von Rauch, "Cruisers for Argentina," 298; Lyon, "Argentina," 297–98. For a description of *Garibaldi*, see "The Argentine Cruiser 'Garibaldi'," *Engineering* 62 (10 July 1896): 45.

[87] Scheina, *Latin America*, 48.

Figure 2.2: The Argentine armored cruiser *Garibaldi*, c. 1895.



Source: A. Noack via the Naval History and Heritage Command. Public domain. http://www.history.navy.mil/our-collections/photography/numerical-list-of-images/nhhc-series/nh-series/NH-88000/NH-88672.html.

Chile moved quickly to respond to *Garibaldi* by purchasing *Ministro Zenteno* off the stocks in August 1895. Yet another protected cruiser being built by Armstrong, the vessel had been ordered by Brazil but was sold after they fell behind on paying the first installment.[88] They also began negotiating with Armstrong for an armored cruiser in September, perhaps recalling an

[88] Brook, *Warships*, 83–84.

earlier recommendation from Armstrong to purchase a purpose-built 7,000-ton armored cruiser instead of modifying *Esmeralda*.[89]

In the following year (March 1896), Armstrong laid down the armored cruiser *O'Higgins* for Chile. Like *Garibaldi*, *O'Higgins* was completed very quickly—the ship was launched in May 1897 and underwent its trials in April 1898. This happened even though there was a seven-month engineering strike at the shipyard where it was being constructed, and a separate strike that affected the trials. Chilean stokers, training to take over the vessel when accepted by the Chilean Navy, were forced to fill in for firemen on strike during *O'Higgins*' speed trials; they reportedly experienced "no difficulty" despite their unfamiliarity with the ship's Belleville boilers.[90] Designed by Phillip Watts, *O'Higgins* mounted a main battery of four eight-inch and a dozen secondary guns on a hull that displaced 8,500 tons.[91] It would be the largest warship purchased during the arms race, surpassing *Capitán Prat*'s 6,900 tons.[92] Although individually powerful, *O'Higgins* was the last major warship Chile would purchase for the next five years.[93]

About a month after Chile's order for *O'Higgins*, the Argentine government purchased another armored cruiser from the Italians. Named *San Martin*, the ship was a near-sister to *Garibaldi*, differing primarily in their main armament: *San Martin* carried four eight-inch guns, while *Garibaldi* carried two ten-inch.[94] As before, Scheina writes that the exact series of intended actions are difficult to discern, given that *San Martin*'s purchase and *O'Higgins*' order

[89] Scheina, *Latin America*, 48; Brook, *Warships*, 102–06.
[90] "Speed Trials of the Chilean Cruiser O'Higgins," *Engineer* 85 (20 May 1898): 472; "The Chilean Cruiser 'O'Higgins," *Engineering* 65 (27 May 1898): 662. This was not always the case with Chilean stokers, who suffered mishaps with *Capitan Prat* and *Esmeralda* (the source does not specify whether this refers to the older protected or newer armored *Esmeralda*). Rauch, *Conflict*, 148.
[91] Brook, *Warships*, 103–07; "The Chilean Cruiser 'O'Higgins," *Engineering* 65 (27 May 1898): 662. For additional details on *O'Higgins*' gun mountings, see "Elswick Naval Mountings, No. III," *Engineer* 89 (2 February 1900): 112.
[92] Lyon, "Chile," 411.
[93] Scheina, *Latin America*, 298.
[94] "The Argentine Cruiser 'General San Martin'," *Engineering* 66 (15 July 1898): 74–75.

were placed so close together and that there would have been some amount of time spent negotiating beforehand.[95]

Beginning in late 1897, the possibility of war between Chile and Argentina grew ever fiercer, driven by rumors of an anti-Chilean alliance between Argentina and Peru. While there was no such arrangement, the prospect of it—and Argentina's lack of urgency in peacefully resolving negotiations on the southern borders between it and Chile—led Chile to prepare for war and reach for a solution to keep Peru out of any conflict.[96]

The war scare grew sharply in intensity in May 1898, when the Chilean government learned that the Argentines were planning to purchase an additional *Garibaldi*-class cruiser from Italy. While the Chileans expressed anger at this move, believing that it was an inappropriate action to take while the two countries continued negotiating their southern border, the Argentine president replied that additional naval acquisitions were needed to soothe the Argentine public after Chile's naval buildup. Not long after, the Chileans discovered that Argentina was also negotiating for a second armored cruiser, which would bring their total to four and put them in a position of decisive naval superiority over the Chileans.[97]

These cruisers would be named *Pueyrredon* and *General Belgrano*, respectively.[98] *Pueyrredon* was completed within two months of being launched in July 1898, a truly remarkable turnaround time, accomplished after the Argentine government invested an

[95] Scheina, *Latin America*, 48.
[96] Robert N. Burr, *By Reason of Force: Chile and the Balancing of Power in South America, 1830–1905* (Berkeley, CA: University of California Press, 1965), 222–24.
[97] Ibid., 224–25.
[98] In addition to purchasing two different Italian cruisers named *Giuseppe Garibaldi*, described in footnote 82, Argentina also purchased two cruisers named *Varese*, which became *San Martin* and *General Belgrano*. These were constructed by Orlando, based in Livorno (Leghorn), rather than Ansaldo. Office of Naval Intelligence, *Notes on Naval Progress*, 93.

additional £30,000 over the shipyard's asking price for the ship.[99] Like *San Martin*, these ships differed in small respects from *Garibaldi*, their ostensible sister. *Pueyrredon* carried Belleville water-tube boilers, as opposed to the cylindrical boilers used on the original *Garibaldi* and Niclause boilers used on some of the Italian vessels of the class, and both *Pueyrredon* and *General Belgrano* carried additional six-inch guns in their secondary armament.[100] *Pueyrredon* arrived in Argentina in September 1898, and *General Belgrano* followed two months later.[101]

The arrival of these warships led to a sudden and dramatic change in the strategic naval calculations of both nations. The Argentine Navy now had a grand total of about 36,390 tons of armored warships, including the four *Garibaldi*-class cruisers, two *Independencia*-class coastal defense ships, and the 1880 central battery ironclad *Almirante Brown*. Chile had just 22,900 across three ships, *Capitán Prat*, *Esmeralda*, and *O'Higgins*, only the latter of which was possibly superior on a one-for-one basis against the *Garibaldi*s. If pressed, the Chileans could summon an additional 5,300 tons of armored warships: the twenty-five-year-old *Almirante Cochrane*, the remaining one of two central battery ironclads possessed by the country, and the famed if obsolete ironclad *Huascar*, captured from Peru in the War of the Pacific. Both were dated and of "limited fighting value" in 1898. In modern protected cruisers, the two countries were evenly matched, with Argentina's three ships at 11,510 tons matching up against Chile's four and 12,410.[102] All in all, the Argentines had a clear naval superiority over their Chilean

[99] Scheina, *Latin America*, 49, 298; von Rauch, "Cruisers for Argentina," 303–04.
[100] An *Engineering* contributor was skeptical that the boiler changes were beneficial, given that the final two members of the ship class reverted to cylindrical boilers. N. Soliani, "The Japanese Cruisers 'Kasuga' and 'Nisshin'," *Engineering* 79 (21 April 1905): 504; Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 403. More information about Niclause (also "Niclausse") boilers is available in Mark Robinson, "The Niclausse Water-Tube Boiler," *Engineer* 88 (22 September 1899): 307–08.
[101] Scheina, *Latin America*, 298.
[102] von Rauch, "Cruisers for Argentina," 309. This paper counts the ships rather differently from von Rauch, adding *General Belgrano* into Argentina's count and moving *Esmeralda* from the protected cruiser to armored ships category, matching how it was classified by contemporary publications like *The Naval Annual* even if there are

rivals: they possessed both more and newer ships than the Chileans, even if the latter's ships were individually larger, and the seamen training gap had sharply narrowed.[103] As early as 1895, the *New York Times* believed that Argentina would have been favored to win in any military conflict against Chile. If anything, their calculus would have shifted only farther onto the Argentine side three years later.[104]

Facing down this threat, the Chileans sent Argentina a stark demand in September 1898 for a firm answer to their request for British arbitration over the border question: "peace or war."[105] Wishing to avoid the latter, Argentine negotiators derived a compromise where their southern borders would be submitted to arbitration, while their dueling claims to the Puna de Atacama would be set aside for a later date. Chile signed onto this proposal on 22 September, and in November the presidents of the two countries hammered out a compromise that would likely end in a United States-drawn border, an outcome that was so positive that the Argentine and Chilean presidents symbolically met in the Strait of Magellan to declare that there would be "eternal peace" between the two countries. The agreement remained acceptable to both even after the American representative gave most of the disputed lands to Argentina but did not last.[106]

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legitimate questions about the true effectiveness of its armor belt. Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 403; Lyon, "Chile," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 412; C.N. Robinson and John Leyland, "British and Foreign Armoured and Unarmoured Ships," in *The Naval Annual*, ed. T.A. Brassey (London: William Clowes and Sons, 1899), 270, 276. The central battery ironclads of Argentina and Chile were showing their age by this point in their service lives, and the two countries dealt with this in different ways. Chile's *Almirante Cochrane* had been rebuilt and modernized in 1889 but was converted to a gunnery training ship between 1897 and 1900, during which its armament was replaced with a lower number of smaller guns. This would have lessened the ship's utility in battle, and likely contributed to von Rauch's decision to list it as having "little fighting value." Argentina's *Almirante Brown*, on the other hand, was refitted in 1897 and 1898 to carry a larger number of smaller but much more modern quick-firing weapons. Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 402; Lyon, "Chile," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 410.

[103] Rauch, *Conflict*, 148–49.

[104] "Two Republics May Fight," *New York Times*, 19 May 1895, 21.

[105] "Chile Offers Peace or War," *New York Times*, 5 May 1898, 7.

[106] Burr, *By Reason of Force*, 226–27.

Over the next two years, Chile faced strong diplomatic headwinds, especially at the International American Congress, where deteriorating relations with Peru, Bolivia, and Chile led to potentially dangerous—from Chile's point of view—conference proposals that in the end were only narrowly averted. By the beginning of 1902, an agreement that was intended to forestall conflicts was instead condemned in Argentina and Chile as "capitulation to the 'enemy'." Shortly thereafter, the Chilean congress voted to devote £3 million pounds to the expansion of their navy, and the naval race was back on.[107]

By that time, however, both countries had been maneuvering for additional naval expansion for several months. Argentina began this round of the arms race by contracting for two more armored cruisers from Ansaldo on 23 December 1901, named *Mariano Moreno* and *Bernardino Rivadavia*.[108] These would be built as improved versions of the *Garibaldi* class, coming in at nearly one thousand tons more displacement than the original *Garibaldi* purchased by Argentina. Despite the additional size and slightly increased length, they were broadly similar to the earlier members of the class.[109] Unlike the previous Argentine members of the *Garibaldi* class, *Mariano Moreno* and *Bernardino Rivadavia* were ordered from scratch, as opposed to purchasing them while under construction for another nation—although the contract carried the familiar contractually obligated cash premium to Ansaldo if the ships were delivered in a short time period (in this case, twelve months) without delays.[110]

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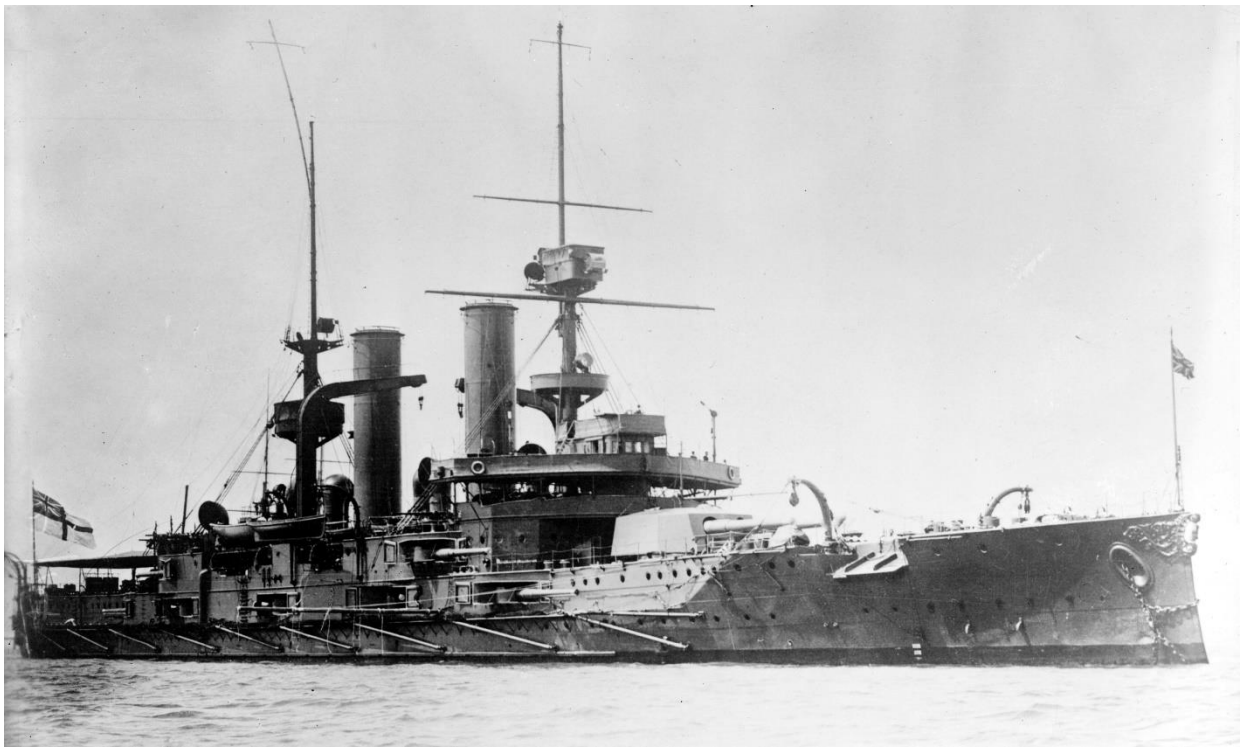
[107] Ibid., 240–43.
[108] Kathrin Milanovich, "Armored Cruisers of the Imperial Japanese Navy," in *Warship 2014*, ed. John Jordan (London: Conway, 2014), 83–84.
[109] Soliani, "The Japanese Cruisers," 504.
[110] Ibid.; Scheina, *Latin America*, 49. The chapter about Argentina in *Conway's All the World's Fighting Ships 1860–1905* would appear to agree with Scheina in stating that the ships were "ordered [by Argentina] from Ansaldo in 1901," but the same book's Japan chapter (written by a different author) claims that the ships were laid down for Italy, even receiving Italian names before the sale. Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 403; A.J. Watts, "Japan," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 226.

Figure 2.3: The British battleship *Swiftsure*, purchased from Chile in 1903.



Source: Bain News Service via the Library of Congress, no known restrictions on publication. https://www.loc.gov/pictures/item/2014696954/.

To counter these ships and Argentina's growing naval superiority, Chile decided to acquire battleships, larger vessels that would in theory be more powerful than the many armored cruisers possessed by or under construction for Argentina. They first inquired with the United States to see if they would sell their three *Indiana*-class battleships for the price of one modern battleship. Scheina writes that this offer "showed a degree of desperation," as even though the ships were only a few years old, the class had been designed for coastal defense and their problems in the open ocean had been widely recognized. Still, the United States declined to sell,

A contemporary *Engineering* account catalogues all the *Garibaldi* cruisers, including their original names, and does not mention an Italian order for *Moreno* and *Rivadavia*. Soliani, "The Japanese Cruisers," 504.

as their navy wished to retain as many battleships as possible until it could build and commission more of the type.[111]

Instead, the Chilean government committed to purchasing two new capital warships based on plans drawn up by Edward Reed, the former Chief Constructor of the Admiralty. The Chilean Navy engaged Reed, who was traveling the country for what he said were health reasons, in late 1901 and asked him to sketch out designs for two fast battleships. Reed, working with the head of the Chilean Navy, came back with an ambitious plan for ships that would displace eleven thousand tons, sail at a maximum speed of nineteen knots, and mount a main battery of four ten-inch guns. Reed was compelled to keep the ships small, both to limit the total cost and allow the ships to be serviced by Chile's largest drydock, located in Talcahuano. Reed went home to the United Kingdom in February 1902. After some modifications to the plans to accommodate Chile's desire for additional 7.5 inch guns in the design's secondary armament, the Chileans ordered one battleship each from Armstrong and Vickers on 26 February 1902, splitting the order in an effort to get the ships as quickly as possible.[112] To pay for them, the Chilean government used part of the country's sovereign gold reserve and redirected money from a loan that was originally given for improving Santiago's sewage system—indicators of the arms race-induced financial stress Chile found itself in, and the difficulty they were having in obtaining additional foreign loans.[113]

[111] Scheina, *Latin America*, 50.
[112] Brook, *Warships*, 130; R.A. Burt, *British Battleships 1889–1904* (Barnsley, UK: Seaforth Publishing, 2013), 294–95. Originally published 1988, revised and re-published in 2013. Burt includes an excerpt from a speech Reed read in 1904, from which much of the pre-British history of these ships has been drawn in British naval historiography.
[113] Grant, *Rulers*, 132–33.

Named *Constitucion* and *Libertad*, the design of these ships was criticized in the contemporary press, and not without some merit. As predicted in the *Times*, rough seas severely hampered the utility of the battleships' secondary armament. This was in part a consequence of Chile's desire for additional 7.5-inch guns, which forced Reed to locate most of those guns on the main deck rather than the upper. Still, the 11,000-ton displacement meant that they displaced about a third more than Argentina's *Garibaldi* cruisers, and the extra space was used to carry heavier armament and armor while being able to steam at approximately the same speed.[114]

The Chilean government also purchased *Chacabuco* during this time, another protected cruiser laid down on speculation by Armstrong, and three destroyers.[115] *Chacabuco* appears to have waited for some amount of time before finding a buyer; launched in July 1899, it only underwent armament and speed trials in January 1902 after being purchased by Chile earlier that same month. Its genesis was even older, as it was slightly modified from a design which had originally been constructed for Japan in the early 1890s.[116]

On the other side of the seesaw, the Argentine government moved to order two fifteen-thousand-ton battleships from Ansaldo, to be delivered in fourteen months, and purchased six *Nembo*-class destroyers then under construction for the Italian Navy.[117] The battleships, which

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[114] Contemporary commentators also questioned whether the ships would be able to achieve their trial speed of twenty knots when in service, a concern which proved to be unfounded. Brook, *Warships*, 129–32.
[115] Rauch, *Conflict*, 184.
[116] Brook, *Warships*, 91–92. Rauch, *Conflict*, 184 describes Argentina's order for *Mariano Moreno* and *Bernardino Rivadavia* as a response to *Chacabuco*, but the Argentine ships were ordered one month earlier.
[117] von Rauch, "Cruisers for Argentina," 304. There is some scholarly disagreement on what happened with these ships. von Rauch is the most specific, mentioning the battleships, their proposed time to completion, and the destroyers. Rauch—who appears to be unrelated to von Rauch and was cited later by Grant—writes that American and British diplomatic records clearly indicate that the Argentine government contracted for two vessels larger than Chile's battleships to maintain naval supremacy in the Southern Cone. Rauch, *Conflict*, 185n52. Rauch also references the *Economist* of 17 May 1902, an article written by their correspondent in Argentina and individually dated to 19 April. This person wrote that the president of Argentina signed a contract with "an Italian firm of shipbuilders" (i.e. Ansaldo) for two fifteen-thousand-ton battleships on "the 28th ult.," which refers to the end of March 1902. "Argentina; The Chilean Question," *Economist*, 17 May 1902, 777. Scheina positions the battleship order as a response to Chile's two battleships, like the others—but dates it to May 1901, even though the Chilean

were possibly scaled up designs from Italy's *Regina Margherita*-class battleships, would have been among the largest in the world, and their main armament of twelve-inch guns would be larger than the ten-inch armed Chilean battleships.[118] The planned delivery time was intended to get the battleships to Argentina in time to oppose their Chilean equals.[119]

End of the arms race

By the middle of 1902, Argentina was in a far stronger position *vis a vis* Chile for a litany of reasons. From a demographic perspective, Argentina's population was larger and growing faster than Chile's. By 1906, the former would have about five million people, far more than the latter's estimated three million.[120] From an economic perspective, a modern cross-country comparison of historical gross domestic product per capita puts Argentina far ahead of Chile throughout this period.[121] Finally, from a military perspective, Argentina's navy was both larger and of superior quality, while there were serious military questions about the true effectiveness of the Chilean Navy. On one side, Argentina could boast a mostly homogenous squadron of *Garibaldi*-class cruisers, which could steam at roughly the same speeds and mounted much of the same armament. On the other, most Chile's warships had been built to unique designs,

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vessels were not designed by that date. This may have been a typo for 1902. Also contrary to other sources is Scheina's contention that it is not known whether these ships were ordered or if it was only an inquiry intended as a shot across Chile's bow. Scheina, *Latin America*, 50–51.

[118] The *Regina Margherita* detail comes from Scheina, *Latin America*, 50. The largest in the world comes from a spot comparison of contemporary European battleships then under construction as documented in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*.

[119] von Rauch, "Cruisers for Argentina," 304.

[120] Seward Livermore, "Battleship Diplomacy in South America: 1905–1925," *Journal of Modern History* 16, no. 1 (1944): 32.

[121] Jutta Bolt, Robert Inklaar, Herman de Jong, and Jan Luiten van Zanden, "Rebasing 'Maddison': New Income Comparisons and the Shape of Long-Run Economic Development," *Maddison Project*, Working Paper 10, https://www.rug.nl/ggdc/html_publications/memorandum/gd174.pdf. The data itself is located at Bolt, Inklaar, de Jong, and van Zanden, "Maddison Project Database 2018," *Maddison Project*, https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2018.

complicating logistics and maintenance while making it more difficult to coordinate them in battle. In 1901, a leading Chilean naval journal decried this state of affairs, calling the country's navy a "heterogeneous conglomeration of vessels which cannot respond to the tactical or strategic needs of the nation, and completely inferior to the Argentine fleet in regards to strength and quality."[122] Moreover, the experienced crews Chile had relied on to make up for quantitative inferiority had been diminished by the requirements of the country's extreme naval expansion of the preceding decade. The number of navy personnel increased from about 1,700 in 1883 to over 3,000 in 1894 and over 5,000 by 1901, with the new positions being filled in large part with new recruits.[123]

Importantly, both Argentina and Chile were suffering under heavy foreign debt incurred in their zeal to obtain more and greater armaments, despite a Chilean cabinet member's questionable protestation to the British minister that "its financial resources were intact."[124] Between 1890 and 1902, the Argentine government spent US$258 million on its army and navy, a massive amount of money that came in no small part from foreign loans.[125] The American ambassador in Argentina cabled home that these large debts were forcing the two countries to back away from their antagonistic arms race. "Both countries are largely in debt and confronted with a deficit," he wrote, and adding that "neither is able to make a foreign loan without paying a high rate of interest and giving guarantee to meet the additional expense which their war policy is incurring."[126] Both the president of Argentina and the American ambassador to the country

[122] von Rauch, "Cruisers for Argentina," 304.
[123] Rauch, *Conflict*, 146–47.
[124] Ibid., 185. Rauch notes that the need to raid the country's gold reserve and put off improvements to Santiago's sewage system clearly indicate that this statement was "pure fantasy."
[125] Rauch, *Conflict*, 195–96.
[126] Grant, *Rulers*, 134.

would later credit the end of the arms race to the problems these debts created for each country's international credit.[127]

It was at this juncture that the United Kingdom—the primary trading partner to both Argentina and Chile, along with their principal creditor—stepped in.[128] Their stake in averting a conflict in the region was clear to W.H.D. Haggard, a British diplomat, who wrote only a few years later that a conflict in the area would be a "national calamity," since Britain's extensive grain and meat imports from Argentina would be interrupted.[129] Moreover, British companies had major stakes in Chile's extensive and lucrative nitrate deposits.[130] As of May 1902, there was £123 million in foreign capital invested in Argentina, and while Chile's equivalent total was lower, it was still "considerable."[131] The British government's efforts to end the arms race were led by Gerald Lowther, its new minister to Chile.[132] Lowther joined tense negotiations in Chile's capital with the president of the country, its foreign minister, and the Argentine ambassador to Chile, who was in close contact with his government via a telegraph line to Buenos Aires. Between them, they hammered out the Pacts of May, signed by Argentina and Chile on 28 May 1902, ratified by their legislatures in July and August, and exchanged on 22 September. The three pacts that made up the agreement set spheres of influence for both countries, and the third pact focused exclusively on limited Argentina and Chile's naval strength, with clauses that compelled them to:

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[127] Sater, *Chile and the United States*, 51–52; Grant, *Rulers*, 131–32.
[128] Rauch, *Conflict*, 185.
[129] Haggard had good knowledge of Argentina's connections with Britain, as he was the British minister to Argentina from 1902 until 1906, when he was transferred to Brazil. W.H.D. Haggard to Edward Grey, "Brazil: Annual Report, 1907," 5, TNA, FO 118/281.
[130] Robert K. Massie, *Castles of Steel: Britain, Germany, and the Winning of the Great War at Sea* (New York: Random House, 2003), 204.
[131] Scheina, *Latin America*, 51.
[132] Rauch, *Conflict*, 185.

- Halt any warship acquisitions in progress, a clause directed at the battleship orders and Argentina's two latest armored cruisers
- Reduce their fleet sizes until a "just balance" was established, something that would be accomplished in one year
- To not acquire any naval armament in the next five years without giving eighteen months' notice, a clause that applied to warships but explicitly excluded coastal fortifications or submarines, which were viewed as useful only in defense.[133]

These restrictions were codified in the Naval Limitations Treaty of 9 January 1903 and adhered to by both parties. Argentina's fifteen-thousand-ton battleships were canceled before construction ever began on them, and on 29 December 1903, they sold their final two armored cruisers to Japan, where they were renamed *Nisshin* and *Kasuga*. Both were utilized in the Russo-Japanese War.[134]

In the same month, Chile's battleships were sold to the United Kingdom, where they were renamed *Swiftsure* and *Triumph*. The British declined to purchase the ships when offered for £1,100,000, believing that their design made them impractical for service in the Royal Navy, but they reconsidered their position after Japan and Russia made offers of £1,600,000 and £1,870,000 (respectively). To avoid any worrying changes in the balance of naval power in the world, a theme that would be echoed a few years later with Brazil's dreadnought order, the British decided to purchase the two battleships for £1,875,000.[135] Playing the great game cost the

[133] Scheina, *Latin America*, 51–52 includes a translated copy of the third pact.
[134] von Rauch, "Cruisers," 304.
[135] Brook, *Warships*, 130.

British treasury nearly £700,000 over the original asking price, and the outlay forced them to cancel plans to order a *Minotaur*-class armored cruiser and *Lord Nelson*-class battleship.[136]

Brazil's coup, revolts, and naval decline

In 1875, fresh out of the Paraguayan War (1864–70), the Brazilian Navy boasted over sixty vessels, nineteen of which were armor-plated.[137] They continued adding to this fleet with two steel-hulled ironclad battleships, *Riachuelo* and *Aquidabã*, in the mid-1880s.[138] They would be the most powerful warships in the Americas for about a decade, when the United States finally commissioned battleships into its navy.[139] Sharing a similar appearance, *Riachuelo* displaced several hundred more tons than *Aquidabã* and had two funnels to *Aquidabã*'s one. Both were armed with four 9.2-inch guns and a secondary armament of 5.5-inch guns.[140] The striking power of these warships led Hilary A. Herbert—a staunch US naval proponent, member of the House of Representatives' Naval Affairs Committee, and future Secretary of the Navy under President Grover Cleveland—to exclaim, perhaps hyperbolically:

> At sea, against any of our vessels or all of them, she [*Riachuelo*] could choose absolutely her own distance for battle. It is humiliating to say it, but if all this old navy of ours were drawn up in battle array in mid-ocean and confronted by the *Riachuelo* it is doubtful whether a single vessel bearing the American flag would get into port. And if in the melee and the chase which followed some ship by leaving its fellows should escape into

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[136] Keith McBride, "Lord Nelson and Agamemnon," in *Warship 2005*, ed. John Jordan (London: Conway, 2005), 71.
[137] *Encyclopædia Britannica*, 9th ed. (1875–89), s.v. "Brazil."
[138] Lyon, "Brazil," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 406–07. *Aquidabã* is often anglicized as *Aquidaban*.
[139] These US ships include *Maine*, which some at the time called a copy of *Riachuelo*, and the three *Indiana*-class coast-defense battleships. N.J.M. Campbell, "United States of America: The New Navy," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 139–140.
[140] Lyon, "Brazil," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 406–07. *Conway's* puts the total of *Aquidabã*'s 5.5-inch guns at four, and that was what the ship was originally delivered with. Subsequent modernizations left contemporary writers flummoxed over what the ship's secondary armament was comprised of, as various sources listed it as anything from the original four 5.5-inch guns, to six 4.7-inch quick-firing guns, to four of the same, to four eight-inch guns. "Dockyard Notes," *Engineer* 89 (16 February 1900): 170. For more details of *Aquidabã*'s as-built specifications, see "The Aquidaban," *Proceedings* 11, no. 2 (1885): 353.

> port, the Brazilian could follow and destroy it under the guns of any fort we have. We have not even a safe harbor of refuge for a fleeing vessel.[141]

This period of superiority did not last long, as the Brazilian Navy was subsequently hamstrung by domestic conflicts. In 1889, military officers deposed the long-time emperor Pedro II, an action that set off much unrest over the following decade. Importantly, this included a major naval revolt in 1893–94, where a number of politicians and most of the navy's experienced officers took control of the naval units in Rio de Janeiro and turned their guns on the army-led republican government.[142] They failed to win the war, and lost their largest warship (*Aquidabã*) to a torpedo fired by a government-controlled torpedo boat.[143] Losing the conflict led to a backlash against the rebel service, what one historian has called a "decade of isolation," after it was re-integrated into the newly born republic.[144] At least one attempt to bolster the navy during this time fell victim to the more powerful army, which had "no faith" in the navy's loyalty to the republic.[145] A Brazilian naval officer would later state that the navy had suffered because of its pervasive "anti-Republican sentiment," alongside general monetary problems then affecting the entire government, although there is evidence that Brazil's commitment to its navy was less than full-throated even before the rebellion.[146]

These complications severely impacted the navy's importance, funding, and readiness.[147] Indicative of this decline, the navy was able to fill only 45 percent of its manning requirements in

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[141] 17 Cong. Rec. H7475 (24 July 1886).
[142] Morgan, *Legacy*, 155–58.
[143] E. Weyl, "The Progress of Foreign Navies," in *The Naval Annual*, ed. T.A. Brassey (London: William Clowes and Sons, 1895), 45–46.
[144] Morgan, *Legacy*, 158.
[145] William Buchanan to Ernesto Tornquist, 5 October 1906, 280, TNA, FO 371/13.
[146] Morgan, *Legacy*, 126; Milne Cheetham to Grey, "Brazil: Annual Report, 1908," 17, TNA, FO 118/287; Gerard Fiennes, "Dreadnoughts for Sale or Hire," *Nineteenth Century and After* 64, no. 378 (1908): 208.
[147] Grant, *Rulers*, 148; Lyon, "Brazil," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 405–10; Scheina, "Brazil," in Gardiner and Gray, *Conway's 1906–1921*, 403; Livermore, "Battleship Diplomacy," 32.

1896, down from 98 percent just a few years earlier.[148] Meanwhile, the Brazilian Navy's combined tonnage quickly fell behind the fleets of its far less populous counterparts in the Southern Cone. Thanks to Argentina's and Chile's naval arms race, the Chilean Navy possessed about 36,900 long tons in total warship tonnage; Argentina followed with about 34,400, and Brazil came last with 28,700.[149] These tonnage figures, though a quick way of comparing navies during this time, hide another problem Brazil's navy faced: its once-modern warships were by now generally older than their foreign counterparts, and were quickly being rendered obsolescent by rapid improvements in naval technology. These advances were one reason why Chile had sold the protected cruiser *Esmeralda*, built shortly before Brazil's ironclad battleships and once proclaimed as "the swiftest and most powerfully-armed cruiser in the world," barely more than a decade after it was built.[150] By the turn of the century, Brazil's only modern armored vessels were two coast-defense ships, *Deodoro* and *Floriano*, both launched in 1898. *Scientific American* regarded them as diminutive vessels of a type "built only for second-rate naval powers," featuring a low speed but heavy armament and armor for their size.[151] Size was an important qualifier, as while *Deodoro* and *Floriano* were indeed well-armed, their displacement was a mere 3,100 tons—not much more than half that of *Riachuelo*, and less than half of Argentina's *Garibaldi* class.[152]

The Brazilians hoped to alleviate some of this technological gap by modernizing and refitting *Riachuelo* and *Aquidabã*, the latter of which was raised after being sunk in the naval

[148] Love, *Revolt*, 16.
[149] Livermore, "Battleship Diplomacy," 32n5.
[150] Brook, *Warships*, 55; "Home," *Graphic* 30, no. 775 (4 October 1884): 347.
[151] "The New Brazilian Armorclad 'Marshal Deodoro'," *Scientific American* 82, no. 12 (24 March 1900): 184.
[152] Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 403; Lyon, "Brazil," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 407.

revolt. They did this first in the 1890s, when both ships were sent to Europe, where they had heavy "tower-like military masts" fitted. These were unsuccessful additions, and their removal in 1904 meant that the ships were more stable and their belt armor would no longer be submerged beneath the waterline—an extremely useful feature in keeping a fighting ship afloat in battle.[153] *Aquidabã* then blew up and sank in 1906, taking 212 people (including four rear admirals) with it.[154]

As the new century passed, the neglect of Brazil's navy was readily apparent to foreign observers, and British diplomats stationed in the country were unstinting in their criticism. In 1906, Britain's acting consul-general in Rio de Janeiro cabled home that the Brazilian Navy was "markedly inferior" in both quantity and quality to Argentina, and that the entire "existing Navy of Brazil may be said to be entirely obsolete and out of date."[155] Another diplomat added that the fleet was "composed … of old units which have been lying for years in the Bay in a sorry state," and Haggard, the newly installed British minister to Brazil, added in his 1906 annual report that the force was still "very weak," and their ship's "usual fate has been to lie and rot."[156] Conditions improved slightly in the years after 1906 as the navy brought on European-trained officers and began limited exercises, but the force's material condition remained old.[157] In 1909, Milne Cheetham, the British *chargés d'affaires* in Rio de Janeiro when Haggard was absent, called out

[153] Philip R. Alger, "Professional Notes," *Proceedings* 31, no. 4 (1905): 983. See also Office of Naval Intelligence, *Notes on the Year's Naval Progress*, General Information Series no. 14 (Washington, D.C.: Government Printing Office, 1895), 14.
[154] Lyon, "Brazil," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 406–07; "Warship Blown Up, 212 Lost," *New York Times*, 23 January 1906, 1b; "The Brazilian Battleship Aquidaban," *Engineer* 101 (26 January 1906): 96.
[155] D.R. O'Sullivan-Beare to Grey, 10 November 1906, 292, TNA, FO 371/13.
[156] Colville Barclay to Grey, 5 October 1906, 246, TNA, FO 371/13; Haggard, "General Report on Brazil for the Year 1906," 14, TNA, FO 118/276.
[157] Captain Horace Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247; Haggard, "General Report on Brazil for the Year 1906," 14, TNA, FO 118/276.

the navy's "feebleness" and its ships as being "very poor," and an anonymous Brazilian naval officer in the *Times* characterized the majority of his "antiquated" ships as "fit for scrapping."[158]

José Paranhos, the Baron of Rio Branco and Brazil's esteemed foreign minister from 1902 to 1912, summed up his dismay at the state of affairs: "In such conditions, you … understand how upset I am and all the worries I have. All that still protects us is the moral force and old prestige that is still left from already old times, when there was still foresight in this land."[159]

[158] Cheetham to Grey, "Brazil: Annual Report, 1908," 17–18, TNA, FO 118/287; "The Brazilian Navy: The Old and the Modern Fleet," *Times* (London), 28 December 1909, 48f.
[159] Luís Viana Filho, *A vida do Barão do Rio Branco* (São Paulo: Livraria Martins, 1967), 445.

Brazil's dreadnought ambitions

In the first decade of the twentieth century, Brazilian politicians and aristocrats, led by the Baron of Rio Branco, began an ambitious attempt to turn their nation into an international power and the regional hegemon, capable of enforcing an end to border disputes and dissuading imperialist foreign aggressors.[160] They believed that their goal was achievable because the country was flush with export revenue stemming from its rubber boom and coffee economy. At the time, it was producing upwards of three-quarters of the world's coffee, and the country was "growing rich at a remarkable rate," in the words of the *Christian Science Monitor*.[161] On top of this new-found wealth, Brazil's governing elites trusted that the turmoil, instability, and domestic conflict of recent years had come to an end, giving them the stability they needed to build up their nation.[162]

Increasing the strength of the Brazilian military, especially the navy, was a crucial step in achieving Rio Branco's goal.[163] As historian James F. Siekmeier writes, "Throughout history … a more powerful navy was a *sine qua non* [an essential condition] for building a more powerful nation."[164] Chronologically, any military expansion would build upon other recent international prestige-boosting events, including the visit of the United States Great White Fleet in 1906, Senator Rui Barbosa's acclaimed performance at the Hague Convention of 1907, and an

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[160] João Paulo Alsina Jr., "Rio Branco, grand strategy and naval power," *Rev. bras. polít. int.* [*Revista Brasileira de Política Internacional*] 57, no. 2 (July/December 2014): 24–25, https://dx.doi.org/10.1590/0034-7329201400302; Love, *Revolt*, 14; Scheina, *Latin America*, 80.
[161] "Brazil Growing Rich," *Christian Science Monitor*, 22 July 1910, 13; Lincoln Hutchinson, "Coffee 'Valorization' in Brazil," *Quarterly Journal of Economics* 23, no. 3 (1909): 528–29.
[162] Alsina Jr., "Rio Branco," 17.
[163] Ibid., 24.
[164] James F. Siekmeier, *Latin American Nationalism: Identity in a Globalizing World* (New York: Bloomsbury Publishing, 2017), 53.

anticipated state visit from the King of Portugal, although he would be assassinated before he could make the journey.[165]

The Brazilian government made informal contact with the Brazil-based agents of the British shipbuilder Armstrong Whitworth as early as November 1903, when the Brazilians received a list of proposals for coast defense ships and armored cruisers from Armstrong. Some of these designs were based on the ex-Chilean *Swiftsure* and the Norwegian *Norge*. The discussions continued into August 1904, when Armstrong sent two additional armored cruiser designs. However, when it came to the question of how the new Brazilian Navy should be built out, the country's political and military establishments were divided along two widely different schools of thought. One faction desired a navy centered around a small number of large and heavily armed warships, which would incidentally further Brazil's international diplomacy in areas like showing the flag abroad. The other wanted a larger number of smaller warships, able to negotiate Brazil's extensive green water holdings with ease.[166]

The small-ship faction initially proved victorious, as on 14 December 1904, the National Congress of Brazil allocated funds for the acquisition of twenty-eight warships, including three battleships, three armored cruisers, six destroyers, twelve torpedo boats, three submarines, and a transport ship.[167] The Brazilians sent out invitations to bid to construct these warships quickly, and asked interested shipbuilders to submit their proposals to Rothschilds, Brazil's powerful financial backers, by February 1905. Rothschilds duly forwarded the tenders on 9 February, and

[165] Haggard to Grey, 9 February 1908, no. 12, TNA, FO 420/247; Cheetham to Grey, 28 June 1908, no. 62, TNA, FO 420/247. Of interest is Cheetham's belief that bolstering Brazil's military was a desire of the "governing class," rather than the entire nation.
[166] Zachary R. Morgan, *Legacy of the Lash: Race and Corporal Punishment in the Brazilian Navy and the Atlantic World* (Bloomington: Indiana University Press, 2014), 159–60.
[167] Ibid., 159; T.A. Brassey and John Leyland, "Foreign Navies," in *The Naval Annual*, ed. T.A. Brassey (London: William Clowes and Sons, 1905), 37. Topliss, "Brazilian Dreadnoughts," 240 inaccurately dates this to October 1904.

Armstrong and Vickers, the only two private naval gun manufacturers in Britain, partnered to submit a joint bid for the battleships (Armstrong) and armored cruisers (Vickers). This maneuver ensured that all the other shipbuilders in the country would be unable to construct the ships. By July 1905, however, the Brazilian Navy decided against purchasing any armored cruisers and asked Armstrong to offer a new sole tender for the battleships and come up with new battleship designs.[168]

A year passed as the Brazilian Navy selected a design and haggled over small details, and on 23 July 1906, the navy minister Júlio César de Noronha, a proponent of the small-ship philosophy, signed a £4.8 million contract with John Meade Falkner, a director at Armstrong and future chairman of the company, for three thirteen thousand ton battleships.[169] These ships, which were enlarged to over fourteen thousand tons shortly after the contract's signing, would have carried the unusual main armament of twelve ten-inch guns and steam at a maximum speed of nineteen knots.[170]

Noronha's warships were, however, doomed. First, the small-ship faction lost a number of its adherents in a January 1906 powder magazine explosion aboard *Aquidabã*, one of Brazil's two ironclad battleships acquired in the mid-1880s. *Aquidabã* had been carrying several high-ranking members of a commission tasked with examining the locations proposed for a new naval arsenal, and three rear-admirals and most of the officers onboard were among the over two hundred people killed. Noronha was present but unhurt, as he had been traveling on the cruiser

[168] Topliss, "Brazilian Dreadnoughts," 243–44.
[169] Johnston and Buxton, *Battleship Builders*, 228; Topliss, "Brazilian Dreadnoughts," 245; Herbert Daring to Grey, 25 July 1906, TNA, FO 371/13.
[170] Topliss, "Brazilian Dreadnoughts," 245–46. Specifically, Armstrong subcontracted one of the three battleships to Vickers, and the designs passed to them by Armstrong on 10 September 1906 show increases in length, beam, and displacement (to 14,564 tons).

Barroso.[171] Second, even though seven thousand tons of construction material had been gathered by the end of 1906 and two of the battleships' keels were laid, the Royal Navy's *Dreadnought* caused the newly elected Brazilian government of Afonso Pena—influenced by its new navy minister Alexandrino Faria de Alencar—to discard the previous administration's naval order in favor of three warships of the new "dreadnought" type.[172] Alencar, a senator, admiral, and large-ship adherent, held a dream of making Brazil "*the* naval power in South America."[173]

Dreadnought was the first battleship to feature an all-big-gun armament of twelve-inch guns, as opposed to the older practice of mounting two to four large and upwards of eight medium guns. It also utilized the first steam turbines mounted inside a capital warship to reach a top speed of twenty-one knots, three knots faster than the previous standard.[174] *Dreadnought* "was so daringly modern, so imposing to the eye and so threatening of men that she impressed the whole world," as one widely published American newspaper editorial put it, and its revolutionary potential was such that another publication said that its "advent made every one of the older ships obsolete … for the *Dreadnought* could choose her range and blow any ship afloat out of the water."[175] Contemporary sources speculate that the Brazilian Navy was also influenced

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[171] Morgan, *Legacy*, 160; "Warship Blown Up, 212 Lost," *New York Times*, 23 January 1906, 1.
[172] T.A. Brassey and John Leyland, "Foreign Navies," in *The Naval Annual*, ed. T.A. Brassey (London: William Clowes and Sons, 1907), 37; D.R. O'Sullivan-Beare to Grey, 10 November 1906, TNA, FO 371/13; Grant, *Rulers*, 152; Morgan, *Legacy*, 162; Topliss, "Brazilian Dreadnoughts," 246; Gerard Fiennes, "Dreadnoughts for Sale or Hire," *The Nineteenth Century* 64 (August 1908), 208. Brazil's 1906 presidential election was held in March, prior to Noronha's order, but Pena was not inaugurated until 15 November. Haggard to Grey, "General Report on Brazil for the Year 1906," 12, TNA, FO 118/276.
[173] Haggard to Grey, "General Report on Brazil for the Year 1906," 19, TNA, FO 118/276. The italicized emphasis is in the original, and the quote comes from a series of short biographies about prominent Brazilian politicians, military officers, and authors that Haggard included in his annual report.
[174] Eric Grove, "The Battleship *Dreadnought*: Technological, Economic and Strategic Contexts," in Blyth, Lambert, and Rüger, *Dreadnought and the Edwardian Age*, 165. The design history and introduction of this warship type into the Royal Navy has been remarkably well explored in naval literature, beginning with the classic narrative written by Arthur J. Marder, *Anatomy of British Sea Power: A History of British Naval Policy in the Pre-dreadnought Era, 1880–1905* (New York: A.A. Knopf, 1940).
[175] "Daringly modern" comes from "A Craze for Dreadnoughts," *Mill Valley Independent*, 18 June 1909. The piece originally appeared in the *Toledo Blade*, and was printed here alongside several other editorials, all under the header

by the results of the Russo-Japanese War and the decisive Japanese victory at the Battle of Tsushima, where British naval analysts judged that the fleet's largest guns decided the battle.[176]

The Brazilian legislature officially sanctioned Alencar's efforts in December 1906 by allowing the administration to modify the naval modernization program as they saw fit, just so long as the cost of the modifications not surpass that of the original planned outlay.[177] Armstrong began disassembling months of work on 7 January 1907, and Alencar signed a new contract with them on 20 February for the purchase of three dreadnoughts, of which two would be built immediately.[178] As a condition of the sale, the Brazilian government sent Armstrong £1.7 million as a security deposit, or what Haggard called "caution money."[179]

Alencar's new naval program, which replaced the one passed in 1904, called for a total of twenty-six new warships at a cost of £8 million.[180] This would represent an extreme expansion in the capability and size of the Brazilian Navy; Alencar estimated that the navy's total gross displacement would jump from 14,000 to 93,594 tons.[181] Beyond the flagship dreadnoughts, the program now called for three scout cruisers, fifteen destroyers, three submarines, and two auxiliary vessels. Scout cruisers were smaller than armored cruisers with less armament and more speed, while destroyers were larger than torpedo boats.[182] Two of these cruisers and ten destroyers would be built first, with the rest to follow. Ideally, the dreadnoughts, scout cruisers,

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"opinions of great papers on important subjects." "Advent made every one" comes from Charles H. Hall, "The Battleship," *Sea Power* 1, no. 4 (September 1916): 18–19.

[176] "The Brazilian Battleship '*Minas Geraes*'," *Engineering* 86 (11 September 1908): 352; "Brazilian Battleship '*Minas Geraes*'—Most Powerful Fighting Ship Afloat," *Scientific American* 99, no. 24 (12 December 1908): 428.

[177] Grant, *Rulers*, 152.

[178] Topliss, "Brazilian Dreadnoughts," 246.

[179] Haggard to Grey, 6 March 1907, no. 15, TNA, FO 420/244.

[180] John Leyland, "Foreign Navies," in *The Naval Annual*, ed. T.A. Brassey (London: William Clowes and Sons, 1910): 54–55. Hereafter cited as Leyland, "Foreign Navies," in *The Naval Annual* (1910).

[181] Philip Alger, "Professional Notes." *Proceedings of the United States Naval Institute* 36, no. 3 (1910): 860.

[182] Leyland, "Foreign Navies," in *The Naval Annual* (1910), 54–55.

and destroyers would deploy in up to two separate fleet units, where one dreadnought would be escorted by one cruiser and five destroyers. In battle, the scout cruiser would serve as the fleet's primary reconnaissance platform and help drive off enemy destroyers, while the destroyers would screen the larger ships. Neither would have to deal with enemy torpedo boats, as for most countries, the small vessels would not be able to make a long-distance voyage to Brazil.[183]

Figure 3.1: The Brazilian cruiser *Bahia*, ordered alongside the dreadnoughts.

Source: Brazilian Navy via Flickr. CC BY-SA 2.0.
https://www.flickr.com/photos/mboficial/34864419556/.

[183] Alsina Jr., "Rio Branco," 19–20.

The Brazilian government also contracted with Vickers in August 1909 for a large floating drydock, which would be named *Affonso Penna*.[184] Measuring about 550 feet long and able to hold vessels that had a one hundred foot beam and a thirty foot draft, the drydock was specifically intended to hold the *Minas Geraes*-class dreadnoughts so that the Brazilian Navy could conduct routine maintenance and make repairs to its new ships.[185] *Affonso Penna* was one of the largest such floating drydocks in the world at its completion, being surpassed only by two such docks in Germany.[186] Mesrs. Smit and Company, based out of Rotterdam and which had specialized tugboats for transporting floating drydocks, towed it from the United Kingdom to Brazil from 4 July to 29 September 1910, where it was stationed in Guanabara Bay in the channel between the islands of Governador and Boqueirão. Boqueirão contained the Brazilian Navy's major arsenal in Rio de Janeiro.[187]

Possessing this docking facility was crucial for the future viability of the dreadnoughts, as in the words of a British naval officer assessing the state of South American navies in 1908, the new ships would "soon be useless" without one. While Brazil had existing land-based naval facilities, particularly in Rio de Janeiro, the dreadnoughts would be unable to utilize them: they were too small to accommodate a dreadnought and were in any case, according to the same officer, "handicapped by the presence of ancient machines, docks, and ships which are of little

[184] For the contract date, see "Floating Dock for Rio de Janeiro," *Times* (London), 14 August 1909, 3d; "New Floating Dock for Brazil," *Times* (London), 25 August 1909, 20c. For the name, see "Floating Dock for Brazil," *Navy* (Washington) 4, no. 6 (August 1910): 27.
[185] "A 22,000-Ton Floating Dry Dock for Brazil," *International Marine Engineering* 16, no. 1 (January 1911): 1. This article contains a detailed technical description of the drydock.
[186] "Brazil's 22,000-Ton Floating Drydock," *Popular Mechanics* (November 1910): 717–18.
[187] "A 22,000-Ton Floating Dry Dock for Brazil," *International Marine Engineering* 16, no. 1 (January 1911): 1, 7; "Floating Dock for Brazil," *Navy* (Washington) 4, no. 6 (August 1910): 27. According to *International Marine Engineering*, *Affonso Penna* was the seventeenth floating drydock that Mesrs. Smit and Company had moved overseas.

use for modern vessels, and are expensive to remove."[188] The Brazilian Navy eventually commissioned a French firm to address the inadequacies in their land-based infrastructure.[189]

The Brazilian Navy would name their dreadnoughts *Minas Geraes* and *São Paulo*, respectively; the third dreadnought would become *Rio de Janeiro*. The names honored the most powerful states of Brazil, which not coincidentally were the three major coffee-producing states within the country.[190] The beginning of construction on these dreadnoughts made Brazil the third country in the world to have such vessels under construction.[191] Suddenly, professional naval journals began listing Brazil alongside acknowledged naval powers like the United Kingdom, Germany, Japan, and the United States.[192] "By good fortune and the enthusiastic co-operation of her British suppliers," maritime historian Richard Hough would later write, "Brazil thus found herself at the head of the hastily-formed international queue for Dreadnoughts."[193]

In a 1909 report to the president of Brazil, Alencar stated that his changes saved the Brazilian treasury almost £1 million, and that *Minas Geraes*' cost-per-ton came in lower than the original *Dreadnought*.[194] As time passed, however, several of his planned ships fell by the wayside. The two dreadnoughts, two cruisers, and ten destroyers were launched or delivered by 1910, and the third dreadnought, three submarines, and one of the two auxiliary ships were built later; all the rest would eventually be canceled.[195]

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[188] Captain Horace Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247;
[189] Townley to Grey, "Argentine Republic: Annual Report, 1909," 29 January 1910, TNA, FO 118/292, 14.
[190] Grant, *Rulers*, 152; Hutchinson, "Coffee 'Valorization' in Brazil," 528–29. The three were also party to a coffee "valorization" policy that helped prop up the price of coffee.
[191] Keel laying dates gathered from Gardiner and Gray, *Conway's 1906–21*. The two countries that preceded Brazil were the United Kingdom, with the eponymous *Dreadnought*, and United States, with the *South Carolina* class.
[192] "The Dreadnought Competition," *Navy* (Washington) 3, no. 5 (May 1909): 18–19.
[193] Richard Hough, *The Big Battleship* (London: Michael Joseph, 1966), 18. This book has also been published as *The Great Dreadnought.*
[194] Leyland, "Foreign Navies," in *The Naval Annual* (1910), 54–55.
[195] Scheina, *Latin America*, 81; Scheina, "Brazil," in Gardiner and Grey, *Conway's 1906–21*, 404–06; Leyland, "Foreign Navies," in *The Naval Annual* (1910), 54–55; "Brazil; Rapid Brazilian Construction," *Navy* (Washington) 3, no. 4 (April 1909): 39.

International reactions to Brazil's dreadnoughts

In 1909, a writer for the *Philadelphia Inquirer* opined that historians looking back on the twentieth century would call its first decade the "Dreadnought Era."[196] Another contemporary commentator remarked that the world had been consumed by "dreadnought mania."[197]

These were not hyperbolic assessments, as the warship type rapidly became a symbol of national prestige and a primary concern in international diplomacy, politics, and naval strategy in the years preceding the First World War. The rise of the dreadnought in these areas stemmed from the contemporary perception of the power that they embodied. A dreadnought's main batteries gave any navy the overwhelming offensive advantage of being able "to strike first and to strike with crushing effect," something which represented a "revolution" in how nations prepared for future wars at sea.[198] This worked both ways. In a sort of precursor to the mutually assured destruction doctrine, dreadnoughts could also be the cornerstone upon which a country's maritime *defenses* were built, so long as the range of their guns could match and deter those carried by a dreadnought of a foreign power. As one historian has written, "dreadnoughts were generally considered the final guarantee against seaborne aggression."[199] It did not take long for press outlets to start using dreadnoughts, and the armament they mounted, as a convenient method for comparing navies against each other.[200]

These conditions fostered a tense and charged political climate which fed into global reactions to Brazil's contract signing, especially in naval journals and major newspapers. "Never

[196] "Dreadnoughts the Issue in England," *Philadelphia Inquirer*, 30 May 1909, 4.
[197] Gerald Ellis Cronin, "South American Sea Power," *Navy* (Washington) 5, no. 7 (July 1911): 29. An additional alternative, this one in the headline: "World Warship Mad," *Washington Post*, 24 December 1911, 7.
[198] "Dreadnoughts the Issue in England," *Philadelphia Inquirer*, 30 May 1909, 4.
[199] Robert O'Connell, *Sacred Vessels: The Cult of the Battleship and the Rise of the US Navy* (Boulder, CO: Westview Press, 1991), 4.
[200] Judson C. Welliver, "The American Navy," *Munsey's Magazine* 53, no. 4 (January 1915): 781.

has the Navy of a minor power loomed so large on the international horizon as that of Brazil during the past year," proclaimed the 1908–09 edition of Britain's *Navy League Annual*. "This nation has had the audacity to order (not merely to 'project'; this is done monthly by many insignificant powers) three warships equal in fighting value to anything afloat or building."[201] Similarly, the long-running magazine *Engineer* frankly stated that "few, if any, foreign ships in recent years have attracted so much attention as the Dreadnoughts from Brazil."[202] The international press began reporting on the order in March 1907, while details of the full purchase were widely reported in July and August.[203]

To compare dreadnoughts to others from their own or other nations, press outlets from the era typically examined armament, speed, armor, and size. These traits were related by what naval historian Norman Friedman calls the "squeeze"—on a given displacement, emphasizing one factor, like armament, could only come at the expense of one or both other factors, which in this scenario would be speed and armor.[204]

These "on paper" measurements led several press outlets and journals to anoint *Minas Geraes* as "the most powerful warship ever built for any navy" and "the most powerfully armed

[201] Alan H. Burgoyne and Gerard Fiennes, "The South American Republics," in *The Navy League Annual 1908–1909*, ed. Alan H. Burgoyne (London: The Navy League, 1908): 96–99.
[202] "The Minas Geraes," *Engineer* 106 (11 September 1908): 260.
[203] E.g. "A Dreadnought for Brazil," *New York Times*, 5 March 1907, 5; "Giant Ships for England or Japan," *New York Herald*, 1 July 1908, 9a; "The Large Order for Foreign Battleships," *Times* (London), 28 August 1907, 8f.
[204] The relationship between armament, speed, and armor on a given displacement can also be explained in contrasting battlecruisers against dreadnoughts. The two warship types displaced similar amounts and mounted heavy armament, but battlecruisers prioritized speed. To obtain these speeds, British battlecruisers of the First World War usually sacrificed armor. This did not serve them well at the Battle of Jutland, where several of them were blown up by German shells. Conversely, German battlecruisers of the same era generally chose to mount a smaller main armament, which allowed them to carry more armor. The squeeze could be alleviated somewhat by increasing the displacement, a trend rapidly employed in the years after *Dreadnought* appeared, but it became a serious constraint in battleship design once again during the interwar period thanks to the tonnage limits imposed by the Washington and London naval treaties. Norman Friedman, *Battleship Design and Development, 1905–1945* (New York: Mayflower Books, 1978), 20–22, 168–69, 172–73.

warship afloat," devoting particularly high praise to its "outstanding" armament.[205] This came in part because of *Minas Geraes*' specifications when contrasted against Britain's *Dreadnought*. Brazil's new warships were designed to displace around 19,500 long tons, carry twelve twelve-inch guns in six twin turrets, have nine-inch belt armor, and steam at twenty-one knots with triple expansion engines. Ten of the guns could fire on a broadside.[206] *Dreadnought*, on the other hand, displaced about eighteen thousand tons, carried ten twelve-inch guns (only eight of which could fire on a broadside), had eleven-inch armor, and steamed at the same twenty-one knots with steam turbines. Later British battleships designed and laid down contemporaneously with *Minas Geraes* mounted the same ten main guns.[207]

Armament was frequently the chief determiner of a ship's perceived power, especially in non-specialist press, and so mounting a higher than average firepower at the expense of one or more other attributes was a deliberate choice made by several minor navies of the time. In the case of *Minas Geraes*, the attribute that suffered was armor.[208] What was novel about the Brazilian design was that it called for "superfiring" turrets, where one turret was placed above and behind another turret. This arrangement allowed more turrets to fit on a shorter hull, but at the time was wholly untested in Britain.[209]

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[205] "On paper" and "most powerful warship" come from "Launch Greatest Warships," *New York Times*, 11 September 1908, 5; "outstanding" and "powerfully armed" come from "The Brazilian Battleship '*Minas Geraes*'." *Scientific American* 102, no. 12 (19 March 1910): 241.

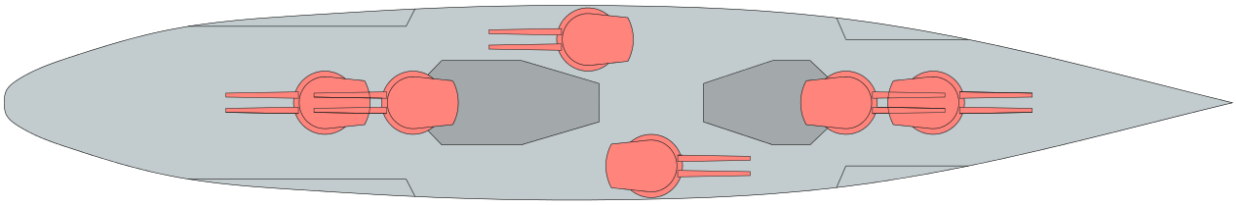
[206] "The Brazilian Battleship '*Minas Geraes*'," *Engineering* 86 (11 September 1908): 352; Breyer, *Battleships*, 320–21. Broadsides were the areas perpendicular to the middle of the ship where the majority of a battleship's guns could be fired. Triple expansion engines were installed instead of the newer steam turbines because the Brazilian Navy was more familiar with the former. "Trials of the Sao Paulo," *Navy* (Washington) 4, no. 5 (July 1910): 29.

[207] Breyer, *Battleships*, 115, 119–126. See also the introduction's footnote 28. In fact, the next six post-*Dreadnought* British battleships mounted ten 12-inch guns. This changed only with the *Orion* class super-dreadnoughts, commissioned in 1912 with ten 13.5-inch guns.

[208] Friedman, *Battleship Design*, 21.

[209] J.R. Perrett, "Some Notes on Warships Designed and Constructed by Sir WG Armstrong, Whitworth, & Co, Ltd," *Mechanical Engineer* 34, no. 867 (4 September 1914): 212. The use of superfiring armament in the *Minas Geraes* design was questioned due to a pervading belief that guns in the upper turrets would interfere with, if not injure, the crew operating the lower turret. This theory was tested and disproved during *Minas Geraes*' trials. See the

Figure 3.2: Diagram depicting the *Minas Geraes* class' main armament.



Source: Sas1975kr and Maxrossomachin via Wikimedia Commons. Public domain. https://commons.wikimedia.org/wiki/File:Minas_Geraes-class_battleship_main_battery_arrangement.svg.

The press played a key role in driving speculation about the Brazilian dreadnoughts. Military-focused journals were quick to declare that such ships were for sale if even one payment in a series of scheduled installments was missed, and within these articles, "ingenious paragraphs" would be "inserted to show that if any Government refuses to buy, a rival will cut in and secure the ship and turn the balance of power." This had the effect of driving higher bids and, presumably, higher journal sales.[210] For the two *Minas Geraes*-class dreadnoughts, the press entertained the possibilities that Brazil was planning to sell the warships as soon as they were completed and left Britain or had been recruited to serve as a proxy for a traditional naval power to protect their identity. The predicted destinations of the dreadnoughts were most frequently cited as Britain, Germany, the United States, and Japan; these can be viewed as stemming from two separate schools of thought. With Britain and Germany locked in a major naval arms race, rumors that the Brazilian vessels would go to one or the other were inevitably linked. There were

chapter on "Constructing and testing the dreadnoughts" along with "The New Brazilian Battleships," *Times* (London), 22 January 1910, 16f. Still, the innovativeness of this feature was rather undercut by the addition of two wing turrets, which were situated near the side of the ship. See figure 3.2. These quickly fell into obsolescence because of the stress their location placed on ship's hulls and their inability to fire to both sides of the ship. Superfiring, on the other hand, was used on all full-sized battleships finished during or after the First World War. Friedman, *Battleship Design*, 132–34.

[210] "The Brazilian Dreadnought and the Naval Missions," *Economist*, 3 January 1914, 6.

similar suspicions between the United States and Japan, which naval analysts believed were natural rivals for dominance over the Pacific Ocean.[211]

One of the first shots was fired in an American naval journal. Writing at the tail-end of 1907, the anonymous Berlin correspondent for the *Navy*, the journal of the Navy League of the United States, noted that there was "little doubt" in the country that the ships were destined for Britain. Colonial undertones appeared as well: "It appears somewhat improbable," the contributor wrote, "that a minor naval power such as Brazil actually intends to saddle herself with such leviathans." In their view, Brazil's current navy could adequately defend its coast against any likely adversary.[212] The same individual returned to the subject months later to debunk theories that Germany would purchase the ships after they left British waters, since the High Seas Fleet was built on inter-ship homogeneity. Instead, he again speculated that Britain was the real conspirator.[213]

None of the rumors subsided until the ships were delivered and commissioned into the Brazilian Navy, especially conjecture that the British would be unable to avoid acquiring them. These views persisted in part because some British Members of Parliament (MP) fretted over the naval balance of power between Britain and Germany.[214] This fear caused them to inquire about the Brazilian dreadnoughts with the aim of ensuring that the warships would not be purchased by a nation hostile to Britain, particularly Germany, which would disrupt the Admiralty's carefully laid plans.[215] In the midst of a multitude of Brazilian dreadnought-related press rumors in July 1908, MP Arthur Lee, a future First Lord of the Admiralty, emphasized the danger he thought

[211] Fiennes, "Dreadnoughts for Sale or Hire," 210.
[212] "British–Brazilian Warships," *Navy* (Washington) 2, no. 1 (January 1908): 11–12.
[213] "The German Fleet," *Navy* (Washington) 2, no. 6 (July 1908): 14.
[214] E.g. "Lord Fisher on British Naval Supremacy," *Times* (London), 28 April 1908, 11d.
[215] "Naval Policy," *Times* (London), 24 March 1908, 6e; "Battleships for Brazil," *Times* (London), 12 May 1908, 4d.

Britain could be in. "A sudden and unexpected addition of three dreadnoughts to the fighting strength of any first-class naval power," he stated, "would completely upset the balance upon which our shipbuilding programmes were constructed."[216]

In response, Reginald McKenna, the First Lord of the Admiralty, stated with care that the government had a "considerable interest" in the ships' eventual disposition and that while "it did not seem likely that Brazil could be launching into a navy of such a size that would require three boats of this magnitude … the Government had not the slightest reason to suppose that the ships were being built with any hostile purpose to this country."[217]

The British held that "considerable interest" because of dangerous possibilities like those entertained by Gerard Fiennes, a British journalist, naval expert, and future author of books on sea power. Fiennes projected that by March 1912, the addition of Brazil's three dreadnoughts to Germany's navy would give it near-parity in dreadnoughts with Britain. If Austria-Hungary's three projected dreadnoughts joined with Germany, the combined forces would have one more dreadnought and forty-two more heavy guns than Britain. Integrating the Brazilian ships would be a challenge, as they had significant design differences from both navy's standard practices—especially for the Imperial German Navy, which would have to find a way to design and manufacture ammunition for the British-made guns—but Fiennes theorized that if war seemed near, the ships would be too difficult to resist.[218] "'Dreadnoughts for sale or hire' in the hands of

[216] "The Warships for Brazil," *Times* (London), 14 July 1908, 8c.
[217] "The Brazilian Ships," *Times* (London), 12 July 1908, 8d.
[218] Fiennes, "Dreadnoughts for Sale or Hire," 210–12. Of note, however, is a critique of this specific article by Milne Cheetham, the British *chargés d'affaires* in Rio de Janeiro when Haggard was absent. Cheetham thought the notion that Brazil ordered the ships to sell later was ludicrous: "The navy has always been prominent in Brazilian history, and I think it is fantastic to suppose that the iron-clads were ordered to be realized later, or with the idea that the fleets of the world would be so evenly balanced in the future that the desire for a Brazilian alliance, or the acquisition of her ships, would enable Brazil to exact important political advantages in the event of an imminent naval conflict." Cheetham to Grey, 23 August 1908, no. 80, TNA, FO 420/247.

minor States are … no inconsiderable menace to the country which lives by sea power," he would later write.[219] Newspapers like the *London Express* therefore concluded that Britain, "driven by naval necessity," would purchase the ships before they left the country.[220]

By 1909, however, the British frontbench in Parliament remained unworried about the Brazilian dreadnoughts. In March, McKenna publicized fresh details of Germany's dreadnought program, most notably that the Germans would have four more than previously thought. Considering this news, Members of Parliament once again debated the merits of obtaining the Brazilian ships. McKenna officially denied that the government would attempt any purchase.[221] "If we need more ships … it would be better to build them ourselves," he stated to the House of Commons, "but we don't require any more at present."[222] When asked if the Admiralty had contingency plans in case the Brazilian ships were sold to another nation, McKenna replied to cheers that "our present superiority in strength in 1909–10 is so great that no alarm need be created."[223]

Across the Atlantic Ocean, newspapers and journals ascribed, as the Brazilian minister to Britain later called it, "ulterior designs" to Brazil's plans.[224] In a widely cited report, the *New York Herald* declared in July 1908 that the ships would be destined for the United States or, as emblazoned in the headline, for Japan. "As regards the destination of the battleships, one thing seems regarded as certain," their naval correspondent breathlessly wrote:

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[219] Gerard Fiennes, "Foreign Navies and the War," in *The Navy League Annual*, ed. Robert Yerburgh (London: John Murray, 1916), 64.
[220] "Mysterious Warships," *Auckland Star*, 12 September 1908, 5.
[221] "The Brazilian Battleships," *Times* (London), 23 March 1909, 6d; "House of Commons," *Times* (London), 23 March 1909, 12a; "The Brazilian Battleships," *Times* (London), 25 March 1909, 7b; "The Naval Scare," *Sydney Mail*, 24 March 1909, 24.
[222] "England's Power on the Sea Safe," *New York Herald*, 25 March 1909, 9f.
[223] "The Brazilian Battleships," *Times* (London), 25 March 1909, 7b.
[224] "Brazil; Rapid Brazilian Construction," *Navy* (Washington) 3, no. 4 (April 1909): 39.

> They will not leave here under the Brazilian ensign and that they will not pass to any Power likely to be hostile to Great Britain. They are not required nor desired for the British navy, but it is generally stated that if a friend of Great Britain does not buy them Great Britain will. The friend will not be France and will not be Russia, which has not yet succeeded in paying for the Rurik, which fine cruiser is for sale. They will not, it is obvious, be allowed to go to Germany. They differ too much from the Italian design to be destined for Italy.
>
> By a process of exclusion, therefore, it seems obvious that their destination is with us or Japan.[225]

Presumably related rumors added that any transfer to Japan would be facilitated by a secret agreement with Brazil, but only one month later, contributors to the *New York Times* alleged that the dreadnoughts were destined for the United Kingdom or Germany—the latter at a going rate of $30 million.[226] London's *Daily Express* claimed to have "definite" evidence that British authorities would purchase the Brazilian dreadnoughts.[227] New York's *The Sun* thought the British would never let the ships go to Germany, but would allow a transfer to Japan.[228] The problem with this scenario, however, was that the British would have no way to disallow a transfer to any power once the dreadnoughts left the United Kingdom. To solve this, London's *The Spectator* advocated for a British–Brazilian treaty which would give the British the first option to purchase the ships at a cost premium should the Brazilian Navy decide to sell them within the first five years of their service lives. "Treaties, however, are always uncertain," the magazine continued. "Perhaps a wiser plan would be, in calculating the force which would give

[225] "Giant Ships for England or Japan," *New York Herald*, 1 July 1908, 9a. Other outlets picked up on this line of reporting, such as "Japan To Acquire Brazil Warships," *Christian Science Monitor* 9 July 1909, 8, or republished the *Herald*'s reporting, such as "Brazil Japan's Catspaw?," *Washington Post*, 2 July 1908, 3.
[226] "Germany May Buy English Warships," *New York Times*, 9 August 1908, C8.
[227] "Brazil's Ships for Britain; Now Reported That New Dreadnoughts Are for England, Not Japan," *New York Times*, 17 July 1908, 1.
[228] "Brazil, Japan, and Great Britain," *Sun* (New York), 1 July 1908, 6.

us absolute security, to reckon purchasable capital ships as part of the force which we must always be prepared to defeat."[229]

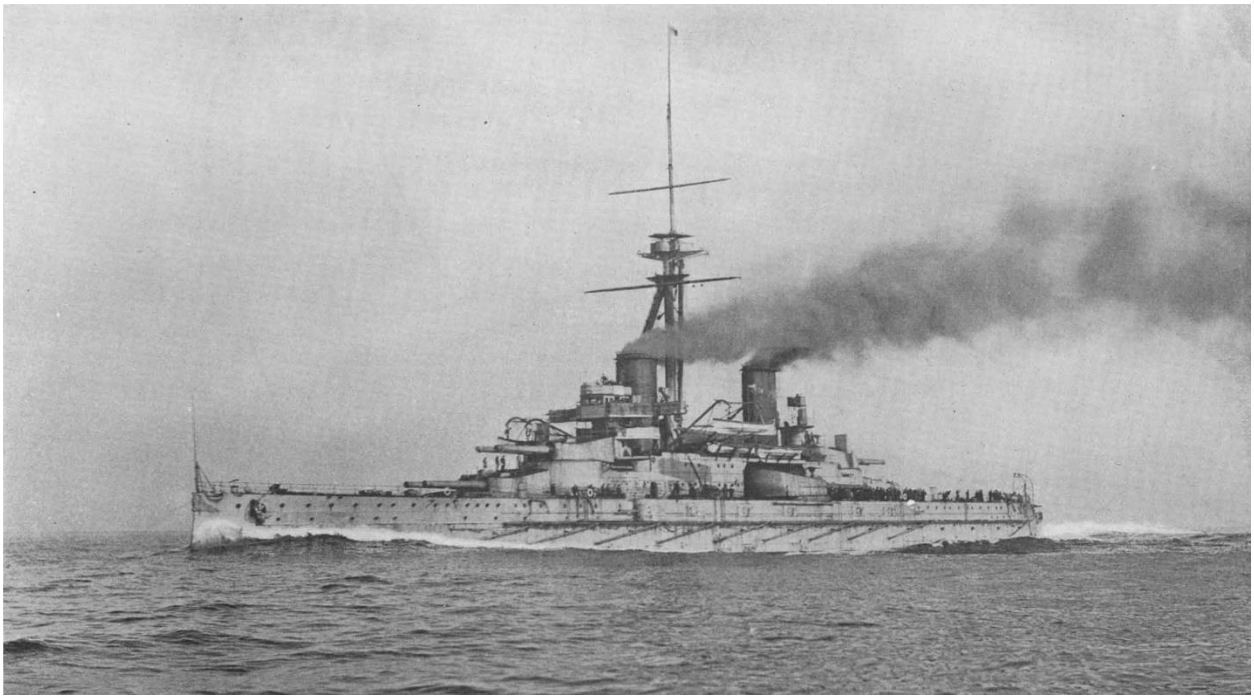
If they were sold to Japan, a treaty-bound ally of the United Kingdom, *International Marine Engineering* noted that the *Minas Geraes* class' offensive capabilities could increase the broadside weight of the Japanese Navy's battle line by nearly one-third, although *The Engineer*'s critical analysis of their defensive features led them to believe that they were "not suitable for European conditions" because of their armor, which was thinner than contemporary European dreadnoughts.[230] Fiennes, the British naval expert, predicted that a Japanese or American acquisition of the Brazilian ships would upset the naval balance of power in the Pacific.[231] Outside the established naval powers, Hüseyin Hilmi Pasha, the Grand Vizier of the Ottoman Empire, declared that his country could purchase them.[232]

Other newspapers and journals tried to shoot down these ubiquitous contentions. The *San Francisco Chronicle* opined that the Japanese government would be "fools" to arm for war against the United States at a time when there were vulnerable European colonies close by, ripe for the taking. Others pointed out the economic ties binding Brazil to the United States, which they believed would prevent the former from committing "commercial suicide" to cavort with Japan, the United States' most likely future foe.[233] Brazil's largest customer for the product was

[229] "News of the Week," *The Spectator* 101 (18 July 1908): 78. At the end of 1912, the British Foreign Office reached out to the Ottoman ambassador in the hope of obtaining a very similar arrangement—that if the Ottomans decided to sell *Reşadiye*, a modified *King George V* class super-dreadnought, in the first four years of its service life, the British would be given the first crack at purchasing it. Halpern, *Mediterranean Naval Situation*, 333–34.
[230] "The Brazilian Battleships," *International Marine Engineering* 13, no. 8 (1908): 362–63; "The Status of South American Navies," *Journal of the American Society of Naval Engineers* 21, no. 1 (1909): 256–57 (reprinted from *Engineer*).
[231] Fiennes, "Dreadnoughts for Sale or Hire," 211.
[232] "Brazil's Dreadnoughts," *Christian Science Monitor*, 12 July 1909, 12.
[233] "Mystery of the Brazilian 'Dreadnoughts'," *Literary Digest* 37, no. 30 (1908): 102–03.

the United States, which consumed nearly five hundred thousand tons of coffee beans in 1907, and the principal source of the Brazilian government's revenue was coffee.[234]

Figure 3.3: *Minas Geraes* at speed, c. 1909–10.



Source: "The Brazilian Battleship 'Minas Geraes'," *Scientific American* 102, no. 12 (19 March 1910): 240. Public domain.

Curiously, little of this coverage referred to the fiasco of Brazil's coffee 'valorization' scheme, where Brazil's three major coffee-producing states planned to buy up massive surpluses in their major cash crop at above market value in the expectation that prices would rise. When problems arose in the arrangement, two backed out, but the state of São Paulo continued, taking out massive loans to do so. Unfortunately for them, the price of coffee did not rise—in fact, it

[234] Haggard to Grey, "Brazil: Annual Report, 1907," 5, TNA, FO 118/281.

fell—and in 1908, Brazil's federal government was forced to offer São Paulo a multi-million-pound guaranteed loan to cover their commitments.[235]

Contemporary commentators skeptical of Brazil's intentions instead focused their questions on the country's strategic need for such ships, principally based on its "insignificant" status in the global hierarchy.[236] W.H.D. Haggard, the British minister to Brazil and a consistent critic of Brazil's naval expansionism, attributed the battleship orders to the nation's "vanity" and "jealousy" in relation to its southern neighbor; to him, the entire venture was a "pure waste of money."[237] *Advocate of Peace,* an American pacifist magazine, similarly blasted Brazil for carrying on with "a showy and pretentious naval policy seemingly for the sheer indulgence of national pride," when the country had no immediate military threats.[238] The *New York Times* summarized the feelings of Western naval powers, writing that when "the orders were placed for [these dreadnoughts], there was much speculation as to the destiny of the vessels, as no naval expert could understand how a second-rate power like Brazil needed such formidable engines of war which would represent absolutely the latest stages of naval construction and armament."[239] The American monthly magazine *World's Work* insightfully outlined the problems these ships introduced to international diplomacy:

> The question that is puzzling diplomats the world over is why Brazil should want ferocious leviathans of such size and armament and speed as to place them ten to fifteen

[235] Hutchinson, "Coffee 'Valorization' in Brazil," 529–31. After its catastrophic beginning, the São Paulo government's valorization program was saved by rising coffee prices, and by 1912 they had paid down a major portion of the loans. "The Industries of Brazil—Coffee Growing," *Times* (London) *South American Supplement*, 29 October 1912, 3. In 1913, they were forced to dump over nine hundred thousand bags of coffee to avoid it being impounded during an anti-trust lawsuit planned by the United States government, although they were able to do so at a healthy profit. "Brazilian Coffee Corner at an End," *New York Times*, 17 January 1913, 4.
[236] "Mysterious Warships," *Auckland Star*, 12 September 1908, 5.
[237] Haggard to Grey, "General Report on Brazil for the Year 1906," 14, TNA, FO 118/276; Haggard to Grey, "Brazil: Annual Report, 1907," 4, TNA, FO 118/281.
[238] Edwin D. Mead, "Reaction in South America," *Advocate of Peace* 70, no. 10 (1908): 238.
[239] "Germany May Buy English Warships," *New York Times*, 9 August 1908, C8.

> years in advance of any other nation besides Great Britain. And even the English Dreadnoughts are as cruisers compared to the Brazilian boats.
>
> … England's reasons for building the Dreadnoughts … are well defined—the maintenance of sea power—and are understood throughout the world. But why the Brazilian boats? Although Brazil has denied that these are meant for England or Japan, naval men of all nations suspect that they are meant for some government other than Brazil's. In the event of war, the government which would first be able to secure these vessels … would immediately place the odds of naval supremacy in its favor. England, no matter how many Dreadnoughts she has, would be compelled to buy them to keep them from some lesser power. They bring a new question into international politics. They may be leaders of a great fleet which minor government are said to be preparing to build; or, to put it more accurately, to stand sponsors for. Some Machiavellian hand may be at work in this new game of international politics and the British Admiralty is suspected. But every statesmen and naval student may make his own guess.[240]

The Brazilian government responds

Fearful of losing the prestige that would be garnered by possessing the dreadnoughts, the Baron of Rio Banco and his foreign diplomats invested much time in vigorously combating the proliferation of any rumor-mongering.[241] In July 1908, for example, Rio Branco protested to a British diplomat that "there was no question … of the vessels being transferred to a foreign power."[242] In a separate telegram, responding to the allegation that Brazil would sell its dreadnoughts to Japan, Rio Branco expressed his belief that the United States and Brazil were on "excellent" terms, and added that "every sensible person will understand that an honest and respectable government would not lend itself to play the part attributed to Brazil by the inventor of the news."[243] The country's ambassador to the United States was rather more blunt with a

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[240] "The Mystery of the Great Brazilian Battleships," *World's Work* 17, no. 1 (1908): 10867–68.
[241] Grant, *Rulers*, 154.
[242] Cheetham to Grey, 21 July 1908, no. 69, TNA, FO 420/247. For other examples of these denials, see "Brazil Would Not Sell Battleships," *New York Times*, 25 January 1908, 4; "Naval and Military Intelligence," *Times* (London), 18 July 1908, 12c; "Naval and Military Intelligence," *Times* (London), 22 March 1909, 9e.
[243] "The Reported Purchase of Battleships," *Navy* (Washington) 2, no. 8 (August 1908): 39. A variation on the "inventor" line can be seen in the *Brazilian Review* of 28 July 1908, in a government-authorized statement to the European press. In part, it says that these rumors being reported on in the press are "sheer invention … circulated in the hope of creating difficulties between the United States and Brazil. … [E]very sensible person will understand

reporter from the *New York Times*, telling them that the idea was "too absurd to deserve denial."[244]

A primary messaging strategy adopted by the Brazilian government, including its naval representatives in the United Kingdom, was that of national defense. "There is not the slightest truth … that these warships, when completed, will be sold to the British or to the German Government, or to any other power," the Brazilian minister to Britain combatively stated in 1908. "They are intended for our own use. Brazil has an extensive seaboard, and needs a relatively strong navy to protect it."[245] He continued on much the same course in March 1909, writing to the *Times* of London that Brazil had "no need to sell" the dreadnoughts.[246] One month later, he spoke before a number of individuals after the launch of *São Paulo*:

> There are not wanting persons of some repute who have ventured to declare that Brazil has no need of such mighty battleships for her own protection, attributing to the Brazilian people ulterior designs, which cannot be justified either in the past history of Brazil or in her pacific developments of to-day. Brazil is not, as many people seem to imagine, a vast deserted country. On our soil there lives, especially along the extensive coast-line, an industrious, orderly, and progressive population, claiming for its accumulated labor that protection and guarantee for its security that it has enjoyed in the past, and under which it may dwell in safety, develop, and progress. We are not constructing a large fleet as a luxury, or, as it were, 'the pageants of the sea,' for the gratification of ostentatious display or inordinate ambition. We are only resuming our way along the path once trodden by us in the past, which we are again following in view of the necessities of the

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that a Government careful of its good name would never agree to play the part attributed by this erroneous statement to Brazil." Irving B. Dudley to Elihu Root, 31 July 1908 (enclosure #2), in "Brazilian battleship building in England (*Minas Geraes*)," Record Group 38, Box 1151, Subject classification O-4-a, Register no. 08/507, National Archives and Records Administration. Hereafter cited as RG (record group), SC (subject classification), Reg (register), and NARA (National Archives and Records Administration). Yet another formulation of this statement, perhaps differing in the word choices used when translating, was printed in full in the *New York Times.* "Brazil's Official Denial; Warships Are Not for Japan—Reports Intended to Prejudice United States," *New York Times*, 2 July 1908, 16.

[244] "Ships Not for Japan: Brazil's Embassy Says She Builds Dreadnoughts for Her Own Use," *New York Times*, 26 June 1908, 2.

[245] Burgoyne and Fiennes, "The South American Republics," in Burgoyne, *Navy League Annual 1908–1909*, 102; "The Brazilian Navy," *Times* (London), 15 August 1908, 5f.

[246] "Naval and Military Intelligence," *Times* (London), 22 March 1909, 9e.

present.[247]

Perhaps the most robust defense issued as part of this messaging strategy was put forward in an editorial published by the *Jornal do Commercio*, among the most respected newspapers in Brazil, which rebutted an article published by the *Brazilian Review*, a journal located in Rio de Janeiro.[248] This piece opined that Brazil would only ever take possession of one of its ordered dreadnoughts, and even proffered that the ship "seems likely to be somewhat of a marine white elephant":

> Of all the foolish uses money can be put, to spend it on armies and navies is the worst of all, especially in South America, where there is virtually nothing to fight about. The megalomania that Brazil has been suffering from for some years has reached dangerous proportions indeed when it indulges in such pranks and threatens the peace of the continent.[249]

Three days later, the *Jornal do Commercio*'s editorial emerged with some especially pointed criticism. The United States' ambassador to Brazil believed that this messaging came from the government, and therefore translated and sent the article to his superiors in Washington, D.C. The editorial argued that the purchase was not "a precipitate action, proceeding under the influence of any given political school of thought for the moment in power," but rather "the result of an aspiration long manifested by the entire country [the defense of Brazil's coastline]." It continued:

> [I]t is not the manifestation of megalomania imagined by the functionary who directs the *Brazilian Review*, but it is a witness to the stable political course imposed by our economy and geographical conditions, and whose origin is not to be found in the caprice, more or less ridiculous, which is attributed to it, but in the depths of the sound opinion of

[247] "Brazil; Rapid Brazilian Construction," *Navy* (Washington) 3, no. 4 (April 1909): 39; "The Brazilian Battleship 'Sao Paulo'," *Engineering* 87 (23 April 1909): 557–58.
[248] On the prestige held by *Jornal do Commercio* in Brazil, see Love, *Revolt*, 3; Haggard to Grey, "General Report on Brazil for the Year 1906," 22, TNA, FO 118/276.
[249] Dudley to Root, 31 July 1908 (enclosure #3), in "Brazilian battleship building in England (*Minas Geraes*)," RG 38, Box 1151, SC O-4-a, reg. no. 08/507, NARA.

> the nation which wishes to be strong in order to protect itself and will be so because it ought to be.[250]

Behind the scenes, however, Rio Branco's emphasis on defending Brazil's coastline was a red herring. Dreadnoughts were far from ideal vessels for a country looking to defend a lengthy coastline; for Brazil, their expense and manning requirements precluded the possibility of possessing enough ships to even begin to patrol from the mouth of the Amazon to Rio Grande do Sul. Indeed, contrary to the public statements put out on behalf of the Brazilian government, the foreign minister's long-term strategy was to employ the new vessels not for defense, but as cudgels in regional diplomacy.[251] For example, it was in Brazil's interests to ensure the mouths of rivers entering the River Plate remained open to ships trying to reach Mato Grosso and other Brazilian territory. Rio Branco's vision was tangibly demonstrated soon after the warships were delivered when one of Brazil's new destroyers was deployed to Paraguay, too shallow for a dreadnought to reach, during its civil war.[252] Historian Jonathan Grant writes that "[Rio Branco's] plan was to make Brazil strong, at least on paper, to impress the rest of South America, and to enable him to solve without conflict the numerous boundary questions [in the region]."[253]

Constructing and testing the new warships

Armstrong laid down *Minas Geraes* on 17 April 1907, and Vickers began constructing *São Paulo* on 24 September of the same year.[254] On 22 January 1908, seven hundred of the

[250] Ibid., cover letter and enclosure #4.
[251] Alsina Jr., "Rio Branco," 22–24.
[252] Ibid., 23; Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247.
[253] Grant, *Rulers*, 154.
[254] Ibid., 135; Topliss, "Brazilian Dreadnoughts," 246. This paper uses the September date given by these sources as both were working straight from the records of British shipbuilders. However, several other sources state that *São Paulo* was laid down on 30 April, including *Conway's* and the Brazilian's government's own digital history file on the ship. Scheina, "Brazil," in Gardiner and Gray, *Conway's 1906–21*, 404; "São Paulo II," *Serviço de*

Elswick shipyard's shipwrights, joiners, and drillers went on strike, delaying all the ships under construction there, including *Minas Geraes*. These trades were so integral to the shipyard's work that the Elswick shipyard manager J.R. Perrett felt compelled to lay off an additional eighteen hundred employees. This meant that more than half the shipyard's workforce was either striking or left idle, with only fitters, plumbers, coppersmiths, sheet iron workers, and pattern makers being retained. While *Minas Geraes*' machinery had been subcontracted out to other companies and therefore remained on schedule, Armstrong's work was left "practically at a standstill," according to Perrett. The strike ended on 1 June, and by the time of Perrett's July report, much of the ship's armor plating had arrived from Armstrong's steel works in Openshaw. In the end, the strike delayed *Minas Geraes*' launch from early April to 10 September, or by about four months.[255]

Vickers trailed behind with *São Paulo*, with more than a year and a half's gap between its keel laying and launch on 19 April 1909.[256] The ship weighed 10,400 tons when it was launched,

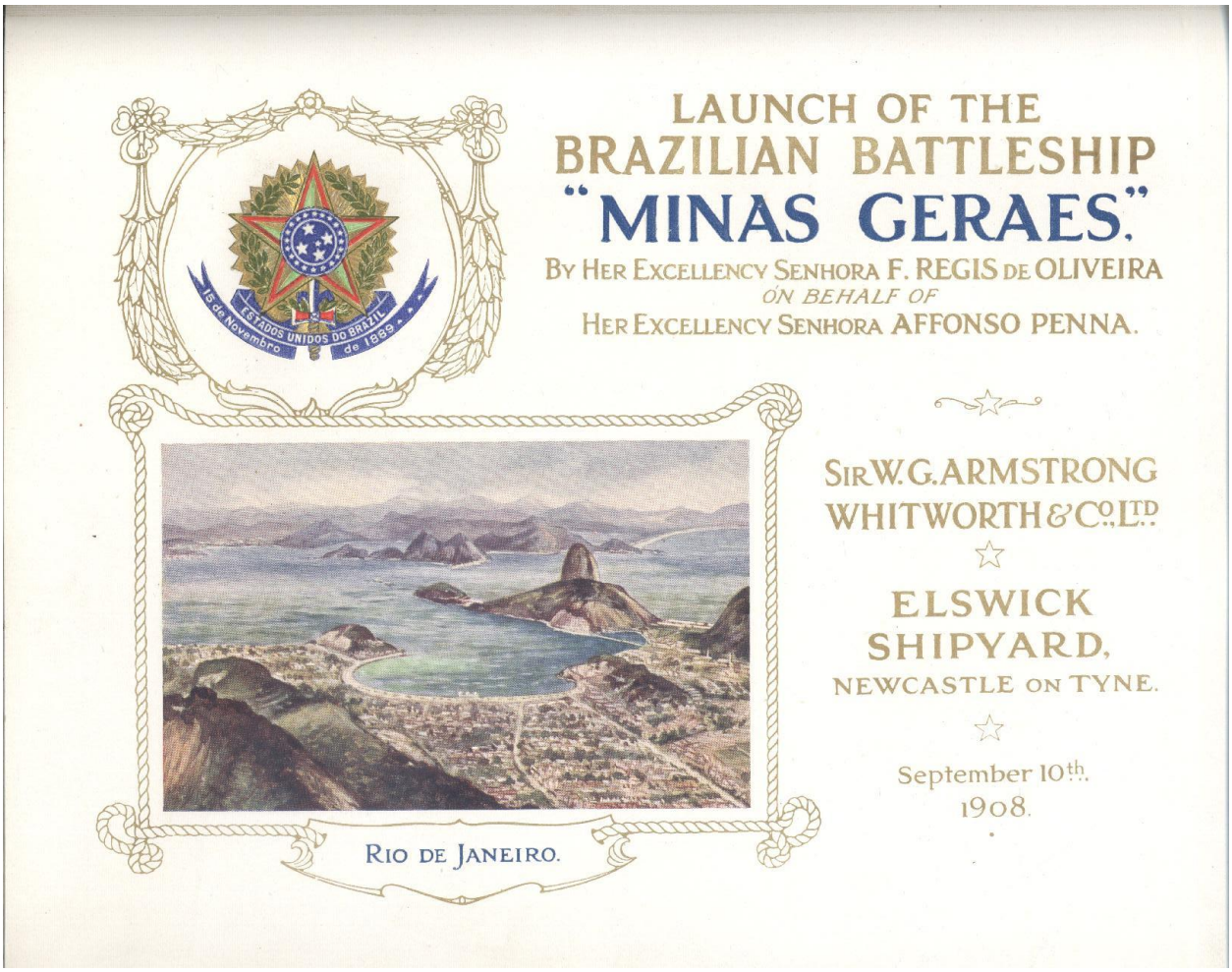
Documentação da Marinha — Histórico de Navios, Diretoria do Patrimônio Histórico e Documentação da Marinha (DPHDM), Departamento de História Marítima. (This document, and the entire *Consulta ao Histórico de Navios* series of ship histories produced by DPHDM, was last available online in 2016. "Histórico de Navios On-Line," DPHDM, 5 April 2016, via the Internet Archive, https://web.archive.org/web/20160405132800/http://www.sistemas.dphdm.mar.mil.br/navios/Cons.asp.) This paper assumes the September date, as Johnston, Buxton, and Topliss confirm each other and were working directly from the records of British shipbuilders.

[255] Johnston and Buxton, *Battleship Builders*, 121–24; Topliss, "Brazilian Dreadnoughts," 246. Every other month, Perrett wrote up a report for Armstrong's Board, some of which have been transcribed by Johnston and Buxton. On 21 January, one day before the strike began, Perrett wrote that there were 4,998 people working for the shipyard; two months later, that number had decreased to 2,467.

[256] Scheina, "Brazil," in Gardiner and Grey, *Conway's 1906–21*, 404. The strike lasted from 22 January to 1 June 1908. Topliss, "Brazilian Dreadnoughts," 246. See also "The Brazilian Battleship 'Minas Geraes'," *Engineering* 89 (21 January 1910): 69, for a short defense of the building time of these ships.

a record, and took forty-seven seconds to slide into the water.[257] Both it and *Minas Geraes* were christened by the wife of Brazil's minister to the United Kingdom.[258]

Figure 3.4: Cover of Armstrong's ornate event booklet put together for the launch of *Minas Geraes*, characteristic of such materials it put together for warships built for foreign nations.[259]



Source: Tyne & Wear Archives and Museums, 450/1/1, via Wikimedia Commons. CC BY-SA 3.0. Inset artwork by Charles de Lacy. https://commons.wikimedia.org/wiki/File:Minas_Geraes_invite.jpg.

[257] "The Brazilian Battleship 'Sao Paulo'," *Engineering* 87 (23 April 1909): 557. Photos of the ship before being launched, including its bow launching cradle, were printed on page 557 and featured on 560.
[258] "Launch Greatest Warships," *New York Times*, 11 September 1908, 5; "Launch Brazil's Battleship," *New York Times*, 20 April 1909, 5; "Brazil Dreadnought Launched," *Christian Science Monitor*, 20 April 1909, 2.
[259] Johnston and Buxton, *Battleship Builders*, 228.

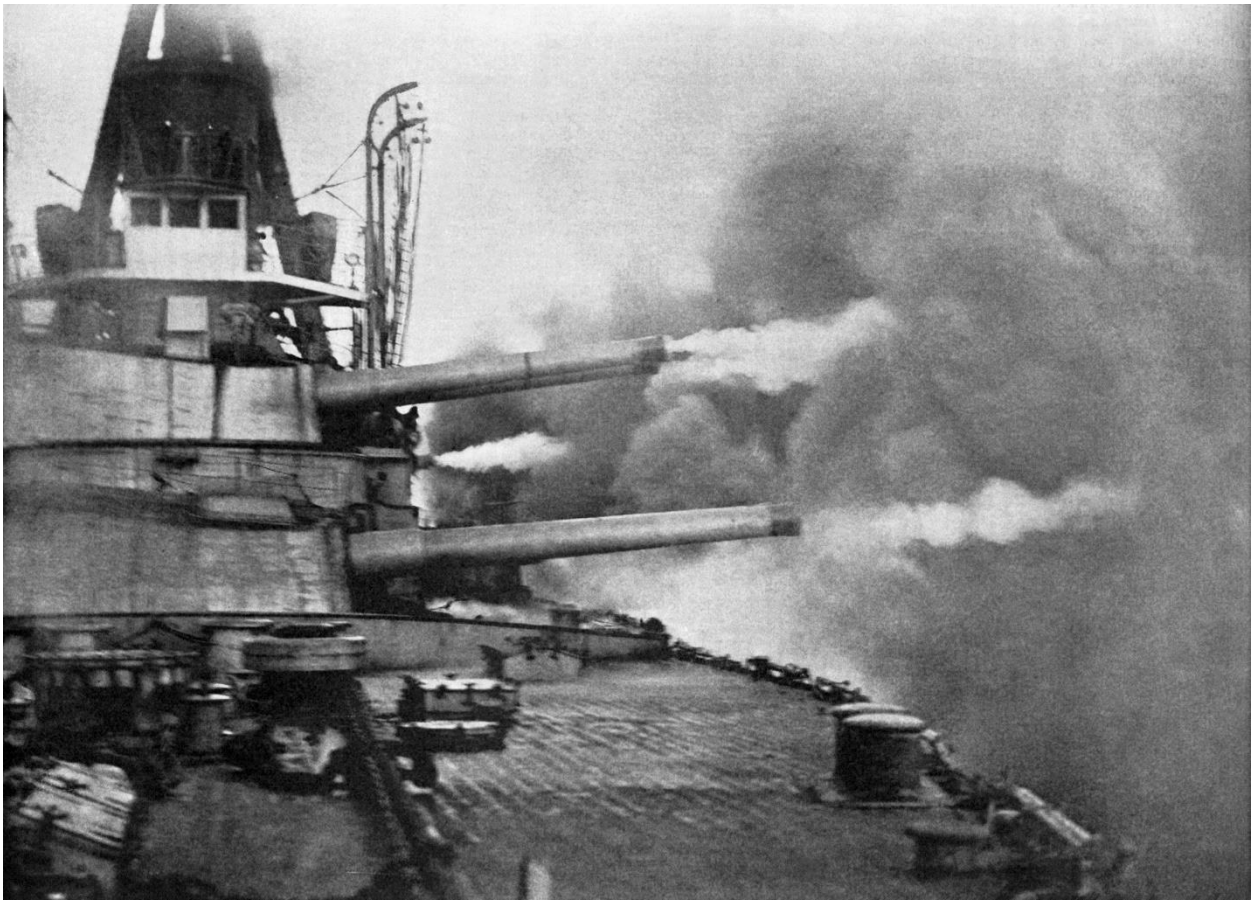
After being launched, the ships were fitted out with equipment that was not required before releasing the hulls into the water. For instance, *Minas Geraes* weighed nine thousand tons at its launch—less than half of its designed displacement. It was only after being launched that it received its electrical wiring and was moored next to a 150-ton crane for the installation of its superstructure, armament, machinery, and the rest of its armor plating. Perrett reported several times in 1908–09 that *Minas Geraes*' fitting out was proceeding quickly in all areas except for where they were waiting on approval of design alterations from the Brazilian Navy, which he called out as a frustrating hindrance, and electrical work.[260]

The final stage of construction was marked by sea trials, where the new ships were put through a series of challenges to ensure that they were fit for service in the Brazilian Navy. *Minas Geraes*' steaming trials began on 14 September 1908, with some assessments being delayed for several days by fog. First, the ship's ability to steam for forty-eight consecutive hours at a speed of ten knots was tested, along with its coal consumption, which would determine its ultimate range. These concluded on 16 September. After two days spent waiting for an end to foggy conditions, the shipyard they measured *Minas Geraes*' ability to steam at three-quarters power for thirty hours. As designed, this should have driven the ship through the water at 20 knots, but the ship only made an average of 19.35 knots in several runs over a measured mile. This performance could perhaps be chalked up to a very rough sea state; during these runs, spray generated by the ship cutting through large waves occasionally reached as high as sixty feet above the waterline. Finally, after another fog-related delay, this one lasting six days, *Minas Geraes* was put through another succession of tests on 29 September. These included artificially limiting the steam pressure being used, where the ship was able to surpass its contractually

[260] Johnston and Buxton, *Battleship Builders*, 123–24.

guaranteed top speed despite the restrictions; a forced-draught trial that resulted in a top speed of 21.432 knots; stopping and starting distances; and determining turning radius. In the end, *Minas Geraes*' steaming trials were "most satisfactory."[261]

Figure 3.5: *Minas Geraes*' gun trials featured the heaviest broadside ever fired.



Source: "The Brazilian Battleship 'Minas Geraes'," *Scientific American* 102, no. 12 (19 March 1910): 240. Public domain.

From the perspective of the press, however, the most interesting part of *Minas Geraes*' trials when the ship's armament was tested. One standout moment, especially for publications which targeted non-specialist audiences, came when ten of *Minas Geraes*' twelve twelve-inch

[261] "The Brazilian Battleship 'Minas Geraes'," *Engineering* 89 (21 January 1910): 67.

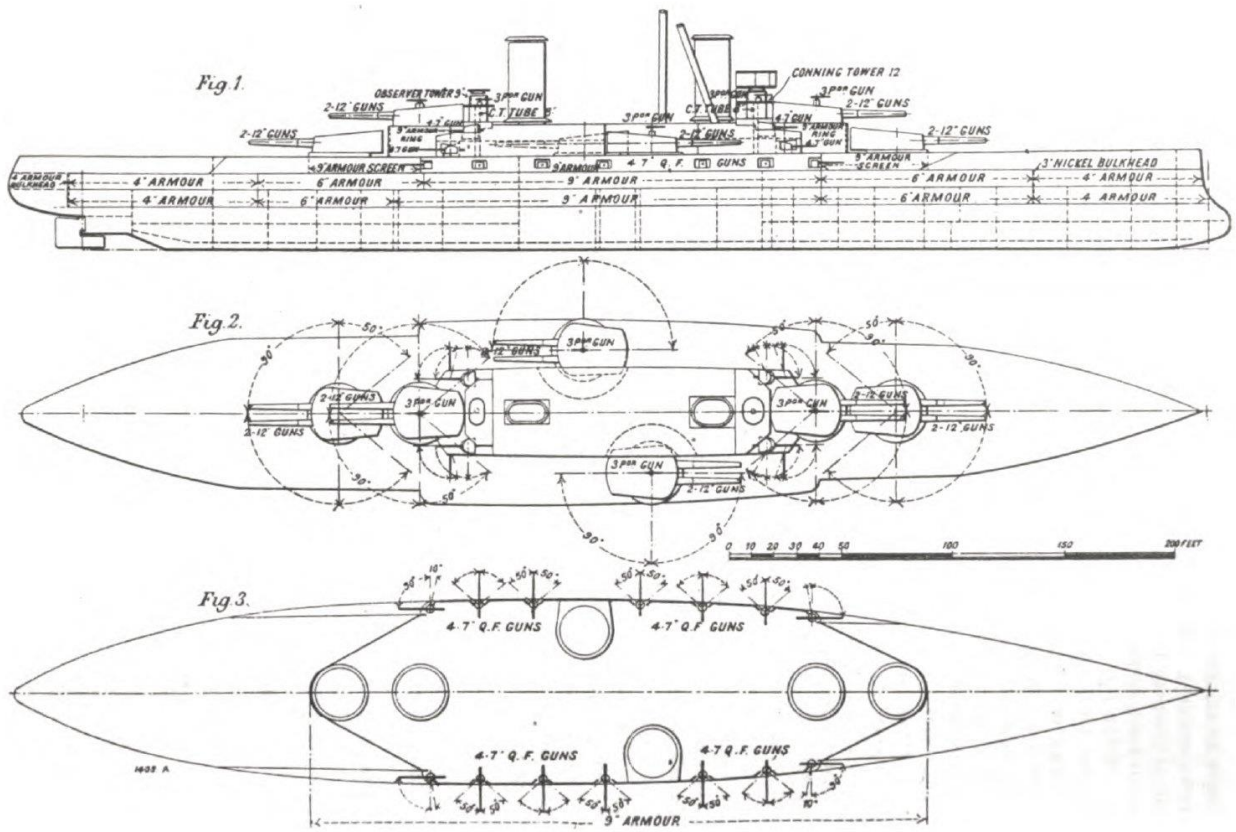
guns were trained to one side and fired at the same time. Each gun used 285-pound bags of cordite to send off their 850-pound shells, and with 8,500 tons of shells and 500,000 foot-tons of potential energy ripping through the air, it was the heaviest broadside ever fired off the deck of a warship up until that time.[262]

Another item of note, this one to specialist audiences, came in testing the ship's armament arrangement. Superfiring turrets, which is defined by the positioning of one gun turret above another such that the upper guns can be trained out above the lower turret (see figures 3.2 and 3.6), had already been adopted for the United States' *South Carolina*-class battleships, then under construction. However, the practice of mounting so many large guns on one ship the hallmark of a dreadnought—was still a new phenomenon, and some naval experts believed that the blast from the upper guns would injure crewmen operating the lower turret only a few feet below. As such, the tests of *Minas Geraes*' superfiring guns attracted much attention from several nations. The trials proved both that this theory was false; indeed, *Scientific American* reported that "the crew could safely stay in the lower [turret] without experiencing the slightest ill effects of the tremendous blast some five feet about their heads." In addition, it disproved another objection to superfiring turrets: that the flash from firing guns in turrets so close together would unduly affect aiming.[263] This way of arranging a battleship's main battery quickly became the norm for all future full-sized ships of the class.[264]

[262] "The Brazilian Battleship 'Minas Geraes'," *Scientific American* 102, no. 12 (1910): 240–41.
[263] Ibid., 241; "The New Brazilian Battleships," *Times* (London), 22 January 1910, 16f; "The Brazilian Battleship 'Minas Geraes'," *Engineering* 89 (21 January 1910): 67. The latter two pieces were authored anonymously but were likely authored by the same individual, having been published one day apart and sharing some identical language.
[264] Friedman, *Battleship Design*, 132–34.

Minas Geraes was completed and handed over to Brazil during a formal ceremony on 5 January 1910, making for a construction time of about two and a half years.[265] This time was not far off contemporary British dreadnoughts, like the *Bellerophon* class, and it actually bested them if the strike time was subtracted.[266]

Figure 3.6: *Minas Geraes* class line drawing, highlighting its armament's firing arcs. The use of superfiring turrets along the centerline gave eight turrets wide arcs of fire, but the two wing turrets were far more limited and could cause damage when firing directly ahead or astern.



FIGS. 1 TO 3. THE BRAZILIAN BATTLESHIP "MINAS GERAES."

Source: "The Brazilian Battleship 'Minas Geraes'," *Engineering* 89 (21 January 1910): 65.

[265] "The Minas Geraes," *Times* (London), 6 January 1910, 4d; "The Brazilian Battleship 'Minas Geraes'," *Engineering* 89 (21 January 1910): 69–70.
[266] Preston, "Great Britain," in Gardiner and Grey, *Conway's 1906–21*, 22.

São Paulo took just under three years to complete, being delivered only in August 1910 and departing the United Kingdom on 16 September.[267] Unsurprisingly, then, its trials happened months after *Minas Geraes* was handed over; they covered much of the same territory without significant differences. Lasting for a total of twelve days, the ship demonstrated in its own forty-eight-hour economy trial that it would have a theoretical range that was nearly thirty percent more than was contracted for. It also successfully navigated its own trial of three-quarters power for thirty hours. Artificially limiting the steam pressure did not prevent the new warship from essentially reaching its guaranteed top speed (coming in at exactly 20.99 knots), and rough weather did not prevent the ship from making 21.623 knots at full forced-draught power.[268] The gun trials saw the record for broadside weight broken again through the addition of *São Paulo*'s secondary armament; Admiral Huett Bacelar, the head of the Brazilian naval commission charged with overseeing the dreadnought's construction, pressed the firing key that started the crescendo of twenty-one guns. The trials also replicated the superfiring test, and several Brazilian and British officers stationed in the lower turret while the upper guns were fired could report that they "suffered no inconvenience."[269]

The scout cruisers *Bahia* and *Rio Grande do Sul*, ordered under the same naval program as the dreadnoughts, were launched by Armstrong on 20 January and 20 April 1909, respectively.[270] The two Brazilian ships were based on the British *Adventure* class and proved to

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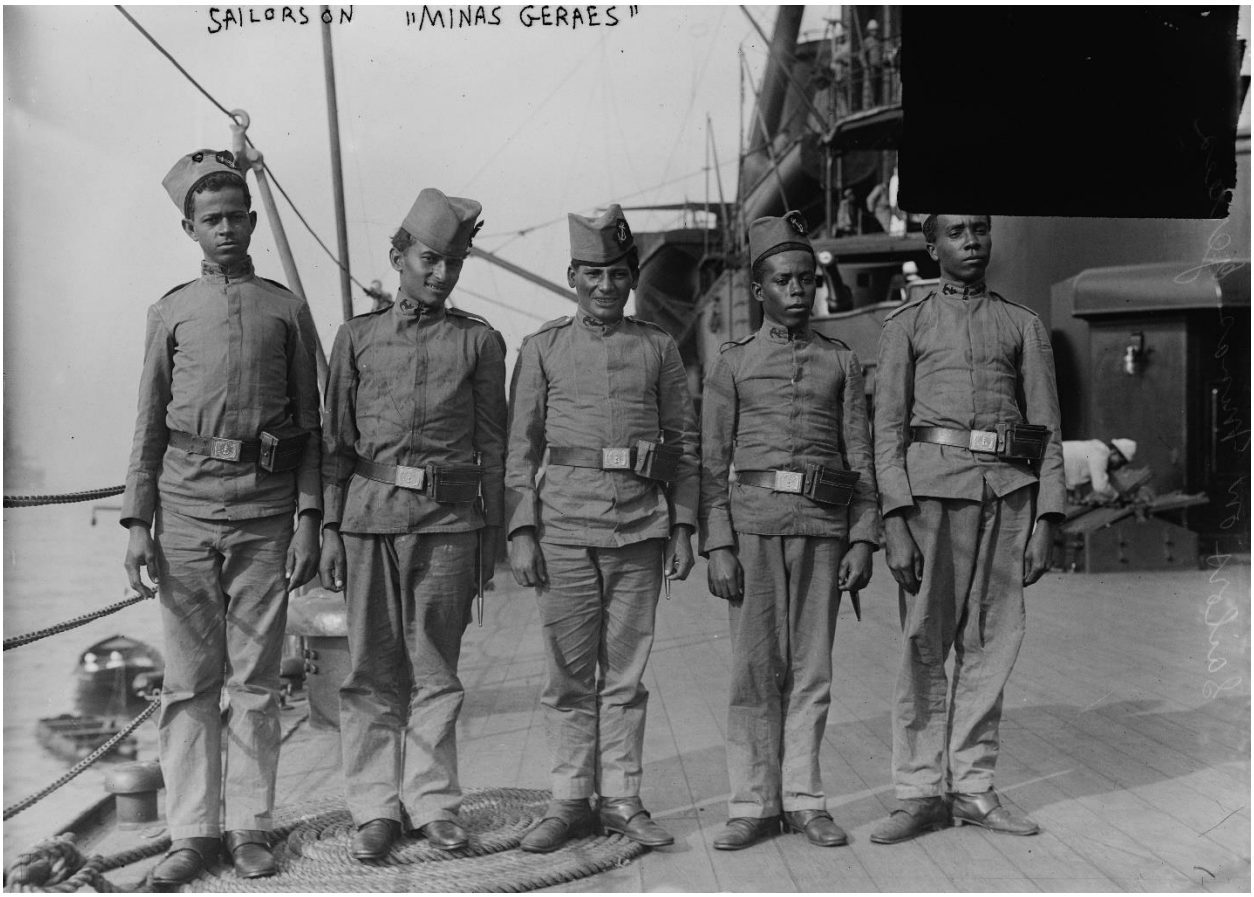
[267] Scheina, "Brazil," in Gardiner and Grey, *Conway's 1906–21*, 404; Topliss, "Brazilian Dreadnoughts," 289.
[268] "Trials of the Sao Paulo," *Times* (London), 3 June 1910, 7c; "Trials of the Sao Paulo," *Navy* (Washington) 4, no. 5 (July 1910): 29.
[269] "Brazil," *Journal of the American Society of Naval Engineers* 22, no. 3 (1910): 999; Philip R. Alger, "Professional Notes," *Proceedings of the United States Naval Institute* 36, no. 3 (1910): 858–59; "Trials of the Sao Paulo," *Times* (London), 3 June 1910, 7c; "Gun Trials of the Sao Paulo," *Times* (London), 4 June 1910, 9b. For more about the Brazilian naval commission, see "The Brazilian Battleship 'Minas Geraes'," *Engineering* 89 (21 January 1910): 69.
[270] "The Brazilian Scout-Cruisers," *Engineer* 109 (20 May 1910): 514–16; "Launch of a Brazilian Scout," *Times* (London), 21 January 1909, 7a; "Launch of a Brazilian Scout," *Times* (London), 21 April 1909, 6b. A detailed line

be the fastest warships of their type in the world, with both making over twenty-seven knots in their trials, and under simulated combat conditions their main guns could fire at a maximum rate of nine aimed rounds per minute. The cruisers were delivered to the Brazilian Navy in 1910, with *Bahia* leaving the United Kingdom on 16 April and *Rio Grande do Sul* expected to depart by the end of the following month.[271]

Figure 3.7: Sailors aboard *Minas Geraes*, probably in 1913.



Source: George Grantham Bain collection, Library of Congress. Public domain. https://hdl.loc.gov/loc.pnp/ggbain.13338.

drawing from Armstrong is provided in *Engineer*. Scheina, "Brazil," in Gardiner and Grey, *Conway's 1906–21*, 405 inaccurately reverses the launching dates for these two ships.

[271] "The Brazilian Scout-Cruisers," *Engineer* 109 (20 May 1910): 514–16.

Revolta da Chibata (Revolt of the Lash)

The vexing questions surrounding Brazil's dreadnoughts eventually quieted and were rendered moot when the ships were handed over to and arrived in Brazil in 1910, with *Minas Geraes* and *São Paulo* docking in Rio de Janeiro on 17 April and 25 October, respectively.[272] However, the government's dreams of remaking the country into an international power on the backs of the new warships were soon crushed by a racially motivated revolt on board the new vessels. Black and mixed-race enlisted sailors, primarily motivated by the latter's persistent use of traditional corporal discipline, took up arms against their white officers in an action which one contemporary magazine called "the most extraordinary event in naval history since the mutiny of the Russian war-ships in the Black Sea."[273]

On the night of 22 November, shouts and gunfire rang out aboard *Minas Geraes*. Fighting did not last long; when the gunsmoke settled, several officers and loyal crewmen laid dead on the wooden decks. The fighting marked the beginning of several successful mutinies aboard three of the four largest and most powerful warships in the Brazilian Navy; within a short period, both *Minas Geraes* and *São Paulo*, the new scout cruiser *Bahia*, and the older *Deodoro* were in rebel hands, along with the crews onboard smaller warships like the minelayer *República*, training ship *Benjamin Constant*, and torpedo boats *Tamoio* and *Timbira*. The majority of *República*'s crew left the ship to bolster *São Paulo* and *Deodoro*; those aboard the other ships either joined with the rebels or fled ashore.[274]

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[272] "The Brazilian Battleship 'Minas Geraes'." *Scientific American* 102, no. 12 (19 March 1910): 240–41; Topliss, "Brazilian Dreadnoughts," 289.
[273] "A Navy on Strike," *Outlook* 96 (10 December 1910): 800. This refers to the *Potemkin* mutiny of 1905.
[274] Morgan, *Legacy*, 200–01; Love, *Revolt*, 20, 28–31, 35–36. *Deodoro*, one of the two small coast-defense ships constructed just before the turn of the century, was older than the other three but had recently been refitted. Love, *Revolt*, 20. One of the officers killed was João Batista das Neves, *Minas Geraes*' captain. "Revolt of Brazilian Warships," *Independent* 69 (1 December 1910): 1179.

The mutineers were led by João Cândido Felisberto, an enlisted man whose parents had enrolled him into a naval school at the age of fourteen.[275] Felisberto was described by an American military attaché as possessing "unusual intelligence" and the "natural characteristics of a leader of men."[276] Key warships that remained in government hands included *Bahia*'s sister *Rio Grande do Sul*, the aging cruiser *Barroso*, and eight new destroyers of the *Pará* class. Their potential effectiveness, however, were tempered by the officers' distrust of the black and mixed-race crewmen under their command, and severely diminished by problems in fitting proper weapons to their ships: the destroyer's torpedoes, their primary weapon against dreadnoughts, were unusable until two days after the revolt began.[277]

This widespread mutiny would become known as the *Revolta da Chibata*, or Revolt of the Lash, after the frequently employed use of whipping that led one newspaper to bluntly call the sailors "tortured."[278] This was likely not far from the truth: a Brazilian government observer, former navy captain José Carlos de Carvalho, was allowed to board several rebel ships and examine one sailor that had been whipped not long before. He vividly testified that this individual's back looked like "a mullet sliced open for salting."[279] Such practices were common in the Brazilian Navy, whose crewmen were frequently impressed from what a later legal scholar once called "the dregs of our urban centers, the most worthless *lumpen* … Ex-slaves and the sons of slaves make up our ships' crews, most of them dark-skinned or dark-skinned mulattos."[280]

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[275] Morgan, *Legacy*, 114.
[276] John S. Hammond, "Mutiny of the Brazilian sailors," 5, in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA.
[277] Love, *Revolt*, 30–31, 35–36; Morgan, *Legacy*, 220. Of the ten destroyers ordered by the Brazilian Navy, only eight had been arrived in Brazil by the time of the revolt.
[278] "Brazilian Sailors Had Been Tortured," *New York Times*, 28 November 1910, 3.
[279] Morgan, *Legacy*, 195.
[280] Morgan has given two different attributions for this quote. In his "The Revolt of the Lash, 1910," in *Naval Mutinies of the Twentieth Century*, eds. Christopher M. Bell and Bruce A. Elleman (London: Frank Cass, 2003), 37, he says that it was the Baron of Rio Branco, citing Edmar Morel, *A Revolta da Chibata*, 4th ed. (Rio de Janeiro:

Lashing had continued in the navy despite an 1889 ban on the practice because it was not enforced and Brazilian naval officers were in strong accordance that their broadly black crews required such discipline. One Brazilian admiral wrote decades later that "our seamen of that time, lacking the moral and intellectual requirements for appreciating the debasing aspects of the punishment [whipping], accepted it naturally, as an opportunity to show their physical and moral superiority." He added that it was an "understandable" tradition "in the face of the backward mentality and ignorance of the personnel that composed the ship's crews."[281]

The lash, however, was not the only contributing cause to the mutiny. These revolting sailors wrote to their political leaders that they wanted an end to what they called the "slavery" being practiced by the navy; the granting of "sacred rights guaranteed us by the laws of the Republic," referring to the use of lash; higher pay; better education; and a limit on daily service time.[282] The demands were, according to contemporary observers and the Brazilian government, directed at the navy's officer core and were not intended to be political.[283] Indeed, several contemporary sources remark on the extremely low salary given to even experienced enlisted sailors.[284] The mutineers threatened that should they not be granted their demands, they would bombard Rio de Janeiro with the heavy weaponry they carried. Many well-off families heeded

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Edições Graal, 1986 [1959]), 13. In Morgan, *Legacy*, 46, published in 2014, he says that it was written by legal scholar Evaristo de Moraes Filho, citing Morel, *A Revolta da Chibata*, 5th ed. (São Paulo: Paz e Terra, 2010), 32. Such language was commonly used among Brazil's elites to describe their country's sailors during the early twentieth century, and in this context, "dregs" means feces. Love, *Revolt*, 22.

[281] Love, *Revolt*, 79.

[282] Morgan, *Legacy*, 201, 204–05; David Lambuth, "The Naval Comedy and Peace Policies in Brazil," *Independent* 69 (29 December 1910): 1430–31.

[283] Viscount James Bryce, *South America: Observations and Impressions* (New York: Macmillan, 1912), 395; Hammond, "Mutiny," 5, in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA; "Mutineers Fire on Rio Janeiro," *New-York Tribune*, 25 November 1910, 1; "Brazil Yields to Navy," *New-York Tribune*, 26 November 1910, 3; Dudley to Philander C. Knox, 29 November 1910, 2, in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA.

[284] Robert Woods Bliss to Knox, 19 December 1910 (enclosure), in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA.

this warning and hurriedly left the city in the expectation that the rebels would fire on the city. Indeed, the mutineers fired several shots at the city from their dreadnoughts' secondary weapons, intending to demonstrate their resolve; these killed three people, including two children.[285]

A disorganized executive branch, under the newly elected Hermes Rodrigues da Fonseca, and military considered attacking the rebels—who da Fonseca called "rough and uncultured"—with the remaining warships under their command, but all the potential results from such an action were extremely unpalatable. A victorious attack would end in the Pyrrhic destruction of some or all the new and astoundingly expensive warships, symbols that had recently received a substantial amount of attention and were still viewed by Brazil's elites as a vital cog in refashioning Brazil into a serious international power. It could also kill Armstrong employees, all British citizens, on board *São Paulo* to ensure that everything performed as designed in the first months after it was delivered from the constructors. Yet even if the president and his military officials could stomach those potential losses, the prospect of being defeated by the rebels was a significantly worse and more probable outcome. Even if the government's warships went into battle at full strength, which in and of itself was unlikely, the dreadnoughts' power dwarfed that of the government's warships; each alone outgunned all the loyal warships.[286]

Faced with these circumstances, da Fonseca folded and granted the mutineers full amnesty through a bill passed by the legislature.[287] This action struck a fearsome blow to Brazil's international prestige and the perceived honor of the country's naval elites. The role reversal that

[285] "Mutineers Fire on Rio Janeiro [*sic*]," *New York Times*, 25 November 1910, 1; "Brazil Gets Back Her Navy," *Christian Science Monitor*, 28 November 1910, 2; "Revolt of Brazilian Warships," *Independent* 69 (1 December 1910): 1179.
[286] Love, *Revolt*, 30–31, 35–36; Morgan, *Legacy*, 211–12, 220; "Brazil Yields to Navy," *New-York Tribune*, 26 November 1910, 3; "A Navy on Strike," *Outlook* 96, no. 15 (10 December 1910): 800; "Republic of the United States of Brazil," *Times* (London) *South American Supplement*, 30 May 1911, 1.
[287] Love, *Revolt*, 33–47; Lambuth, "Naval Comedy," 1430–33.

these admirals found themselves in, and the way that they were forced to fold and give in to the mutineer's list of demands—demands from underclass, broadly black naval crews—the elites suffered a significant embarrassment on both the domestic and international fronts. Moreover, while having any revolt was problematic for the navy, as it would in any military branch around the globe, the symbolic rejection stung worse in Brazil. Its officers had been forced from their dreadnoughts, which suddenly represented a weak nation-state which had embarked on a path of technological modernization without accompanying social changes.[288]

The world took notice of the concessions granted to the mutineers. New York's *Outlook* journal stated that "the humiliation and mortification of the Brazilian Government must be complete," and the British minister to Brazil concluded that revolt ended in a "dramatic exposure of [Brazil's] impotence."[289] Viscount James Bryce, a former British politician and ambassador who was traveling through Rio de Janeiro when the mutiny broke out, questioned if the Brazilian people were "worthy" enough to inherit their country.[290] John S. Hammond, the United States' military attaché in Brazil, believed that the mutiny's success would prove to "be an everlasting humiliation to Brazil."[291] David Lambuth, an instructor at Brazil's Granberry College, wrote in the American weekly magazine *The Independent* that Brazil had made "a fool of itself," calling the entire episode a "naval comedy."[292]

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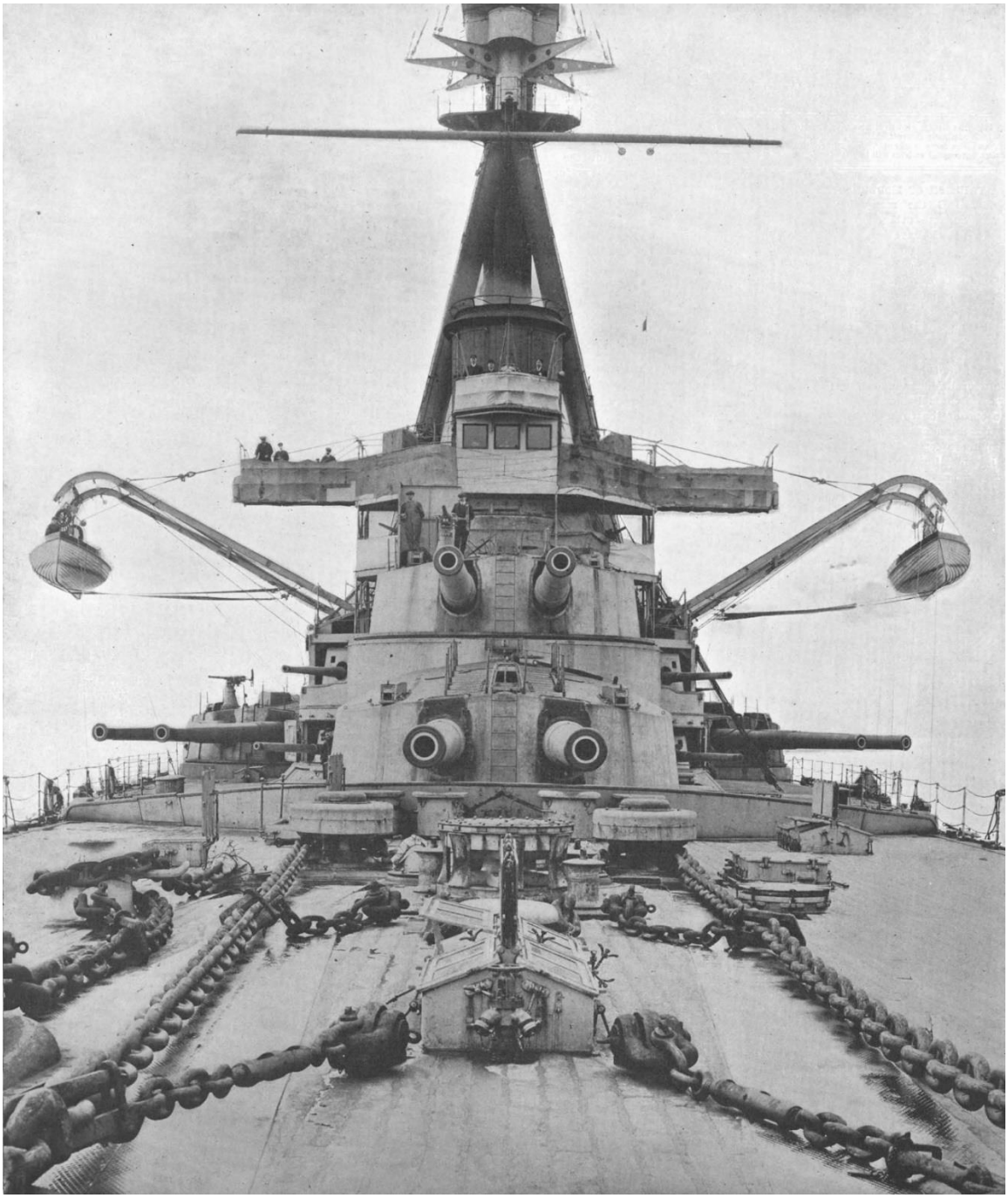
[288] Morgan, *Legacy*, 211–12; Bryce, *South America*, 398. "Battleships can sometimes bring prosperity as well as destroy it," one prescient article said about a year before the revolt. "A Craze for Dreadnoughts," *Mill Valley Independent*, 18 June 1909, 6.
[289] "A Navy on Strike," *Outlook* 96, no. 15 (10 December 1910): 800; Haggard to Grey, "Brazil: Annual Report, 1911," 1, TNA, FO 118/305.
[290] Bryce, *South America*, 395–96, 419–20.
[291] Hammond, "Mutiny," 6, in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA.
[292] Lambuth, "Naval Comedy," 1430. On Lambuth's line of work, see "David Lambuth, 69, of Dartmouth Dies," *New York Times*, 24 August 1948, 24.

Figure 3.8: *Minas Geraes* seen from the bow, c. 1909–10. The photo was featured on *Scientific American*'s cover on 19 March 1910, two months after the ship was delivered.



Source: "The Brazilian Battleship 'Minas Geraes'," *Scientific American* 102, no. 12 (19 March 1910): 233. Public domain.

At home, the political stage became heated: Rui Barbosa, a prominent senator and the losing candidate in the recent 1910 presidential election, led the amnesty effort in the Senate and ensured it passed with a veto-proof majority.[293] After the revolt's conclusion, he used the occasion to attack the government's naval policy:

> International war has not yet come to the doors of our republic. Civil war has come many times, armed by these very weapons which we have so vainly prepared for our defense against a foreign enemy. Let us do away with these ridiculous and perilous great armaments, securing international peace by means rather of just and equitable relations with our neighbors. On the American continent, at least, it is not necessary to maintain a 'peace armada'; that hideous cancer which is devouring continuously the vitals of the nations of Europe.[294]

The mutineers did not fare well after the Revolt of the Lash, as a second and unrelated revolt by marines in December 1910 was used as an excuse to round up the amnestied mutineers. Those sailors that did not get away were put in prison, where sixteen died in a crowded prison cell not long after. Others were sent to far-flung regions of Brazil to help construct the Madeira–Mamore Railroad or work on the Amazon rubber plantations, for examples. The British minister to Brazil described the former's conditions as "dangerously unhealthy," while Barbosa said of the latter that it was "a place where one only dies."[295] Felisberto, the leader of the Revolt of the Lash and one of only two people to survive that crowded prison cell, was put on trial and acquitted eighteen months later.[296] Barbosa fled to his home region for a time, fearing that he would be imprisoned under newly granted emergency powers.[297]

After the revolt's conclusion, Brazil's new warships, the cornerstone on which the country's dreams of international power rested, were deliberately neglected by the government

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[293] Morgan, *Legacy*, 219, 224.
[294] Lambuth, "Naval Comedy," 1433.
[295] Haggard to Grey, 19 December 1910, no. 132, TNA, FO 420/254; Morgan, *Legacy*, 229, 239–50.
[296] Morgan, *Legacy*, 229, 239–50.
[297] Haggard to Grey, 19 December 1910, no. 130, TNA, FO 420/254.

for a time. *Minas Geraes* and *São Paulo*'s main weapons were effectively disarmed by the removal of their breechblocks, the ships were frequently kept at anchor, and the majority of their already undermanned crews needed to be replaced.[298] In fact, a minimum of eighteen hundred seamen were discharged in the aftermath of the revolt.[299]

These were all points that W.H.D. Haggard, the British minister to Brazil and often extremely critical of his posting's naval expenditures, was all too happy to harp on in his reports home. In December 1910, shortly after the mutiny, Haggard said that the Brazilian Navy had found itself in a "curious condition" with "magnificent ships and no crews."[300] One month later, he added that ships had been "reduced … to … sheer hulks without any crews to man them." From Haggard's vantage point, the mutiny had made clear the "utter uselessness to Brazil of these ships," so much so that he speculated that if the Brazilian government sold the dreadnoughts—and there was some support within the country and its politicians for that—Argentina would sell the dreadnoughts they have under construction, making the "best of a bad bargain and get[ting] back the money that they have spent on them, or at least as much as possible."[301] By the time of his 1912 annual report, submitted in June 1913, Haggard relayed an estimate from Armstrong of £700,000 to return the ships to active service, adding a lengthy tangent on his assessment of the ships:

> These ships are absolutely useless to Brazil, the officers and the crews do not know how to work the machinery and, even if they know how to fire the big guns, they are afraid to do so. At this moment, after they have been lying for years in Rio Harbour, the only men who know anything about the mechanism of the ships, and do what they can to keep them in order, are the so-called "guarantee men" supplied by Messrs. Armstrong. They have been lying in the harbor ever since their arrival, with the exception of one or two trips to

[298] Grant, *Rulers*, 158–59; "Brazil Changes Navy Personnel," *Christian Science Monitor*, 14 December 1910, 18; "Brazil to Disarm Ships," *Washington Post*, 14 December 1910, 3.
[299] E. Hamilton Currey, "The Navy of Brazil," *Times* (London) *South American Supplement*, 28 November 1911, 1.
[300] Haggard to Grey, 12 December 1910, no. 126, TNA, FO 420/254.
[301] Haggard to Grey, 22 January 1911, no. 8, TNA, FO 420/254.

> Ilha Grande, the quarantine station 50 or 60 miles down the coast. … It really is an exemplification of the frog swelling himself out until he bursts, for not only has Brazil had to pay about 5,000,000*l* for the purchase of the two ships, but their upkeep comes to several hundreds of thousands a-year, for vessels which, even if they could be worked or their guns fired, would be perfect useless for the purpose for which they are intended, as they draw so much water that they could not go up the River Plate [the estuary adjacent to Argentina's capital], while for blockading purposes they would not be so useful as torpedo-destroyers for instance. It really was on all fours with the obsolete Chinese method of trying to frighten the enemy with masks and by making faces.[302]

As Latin American historian Zachary Morgan would later write, "The ships were saved, but at what cost?"[303]

Even had the revolt not occurred, there is some evidence to suggest that Brazil would have found severe problems in employing its dreadnoughts had they found themselves in any external conflict. In 1908, a Brazilian journal made "uncomplimentary remarks" about the country's preparations for the dreadnoughts, especially with regards to training its crewmen, and Milne Cheetham, another British diplomat, gave credence to these claims.[304] Once the ships arrived in Brazil, they were chronically undermanned, making do with less than a third of their designed complements.[305] This led to the remaining crewmen being severely overworked, which became a complaint during the mutiny; near its conclusion, they requested that "the internal service of the ships … be attended to by increasing the number of men without further sacrifice on our part."[306]

Furthermore, an individual identified only as "the daughter of a diplomat" reported that *Minas Geraes* had been heavily damaged on its maiden voyage from the United Kingdom after

[302] Haggard to Grey, "Brazil: Annual Report, 1912," 18, TNA, FO 118/317.
[303] Morgan, *Legacy*, 229.
[304] Cheetham to Grey, 2 August 1908, no. 72, TNA, FO 420/247.
[305] Dudley to Knox, 29 November 1910, 4, in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA.
[306] "Revolt of Brazilian Warships," *Independent* 69 (1 December 1910): 1179.

British firemen deserted the ship during a stop in the United States. By the time the dreadnought reached Brazil, two boilers had been disabled and the ship required some $500,000 in repairs. (This claim is not echoed in other sources.) "Brazil is a young republic," the author wrote, and advocated that the country "learn to spend more time and money in … personnel rather than in big ships," which served only as a "big show" rather than benefiting the country.[307] A separate and proven incident was the mutineer's fouling of the hydraulic system which trained *São Paulo*'s main battery, making the guns nearly useless. The fix for this required British engineers from Armstrong, what Haggard called the "guarantee men."[308]

Finally, Haggard expressed many concerns about the Brazilian Navy's preparations for the new dreadnoughts: he believed that Brazil may have shelled out the money to purchase the warships but had not equipped themselves to be able to properly employ them. In his view, which he had expressed as early as March 1907, soon after the dreadnoughts were ordered, the navy suffered from officers and sailors that lacked adequate training.[309] Haggard does not state whether he thought that the broadly black and mulatto crews could ever be adequately trained, and later emphasized his belief that non-white people were incapable of operating a dreadnought:

> [Without] foreign instructors, it will always be impossible for Brazil to have an effective fleet under modern conditions. You cannot wash a blackamore white, and it would, in my belief, be impossible to drill into the crews of these ships which are, officers and men, of mixed blood—though the latter are, of course, generally darker than the former—habits of discipline, care, attention, accuracy, all the qualities in fact necessary for the safe management of the numbers of delicate machines that go to make up the means of managing and fighting modern ironclads. To arrive at the mental condition necessary for this purpose would be simply impossible for men of their racial caliber and instinct. A

[307] "Humors of Brazil's Navy," *Boston Evening Transcript*, 30 November 1910, 22.
[308] Bliss to Knox, 19 December 1910 (enclosure), in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA. The enclosure is a personal letter from "an officer of the British Fourth Cruiser Squadron," whose source was a British engineer who had been on board one of Brazil's dreadnoughts for about a year. Hammond, "Mutiny," 4, in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA.
[309] Haggard to Grey, 6 March 1907, no. 15, TNA, FO 420/244; Haggard to Grey, 28 November 1910, no. 106, TNA, FO 420/252.

> Brazilian navy under modern conditions never can and never could exist as a fighting factor.[310]

That the Brazilian crews were unable to utilize their dreadnoughts is not a universal view. Eyewitness accounts from several onshore foreign observers emphasize that the ships were extremely well-handled during the revolt even though they had no officers and were controlled by broadly black enlisted sailors, a fact that surprised some of the observers. This impressive feat was attributed to the crewmen's training in the United Kingdom.[311] Moreover, discipline was tightly maintained during the mutiny, and liquor on board the ships was thrown overboard to avoid any problems with drunk sailors. Hammond, the United States' military attaché to Brazil, was particularly effusive in his admiration for the mutineers. On the morning after the revolt, he noted that the four main rebel ships left Rio de Janeiro's harbor through "a very difficult channel," conducted a naval review, and practiced battle maneuvers without incident. They then returned to the harbor, being "handled in a manner that was nothing short of wonderful, considering that the commanders … were seamen." By the end of the revolt, Hammond wrote with that Felisberto and his men had "excited universal respect"—an overstatement—"and proved that there is excellent ability in the Brazilian ranks."[312]

The years following the revolt hold some ammunition for both sides of the debate over the true potential effectiveness of Brazil's dreadnoughts, but it seems clear that at least some level of foreign support was required to keep the dreadnoughts operational and fully functional for extended periods of time. On the one hand, the *New York Times* reported no problems with *Minas Geraes* when it was dispatched to the United States in 1913 with Lauro Müller, Brazil's

[310] Haggard to Grey, "Brazil: Annual Report, 1911," 8, TNA, FO 118/305.
[311] Morgan, *Legacy*, 179–93; 206–09; "Mutineers Fire on Rio Janeiro," *New-York Tribune*, 25 November 1910, 1.
[312] Hammond, "Mutiny," 3–5, in "Brazilian Naval Revolt, 1910," RG 38, Box 760, SC E-9-d, reg. no. 799, NARA.

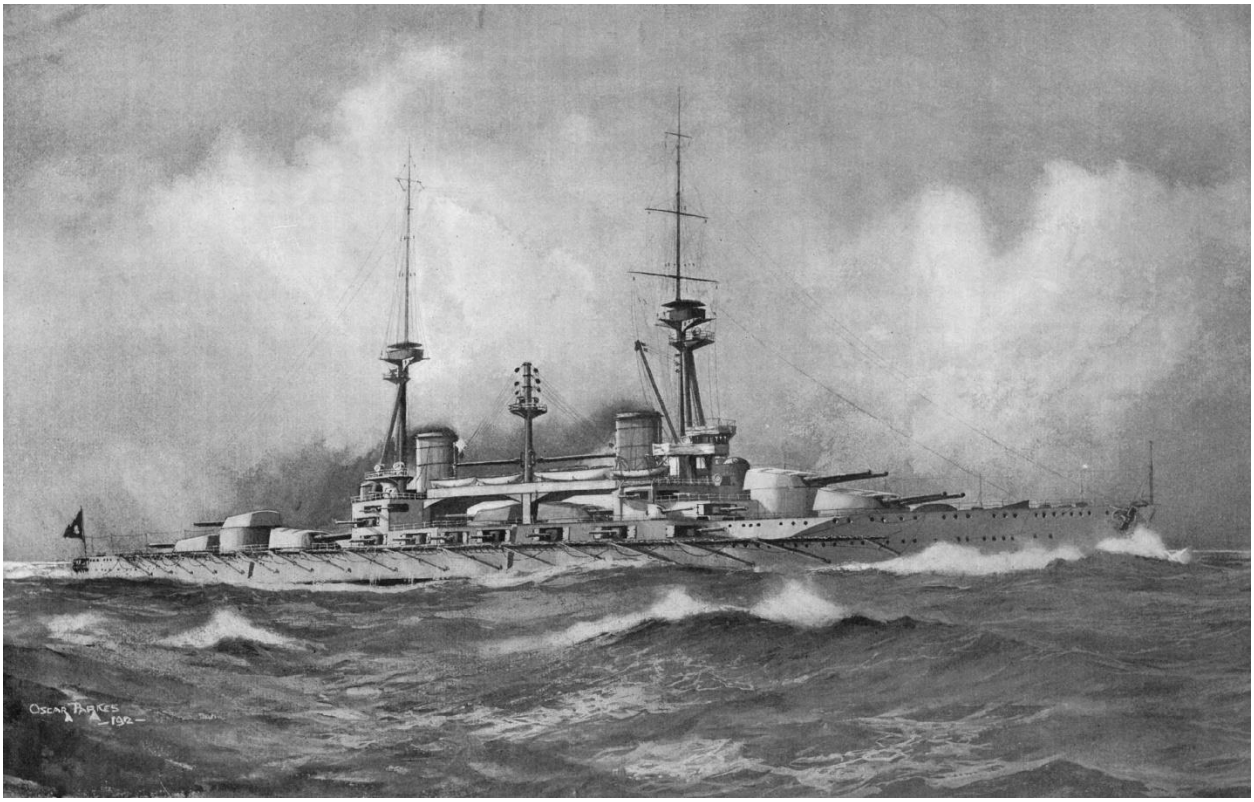
foreign minister and the replacement for Rio Branco after his death, embarked.[313] On the other, much of the Brazilian Navy was reportedly in poor condition when the country entered the First World War, and so both dreadnoughts were sent to the United States to be modernized. *São Paulo* went first, with the intention of docking in the United States in time for its 1918 Independence Day celebrations, but fourteen of its eighteen boilers broke down during the journey. The crew was forced to make for Bahia for emergency repairs, which were completed not by its own crewmen but ninety sailors from the American battleship *Nebraska*, which was visiting Bahia at the time. Escorted by that ship and *Raleigh*, an American protected cruiser, *São Paulo* would eventually make it to New York nearly a month and a half after leaving Rio de Janeiro. It remained there until 1920, long after the war's conclusion.[314]

Having been restored by American shipwrights and engineers, *São Paulo* was sent abroad twice soon after its refit was complete. Its first trip brought Belgium's sovereign king and queen to Brazil in September 1920, reciprocating a visit from Brazil's president in the preceding year.[315] The second, made only months later, repatriated the bodies of Brazil's former emperor Pedro II and his wife Teresa Cristina.[316] In 1922, the crews on board *São Paulo* and *Minas Geraes*, recently returned from its own refit, were drilled often and headed out on several excursions for target practice. *São Paulo*'s gunners performed especially well in a January exercise, hitting eighty-five percent of their targets at a range of two thousand meters.[317] In the same year, the dreadnoughts stayed loyal during the *Tenente* revolts and fired salvos at the rebel-

[313] "Brazilian Envoy Host on Warship," *New York Times*, 12 July 1913, 7; Edward Marshall, "'You North Americans are Extraordinary!' Dr. Mueller," *New York Times*, 20 July 1913, 46.
[314] Scheina, *Latin America*, 97.
[315] "King Albert Accepts Big to Visit Brazil in August," *New-York Tribune*, 24 April 1920, 4; "King Albert and His Queen Sail for Brazil Today," *The New York Times*, 1 September 1920, 1.
[316] "Leader of Revolution to Honor Dom Pedro II," *New-York Tribune*, 31 January 1921, 19; "Brazil Receives Dead Exiles," *Washington Post*, 11 January 1921, 6.
[317] Various reports in "Target Practice, Brazil," RG 38, Box 1153, SC R-2-b, reg. no. 15263.

held Fort Copacabana in Rio de Janeiro's harbor.[318] By 1924, however, *São Paulo*'s condensers were in disrepair, which ironically helped derail another mutiny on board the ship.[319]

Figure 3.9: Artist's impression of the final *Rio de Janeiro* design, 1913.



Source: Oscar Parkes, "The Brazilian Battleship 'Rio de Janeiro'," *Scientific American* 108, no. 22 (31 May 1913): 493. Public domain.

The long saga of Brazil's third dreadnought

While Brazil would never take possession of another battleship, the 1907 naval program's third proposed dreadnought, *Rio de Janeiro,* was subjected to what one naval historian's publisher called a "hilarious, melancholy and extraordinary" tale of being

[318] Robert Scheina, *Latin America's Wars*, vol. 2, *The Age of the Professional Soldier, 1900–2001* (Dulles, VA: Brassey's, 2003), 128.
[319] Scheina, *Latin America*, 77–79. They were also running low on fuel and provisions. "Brazil Youths' 'Mutiny' Like Opera Bouffe," *Christian Science Monitor*, 11 November 1924, 1.

constructed, torn down, and re-constructed—all of which happened multiple times. It was then sold and finally forcibly transferred after the beginning of the First World War.[320]

The roots of all this begin with the problems with Brazil's 1908 coffee crop, when the Brazilian federal government had to step in and give the state of São Paulo a £15 million loan to cover its failed attempt to buy up a coffee surplus and wait for its market price to rise. At the same time, Argentina was nearing a decision to counter Brazil's dreadnoughts with dreadnoughts of their own. These factors led the Brazilian government to reconsider its decision to order three dreadnoughts, rather than just two.[321]

Perhaps understandably, Armstrong was not keen on potentially losing millions of pounds from a cancelled dreadnought. In September 1908, less than a week after *Minas Geraes* was launched, Sir Andrew Noble, Armstrong's chairman, wrote to Admiral Bacelar, the head of the Brazilian naval commission in the United Kingdom, to push the Brazilians into proceeding with the order it signed:

> I need not emphasize the arguments as to the desirability of the Brazilian Government proceeding with the naval programme in its entirety—a program which is certainly not more than sufficient for the needs and interests of the Country … I trust that the Minister of Marine will be able to give you instructions for proceeding with the laying of the keel of the third ship, on the slip just vacated by the *Minas Geraes*.[322]

On 16 September, two days after Noble sent his letter, two directors from Armstrong and two representatives of the Brazilian government met to discuss the matter. The former convinced the latter to agree to only a few contract revisions, including a maximum of a three-year delay in construction, future payments in cash (as opposed to government bonds), and counting €350,000 of previous payments as going towards the first two dreadnoughts, rather than the third.

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[320] Hough, *Big Battleship*, dustjacket.
[321] Topliss, "Brazilian Dreadnoughts," 247; Hutchinson, "Coffee 'Valorization' in Brazil," 529–31.
[322] Quoted in Topliss, "Brazilian Dreadnoughts," 247.

However, they also began preparing alternative (and far smaller) designs. With these, the Armstrong directors were able to overcome a Brazilian counter-proposal—that the original contract would remain in force even while the third ship's construction would be indefinitely delayed—but not resistance from the company's board, which vetoed the deal on 8 October at the insistence of Stuart Rendel, a fellow Armstrong director. Rendel did not believe that the Brazilians were seeking contractual changes due to financial reasons, and he did not sympathize with the arguments made by John Meade Falkner, who would eventually rise to become chairman of Armstrong. Falkner had written to Rendel to say that he:

> [Felt] a distinct, and probably foolish quixotic sympathy with these people, who have given us a contract at which the world of business stood stupefied—who by this order have immensely strengthened our prestige—who have out-Heroded Herod [i.e. in its level of extravagance], and by these gigantic ships, have set all the navies of the world to follow Elswick's lead.[323]

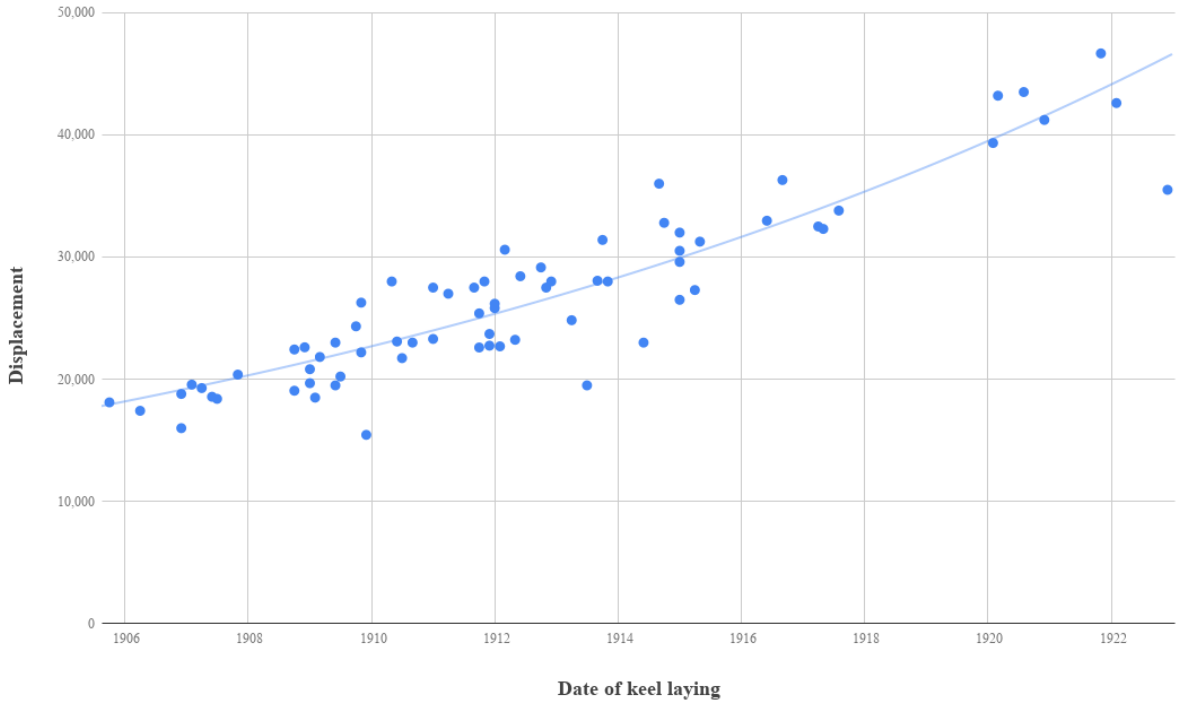
In the face of additional economic obstacles, the Brazilian government tried to delay *Rio de Janeiro* again in July 1909, just weeks after its Minister of Marine struck an agreement with Armstrong's staff to hurry the completion of *Minas Geraes* for the price of committing to laying down the third dreadnought as soon as *Minas Geraes* was finished. Armstrong's board again refused to countenance this change, but the Brazilians were bailed out by global banks' increasing willingness to loan them the required money. The third dreadnought's keel was laid down for the first time on 16 March 1910, about two months after *Minas Geraes* had been delivered to the Brazilian Navy.[324]

It did not take long for the Brazilians to reconsider their order yet again. In an era of rapid naval technological developments, the *Minas Geraes* class' design was not up to the standard of

[323] Ibid., 248–49.
[324] Ibid., 249.

the newest foreign battleships. "One of the most appalling things to the economist in fiscal affairs," one 1909 article in *International Marine Engineering* began, "is the rapidity with which costly warships become obsolete and have to be scrapped."[325] The new designs, called "super-dreadnoughts," displaced far more and carried heavier armament; the first, the United Kingdom's *Orion,* was laid down in November 1909.[326]

Figure 3.10: Growth in dreadnought displacement, 1905–22, spanning the eponymous *Dreadnought* to Britain's treaty-limited *Nelson* class. The graph includes the first dreadnought or battlecruiser in each ship class that was either laid down or was close to being laid down, even if construction was later canceled. Ships of note include Brazil's *Minas Geraes* (April 1907), Argentina's *Rivadavia* (May 1910), Brazil's final keel laying for *Rio de Janeiro* (September 1911), and Chile's *Almirante Latorre* (November 1911).[327]



Source: Author's work. Data gathered from Breyer, *Battleships.*

[325] Benjamin Taylor, "Recent Warship Development," *International Marine Engineering* 14, no. 9 (September 1909): 369.
[326] Topliss, "Brazilian Dreadnoughts," 254.
[327] The graph includes the first dreadnought or battlecruiser in each ship class that was either laid down or was close to being laid down, even if construction was later canceled. HMS *Hood* is listed at its 1916 designed displacement, not its displacement as commissioned.

Figure 3.10 shows the rapid growth in dreadnought displacement between 1905 and 1922. Critically for the development of *Rio de Janeiro*, Argentina's first 27,500-ton *Rivadavia*-class battleship was laid down in May 1910, the same month in which the Brazilians asked for Armstrong to halt all work on the new dreadnought and submit new designs.[328]

On 7 May 1910, Bacelar, the head of the Brazilian naval commission, directed Armstrong to halt all work on *Rio de Janeiro* and to propose new and more powerful designs. They moved rapidly to comply with this request and came up with three designs by 12 May, two of which were submitted to Bacelar, and one of which was selected and refined in Armstrong design 653. In a meeting between Noble, Bacelar, and now-Chief Designer J.R. Perret, Bacelar approved detailed design work on 653, a 31,600-ton ship with twelve fourteen-inch guns arranged in a similar fashion to *Minas Geraes*. Armstrong dispatched Eustace Tennyson D'Eyncourt, its chief salesman, to Brazil in August 1910 to hammer out the final design particulars. Weeks of small work followed, with the Brazilians sending in what one historian said "what must have seemed [like] an endless stream of requests and criticisms" to D'Eyncourt. Finally, by October D'Eyncourt was able to secure an agreed-upon design that he submitted to Alexandrino Faria de Alencar, the Minister of Marine and a leader in the 1907 revisions to Brazil's naval program. With his signature, the Brazilians committed themselves to a £2.864 million ship, and its keel was laid down again in the same month.[329]

Once again, headlines around the world blared that Brazil would "lead all navies with its latest dreadnought," and that it would "be the largest and most powerful warship in the

[328] Hough, *Big Battleship*, 30. Topliss does not explicitly connect the decision to re-design *Rio de Janeiro* with Argentina's dreadnoughts, but refers generally to the design becoming obsolete. The Brazilian naval commission asked for new designs on 7 May, while *Rivadavia* was laid down on 25 May 1910. Topliss, "Brazilian Dreadnoughts," 254; Scheina, "Argentina," in Gardiner and Grey, *Conway's 1906–21*, 401.
[329] Topliss, "Brazilian Dreadnoughts," 256–60.

world."[330] Tables created by the press charted the displacements of the world's new capital ships, completed or under construction, put Brazil at the top of the list.[331]

An important qualifier, however, is that Alencar was the *outgoing* minister of marine—and buried in the official contract was a stipulation that the next minister of marine had to approve of the new design. Admiral Margues Leao, appointed as Alencar's replacement by the new presidential administration, did not. Assuming his office in November 1910, Leao had been heavily influenced by the designs of new German dreadnoughts, which mounted twelve-inch guns, and the president he served under would go on to state that the new dreadnought should "not be built on exaggerated lines such as have not yet stood the test of experience."[332] Bacelar, however, was of the opposite opinion and believed that Brazil needed the most powerful dreadnought it could purchase. Accordingly, he was able to convince Armstrong to sketch out designs that were actually *larger*, featuring up to a main battery of 16-inch guns and secondary 9.4-inch guns—a design that was Bacelar's own brainchild and "probably the most outrageous Dreadnought ever proposed," according to economic and naval historian David Topliss. Unfortunately for Armstrong and D'Eyncourt, who found himself headed back to Brazil in March 1911, they quickly discovered that Leao's views would carry the day. By the time D'Eyncourt arrived in Brazil, Armstrong had been told that Leao had "practically convinced the

[330] "World's Biggest Warship," *Washington Post*, 7 August 1910, 8; "Brazil's Naval Program," *Navy* (Washington) 4, no. 6 (August 1910): 27.
[331] "Our Navy Close to England's Now," *New York Times*, 11 December 1910, 8; "Brazil's Naval Program," *Navy* (Washington) 4, no. 6 (August 1910): 28.
[332] Topliss, "Brazilian Dreadnoughts," 260–63. Both Topliss and Hough, *Big Battleship*, 35, identify the "exaggerated lines" quote as coming from Leao near the beginning of his tenure as minister of marine. Neither use footnotes to identify their source for this, however, and Hermes Rodrigues da Fonseca, the president of Brazil who took office in the same month as Leao, made a curiously similar statement on 3 May 1911 (the final sentence): "When I assumed office, I found that my predecessor had signed a contract for the building of the battleship *Rio de Janeiro*, a vessel of 32,000 tons, with an armament of 14 in. guns. Considerations of every kind pointed to the inconvenience of acquiring such a vessel and to the revision of the contract in the sense of reducing the tonnage. This was done, and we shall possess a powerful unit which will not be built on exaggerated lines such as have not as yet stood the time of experience." Quoted in Scheina, *Latin America*, 82n6.

president [of Brazil] to cancel the *Rio de Janeiro* and replace her with an improved *Minas Geraes*." With the winds having shifted so decisively in favor of a smaller dreadnought, D'Eyncourt likely only proposed twelve-inch gunned battleships upon his arrival in Brazil.[333]

The classic account of D'Eyncourt's negotiations in Brazil, found in maritime historian Richard Hough's *The Big Battleship*, acclaims D'Eyncourt as a masterfully flexible negotiator who was surprised by the shift to 12-inch guns. In this telling, upon discovering the shift in naval philosophy, D'Eyncourt immediately dropped the designs he had brought with him to the country, all of which were armed with guns of at least 13.5 inches, and improvised a 12-inch gunned solution over the course of one night's work.[334] Topliss, however, demonstrates that this tale is "totally contradicted by the evidence" contained in the Armstrong's archives. D'Eyncourt's flexibility was indeed masterful, something he proved in dealing with all the requests for small design alterations both before and after the new desire for 12-inch guns, but Armstrong was only "briefly" misled by Bacelar's proposals and was "well aware" of the change in dominant naval philosophy. D'Eyncourt was informed of this shift via shipboard telegraph before he even landed in Brazil, and he had brought several twelve-inch designs with him, including several modernized variations on the basic design of the *Minas Geraes* class.[335]

Once D'Eycourt landed in Brazil, discussions with Leao and the country's naval authorities quickly focused on Design 690, the largest applicable design D'Eycourt had brought with him. It called for no less than fourteen twelve-inch guns, a total that would be the most guns in a main battery that the world had ever seen. Topliss speculates that the reasoning for this was

[333] Topliss, "Brazilian Dreadnoughts," 263–80. On Topliss' academic background, see Friedman, *British Battleship*, 152n47.
[334] Hough, *Big Battleship*, 36–38.
[335] Topliss, "Brazilian Dreadnoughts," 263.

nakedly political and stemmed from Leao's desire for the twelve-inch gun. Under *Rio de Janeiro*'s revised contract from the previous October, any alterations required that the Brazilian government spend at least as much—and that total was already greater than what they had paid for *Minas Geraes*, which carried twelve twelve-inch guns. Topliss suspects that Leao was worried that if he settled for a new dreadnought with only ten or twelve twelve-inch guns, he would be criticized for ordering a ship that was, on paper at least, less capable yet more expensive. Without the option of fourteen-inch guns, the only remaining option was to make sure that the number of twelve-inch guns in the new design was more than that of the preceding *Minas Geraes*.[336]

By June 1911, Leao chose to move ahead with the fourteen-gun design, signing a contract for £2.675 million.[337] The new ship would also carry a maximum of nine-inch belt armor, three separate armored decks, steam at a maximum of twenty-two knots, and carry over three thousand tons of coal plus oil, which according to one contemporary naval analyst was an "exceptional amount" of fuel when compared to the other South American dreadnoughts.[338]

Curiously, the Revolt of the Lash seems to have had little impact on *Rio de Janeiro*; for example, the mutiny is left entirely unmentioned in Topliss' comprehensive account of *Rio de Janeiro*'s design history. This is despite a unanimous, if also brief, determination by Brazilian

[336] Ibid., 263–64, 280.
[337] Ibid., 281. Design details on 264–65. Designing ships with headline-grabbing firepower in this time period was one tactic used in selling ships to minor navies, and it happened to some extent on all the dreadnoughts ordered by South American countries. While the "squeeze" of naval design (see footnote 203) meant that adding firepower could come only by subtracting from other areas of the ship, most navies chose to emphasize the easily understood variables of firepower and speed at the expense of armor. An analogy in a modern framework can be found in muscle cars and the desire to possess one with the highest theoretical top speed and horsepower. Friedman, *Battleship Design*, 21. The £2.675 million June 1911 contract price is lower than the previous October 1910 £2.864 million contract, even though the Brazilians were obligated to spend as much or more than what they committed to that October. This discrepancy is left unexplained in Topliss.
[338] Oscar Parkes, "The Brazilian Battleship 'Rio de Janeiro'," *Scientific American* 108, no. 22 (31 May 1913): 492.

president Hermes Rodrigues da Fonseca and his cabinet to sell the two *Minas Geraes*-class dreadnoughts before the ships were made obsolete in three to four years. Surprisingly, the supporting ministers included Rio Branco, leading Haggard to exclaim that "this is indeed a wonderful surrender on the part of the man who was answerable for the purchase and who looked upon them as the most cherished offspring of his policy." The Brazilian politicians, however, eventually decided that the potential negative effects such a deal could have in the country's politics outweighed the desire to rid themselves of the warships.[339]

Armstrong laid down *Rio de Janeiro*'s keel on 14 September 1911, but by the following year, the Brazilian government was once again reconsidering their purchase.[340] This happened even as the ship received more press calling it the world's "biggest battleship" after its launch on 22 January 1913, although this was inaccurate as the Argentine dreadnoughts were slightly larger.[341] Contemporary foreign dreadnoughts outside Germany were all opting for fourteen-inch guns, including the Chileans, whose second super-dreadnought *Almirante Cochrane* was laid down in the slip vacated by *Rio de Janeiro* on the same day the latter ship was launched. Inside Brazil, prominent newspapers were comparing their dreadnought to *Nevada*, a super-dreadnought being built for the United States, which could fire a heavier broadside with four fewer guns in its main battery thanks to the use of fourteen-inch guns and two triple-gun turrets. In short, the Brazilian government was confronting the dilemma that had caused it to reorder *Rio de Janeiro* in the first place—the ship would be wholly outclassed soon after it was completed, both on paper and reality.[342]

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[339] Topliss, "Brazilian Dreadnoughts," 260, 263; Grant, *Rulers*, 159; Haggard to Grey, 22 January 1911, no. 8, TNA, FO 420/254.
[340] Topliss, "Brazilian Dreadnoughts," 283
[341] "The Biggest Battleship," *New-York Tribune*, 23 January 1913, 12.
[342] Topliss, "Brazilian Dreadnoughts," 283.

Military strength and international prestige were not the only obstacles the Brazilian government was confronting, as their finances were becoming increasingly problematic. In 1912, the government was facing external and internal debts totaling over $800 million and a yearly deficit that neared $50 million per year.[343] By the following year, a financial crunch caused by an increase in government expenditures was looming, and their international credit was suffering under the weight of internal public debt.[344] Meanwhile, Brazil's rubber industry, a key source of government revenue, was declining in the face of intense competition from the United Kingdom's colonies in Southeast Asia.[345] In May 1913, the Brazilian government was unable to obtain a desired 11 million (presumably pounds sterling, but not specified) in loans, and by October 1913, Brazil was facing an economic depression fueled by the decline of coffee and rubber.[346] In the same month, Haggard, close to departing his office as the British minister to Brazil, said that "I must state that [the country] is … in a worse condition than it was when I arrived here in 1906."[347]

Armstrong mounted a strange attempt to rescue *Rio de Janeiro* in September 1913, suggesting that all fourteen twelve-inch guns be replaced by seven fifteen-inch guns, one per turret. This armament arrangement would have been completely without precedent; no dreadnought ever built, before or after, utilized single gun turrets.[348] The Brazilians, however,

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[343] Percy Allen Martin, *Latin America and the War* (Gloucester, MA: Peter Smith, 1967), 37.
[344] "Brazilian Finance—Government and Expenditure," *Times South American Supplement* (London), 29 April 1913, 10.
[345] "Brazilian Rubber—A Declining Industry," *Times South American Supplement* (London), 25 February 1913, 8.
[346] "City Notes—The Brazilian Loan," *Times South American Supplement* (London), 27 May 1913, 9; "City Notes—Brazilian Depression," *Times South American Supplement* (London), 28 October 1913, 6. By early 1914, their securities' fortunes on London's stock market had a "remarkably sudden" turnaround. "City Notes—Stock Exchange Revival," *Times* (London) *South American Supplement*, 27 January 1914, 6.
[347] Haggard to Grey, 24 October 1913, no. 86, TNA, FO 420/257.
[348] Topliss, "Brazilian Dreadnoughts," 283. Topliss notes that he found no definitive date on which the Brazilian government decided to sell the ship. The earliest he can give is 4 September 1913, when the Brazilians gave Rothschilds instructions to find a buyer. Perhaps the decision was made in the previous month, when Alencar, the architect of the revised 1907 naval construction program, regained the position of minister of marine; the American

had already asked Rothchilds, their British financial backers, to seek buyers willing to pay £2 million for their vessel.[349]

There was no shortage of countries captivated by the soon-to-be-former *Rio de Janeiro*. Russia, Greece, the Ottoman Empire, and Italy were all interested in acquiring it for themselves, and France wanted to steer it to Greece, which would ensure that it could not fall into Italy's hands. Slowly, some of these nations dropped out. The Russians, who had reportedly been interested in the ship as early as January 1913, decided against a purchase on 5 November of the same year, stating that the ship's construction was so far advanced that the cost of altering its armament to Russia's desired arrangement was prohibitive. Italy also took itself out of the running later that month, although an inaccurate report in the *Daily Telegraph* reported that they had bought the ship; in any case the French government continued assisting its Greek counterpart in their acquisition efforts.[350]

Throughout November and most of December, the Greek government looked for a financial backer to fulfill their 27 November offer of the ship's total contract price plus an additional £50,000, as the Brazilians were demanding that they receive the cash up front.[351] Throughout the end of November and most of December, the French, Greeks, and then-First Lord of the Admiralty Winston Churchill tried to line up all the financial dominoes, but these

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government discovered the intention to sell by early September 1913 at the latest. Edwin Vernon Morgan to Bryan, 8 September 1913, in "Brazilian battleship *Rio de Janeiro*," RG 38, Box 1151, SC O-4-a, reg. no. 736, NARA.

[349] Grant, *Rulers*, 160; Topliss, "Brazilian Dreadnoughts," 283.

[350] Halpern, *Mediterranean Naval Situation*, 332–33, 339–40; Topliss, "Brazilian Dreadnoughts," 284; "Refuses Russia's Offer," *New York Times*, 17 January 1913, 4; "Italy Buys Dreadnought; Reported to Have Purchased the Rio Janeiro, Built for Brazil," *New York Times*, 29 November 1913, 4, which repeats the *Daily Telegraph*'s claim. Halpern claims that he found "no evidence in the Italian naval archives" to corroborate the notion that their government wanted to purchase the ship, but did find unsupported speculation from the-then French naval attaché to Italy that the rumor had been started by an Italian shipyard rivalry. Halpern, *Mediterranean Naval Situation*, 340n104. Topliss, on the other hand, states that Italy "decided independently around 20 November not to buy it." Unfortunately, Topliss' piece does not use footnotes, making it impossible to determine his source. Halpern is listed in Topliss' bibliography, however, which may imply that Topliss made use of a source Halpern did not find.

[351] Topliss, "Brazilian Dreadnoughts," 284.

efforts came to a crashing halt on 29 December.[352] On that day, the Ottomans announced that they had taken formal control of the still-incomplete battleship with a deposit of £1.25 million and an additional £940,000 to be paid within six weeks.[353] The offer had been backed by the French Périer bank, something which gave its country's government a black eye.[354] The total reported purchase price was £2.34 million.[355] The Ottomans were required to pay for the remainder of the ship's construction, which would be renamed *Sultan Osman I*.[356] Publicly, the Brazilian Navy stated its reasoning in the *Daily Telegraph* as wanting a "better class" of battleship, with which the navy could form two separate divisions: one with two fifteen-inch-armed super-dreadnoughts, and the other with the two *Minas Geraes* class ships.[357]

Ironically, the purchase fulfilled some of the fears expressed by naval commentators when the two *Minas Geraes*-class dreadnoughts were under construction. "The purchase [of *Rio de Janeiro*] must be regarded by naval powers as a disconcerting incident if enormously powerful ships built for one country are to be sold at the last moment to another," the *Christian Science Monitor*'s European Bureau wrote at the end of 1913. "The building programs of European dockyards will be subject to hopeless fluctuation and a dangerous factor of a new description will be introduced to naval competition."[358] Conversely, Bacelar, the now-former head of the Brazilian naval commission in the United Kingdom, blasted his government in a published letter for "weakening the power and prestige of Brazil in the eyes of the world." The

[352] Halpern, *Mediterranean Naval Situation*, 340–41.
[353] Grant, *Rulers*, 161; Topliss, "Brazilian Dreadnoughts," 284.
[354] Halpern, *Mediterranean Naval Situation*, 341; "The Brazilian Dreadnought and the Naval Missions," *Economist*, 3 January 1914, 6.
[355] "Turkish Navy," *Sydney Morning Herald*, 31 December 1913, 13; Unknown [illegible signature] to Secretary of State William Jennings Bryan, 8 January 1914 (enclosure), in "Brazilian Battleship Rio de Janeiro," RG 38, Box 1151, SC O-4-a, reg. no. 736, NARA.
[356] Topliss, "Brazilian Dreadnoughts, 284.
[357] C.C. Gill, "Professional Notes," *Proceedings of the United States Naval Institute* 40, no. 2 (1914), 492.
[358] "Turkey Buys Dreadnought from Brazil," *Christian Science Monitor*, 31 December 1913, 1.

Brazilian government countered his claims by stating that *Rio de Janeiro* was not suitable for "the new scheme of the navy," and put Bacelar under arrest.[359]

The truncated end to Brazil's naval dreams

Having disposed of *Rio de Janeiro,* there was unfounded speculation that Brazil was content with its two *Minas Geraes*-class dreadnoughts.[360] This was not the case, and in fact ignored the previously stated intentions of the Brazilian government. Advocacy efforts supporting an order for what was then going to be a fourth dreadnought extended back at least as far as 1910, when Bacelar vocalized his belief that the-then just announced *Rio de Janeiro* "could not be left alone … and similar ships will have to be built to accompany her in the Brazilian fleet."[361] Perhaps more importantly, however, the Navy League of Brazil mobilized to support the effort. Described by Fiennes, the British naval expert, as "strong and aggressive" with a "real influence on public opinion," the league started collecting public subscriptions for a fourth dreadnought starting in 1910, setting quotas for each state and major city in the country in the process. Such a ship would have been in addition to the originally planned *Minas Geraes, São Paulo,* and *Rio de Janeiro*.[362] This effort was evidently quite successful, as in 1912 one

[359] "Turkey Buys a Dreadnought," *Independent* 77 (2 February 1914): 154.
[360] Unknown [illegible signature] to Bryan, 8 January 1914 (enclosure from *Diario Official*), in "Brazilian Battleship Rio de Janeiro," RG 38, Box 1151, SC O-4-a, reg. no. 736, NARA. "Disarmament Not Intention Say Brazilians; Officials of Republic That Sold Dreadnought Declare Others Will Be Built—President Sees Fleet Off for Practice," *Christian Science Monitor*, 26 February 1914, 8 states that after the sale of *Rio de Janeiro*, "the opinion went abroad that the country is entering on a policy of disarmament." The paper had previously reported that Argentina would be comfortable with its own two dreadnoughts and would most likely not be ordering a third. "Argentina and Brazil Thought in Agreement," *Christian Science Monitor*, 29 January 1914, 8. Edwin Vernon Morgan, the United States' ambassador to Brazil, thought that another Brazilian dreadnought would be "particularly unnecessary and undesirable" due to "straightened financial conditions at home, the unfavorable situation abroad of Brazilian credit, and the good relations which Brazil enjoys with Argentina and Chile." Morgan to Bryan, 19 May 1914, in "Brazilian battleship Riachuelo," RG 38, Box 1152, SC O-4-a, reg. no. 4235.
[361] "Brazil's Naval Program," *Navy* (Washington) 4, no. 6 (August 1910): 27–28.
[362] Fiennes, "Dreadnoughts for Sale or Hire," 208; Livermore, "Battleship Diplomacy," 40; "Brazil," *Navy* (Washington) 4, no. 8 (October 1910): 29; "Brazil; The Navy," *Times* (London) *South American Supplement*, 30 May 1911, 9.

chronicler stated that the Navy League's forty thousand members were "working might and main" for an additional *two* dreadnoughts, and that an order for the first was "almost a certainty, as a great deal of money is already subscribed."[363]

In October 1913, the Brazilian government publicly announced its intention to sell the ship and use the funds to construct a new and larger super-dreadnought. Design proposals from Armstrong and Vickers quickly followed.[364] These early pitches show large variations in armament, which could indicate that the Brazilians were uncertain as to what they were looking for in their new capital warship, but they eventually settled on the fifteen-inch gun.[365] By January 1914, mere days after *Rio de Janeiro* was sold, reports stated that they had signed an agreement with Armstrong to construct another dreadnought at no additional cost.[366] Another naval commission was sent abroad in the following month.[367]

Armstrong submitted four designs that October, the most detailed of which was an enlarged *Almirante Latorre*-class battleship, then being built by Armstrong for Chile. This

[363] J.C. Oakenfull, *Brazil in 1912* (London: Robert Atkinson Limited, 1913), 91. This source is part of an annual *Brazil* series Oakenfull wrote in 1909–13, 1919, and 1922. The "almost a certainty" statement was closely mirrored in the subsequent 1913 publication: according to Oakenfull, the order was "almost assured, as a great deal of money has been collected already." J.C. Oakenfull, *Brazil (1913)* (Frome, England: Butler & Tanner, Selwood Press, 1914), 111. This series was directly supported by the Brazilian government, as the 1909 edition was "published under the auspices of the Brazilian Government Commission of Propaganda and Economic Expansion," and the 1910 edition was edited by the "Commission of Economic Expansion of Brazil." Any mention of them disappears in 1911, but 11,500 copies of the 1913 edition were printed on an order from the Brazilian government. See the opening unnumbered and title pages in *Brazil in 1909* (Paris: Brazilian Government Commission of Propaganda and Economic Expansion, 1909); *Brazil in 1910* (Dublin: Commission of Economic Expansion of Brazil, 1910); *Brazil in 1911* (London: Butler and Tanner, 1912). The 1910 edition consulted in writing this thesis has a stamp which overwrites the listed printer—Rt. White Stevens in Plymouth, England—with the Commission.

[364] Oakenfull, *Brazil (1913)*, 118; Topliss, "Brazilian Dreadnoughts," 284. Oakenfull cites telegrams from Reuters received on 16 October 1913.

[365] Topliss, "Brazilian Dreadnoughts," 284; Alan Vanterpool, "The 'Riachuelo'," *Warship International* 6, no. 2 (1969): 140.

[366] "Dockyard Notes," *Engineer* 117 (9 January 1914): 52; "Disarmament Not Intention Say Brazilians," *Christian Science Monitor*, 26 February 1914, 8; Unknown [illegible signature] to Bryan, 8 January 1914 (enclosure from *Diario Official*), in "Brazilian Battleship Rio de Janeiro," RG 38, Box 1151, SC O-4-a, reg. no. 736, NARA. See also "Another Warship for Brazil," *Christian Science Monitor*, 10 February 1914, 8.

[367] "Brazil Plans Dreadnought," *Christian Science Monitor,* 24 February 1914, 8.

proposal would have displaced three thousand tons more than the Chilean super-dreadnoughts, which would accommodate lengthening the ship to carry a sixth fourteen-inch gun turret, adding heavier armor, and a more powerful power plant to ensure that it could steam at approximately the same top speed (twenty-three knots). The other three proposals were for larger vessels: a 32,500-ton ship mounting ten fifteen-inch guns, essentially a faster and up-gunned variant of Britain's *Iron Duke* class, or a 36,000-ton sketch that used the same hull design to carry a main armament of either ten sixteen-inch guns or twelve fifteen-inch guns.[368]

In December through March, Vickers offered a wide range of designs that featured either fifteen- or sixteen-inch guns on displacements that varied from 26,000 to 30,500 tons. All gave the Brazilians the option of using "mixed" firing—that is, coal sprayed with oil—or oil-only firing, of which the latter's better thermal efficiency would give a faster speed on approximately the same displacement. The final two designs, submitted in March, called for eight or ten fifteen-inch guns, the latter design lengthened to fit an extra turret and additional machinery to keep the top speed above twenty-two knots.[369]

Armstrong, on the other hand, came back to the Brazilian government with eight broadly similar hull designs in February 1914, two of which carried eight fifteen-inch guns, and two longer proposals which carried ten. Within these, the ships varied primarily in their speed, fuel, and (presumably) propulsion machinery, although the differences in horsepower are not included. All of Armstrong's designs called for fifteen-inch guns, possibly the same guns that were used on the United Kingdom's *Queen Elizabeth* class, then under construction.[370]

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[368] Vanterpool, "The 'Riachuelo'," 140–41.
[369] Topliss, "Brazilian Dreadnoughts," 284–85.
[370] Ibid., 284, 286. Topliss includes Armstrong's detailed line drawings of Design 781, the eight-gun fifteen-inch design selected by Brazil, and 782, the first ten-gun fifteen-inch variant, on pages 287–88.

In fact, Armstrong's Design 781 bore a strong resemblance and would have drawn favorable comparisons to the *Queen Elizabeth* class. In comparing Design 781 and *Queen Elizabeth*, both ship classes were armed with eight fifteen-inch guns, but the former would have used its additional three thousand tons of displacement to carry additional armor at the cost of a slightly lower top speed. In all, Design 781 would have displaced 30,500 tons with a hull that was 660 feet long overall and carried belt armor that was a maximum of 13.5 inches thick. The machinery would have used mixed firing and geared turbines to achieve a speed of 22.5 knots, even though Armstrong offered oil-only firing in two of its eight proposals; the lower thermal efficiency of mixed firing lowered the design's potential top speed.[371]

The Brazilian government ordered one super-dreadnought of this design in May 1914, although reports of a provisional order with Armstrong emerged as early as February.[372] Preliminarily named *Riachuelo*, it was given the yard number 879, and its keel was to be laid in a berth next to *Malaya*, a super-dreadnought then under construction for the United Kingdom.[373] For one final time, press outlets heralded Brazil as the owner of the strongest warship in the world. The *Christian Science Monitor*, for example, called it the "world's greatest [planned] dreadnought," adding that it was "expected to exceed in size and power any other man-of-war afloat."[374]

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[371] Topliss, "Brazilian Dreadnoughts," 284–86.
[372] Ibid., 286; "Dockyard Notes," *Engineer* 117 (20 February 1914): 216–17; "[Untitled]," *Engineer* 117 (15 May 1914): 526. This order has been misreported in naval literature, as naval historians Robert Scheina, in *Conway's 1906–21*, and Alan Vanterpool have both stated that the ship was never contracted for. Both attribute this alleged decision to financial and economic concerns (Vanterpool calls it a "financial crisis"). The ship was, however, ordered, an assertion that is backed up in detail by fellow historians Ian Sturton and David Topliss, along with a lengthy list of contemporary sources provided by Sturton. Scheina, "Brazil," in Gardiner and Grey, *Conway's 1906–21*, 405; Vanterpool, "The 'Riachuelo'," 140; Ian Sturton, "Re: The Riachuelo," *Warship International* 7, no. 3 (1970): 205–06; Topliss, "Brazilian Dreadnoughts," 286.
[373] Ibid., 286; "The New Battleship for Brazil," *Times* (London), 5 January 1914, 3f.
[374] "World's Greatest Dreadnought is Plan [*sic*] in Brazil' Government Holds to Naval Program and Says No More Battleships Are to Be Sold," *Christian Science Monitor*, 6 August 1914, 6.

Brazil's dreadnought dreams finally came to a crashing halt in August 1914 with the beginning of the First World War. The British government could not let foreign countries order warships from British shipyards, as the effort would use up valuable materials, building slips, and men that could be better used in contributing towards their own war effort. Construction of *Riachuelo*, whose projected keel laying date was in September 1914, was quietly and unceremoniously suspended in January 1915 and formally canceled in May.[375] "Had it not been for the crisis and the war," one author would write in 1919, "there is no doubt the Navy League … would have carried out its plans for the addition of two more first-class battleships to the fleet."[376] The former *Rio de Janeiro* also fell victim to the conflict, as the British took over the nearly complete ship shortly after the war began and commissioned it into their navy as *Agincourt*.[377]

[375] Brook, *Warships*, 153; Topliss, "Brazilian Dreadnoughts," 285–86.
[376] J.C. Oakenfull, *Brazil: Past, Present and Future* (London: John Bale, Sons & Danielsson, 1919), 149. See footnote 362 for more about Oakenfull's *Brazil* series.
[377] Topliss, "Brazilian Dreadnoughts," 286.

Countering the threat: Argentina and Chile

In the years after the Pacts of May, Argentina and Chile remained true to the treaty they signed, which in part restricted each country's warship purchases until 1907. Their resolve, however, began to fray as the Brazilian naval program of 1904 took shape. By 1906, the countries were inclined to abrogate the pacts so that they could respond to the Brazilian Navy's planned expansion, with both making that determination before Brazil changed its order the dreadnoughts.[378]

Argentina's path

Politicians in Argentina were particularly distressed at the prospect of a revived Brazilian Navy. The foundation of their country's prosperity was situated upon the ability to export agricultural products, including wheat, corn, grain, and beef—in fact, eighty percent of the grain and beef produced in Argentina was shipped abroad. Compounding the lack of a diversified economy, most of Argentina's exports went through the River Plate, the estuary on which the Argentine capital of Buenos Aires had been constructed. Strategically speaking, the choke point this created meant that a blockade of just the River Plate's entrance, requiring only a small fleet of warships could significantly destabilize Argentina's economy. As such, the Argentine government and its navy were keenly aware of the need to ensure that this scenario never came to pass. In the words of an Argentine admiral speaking to an American reporter in 1910:

> [Exports] must pass out of the Plate River [River Plate], which is our only channel to the outer world. If a hostile neighbor could blockade the Plate's mouth, and keep shipping away from us, it could nearly destroy us. We should be choked, strangled, deprived of strength, and forced into submission. Therefore we have a navy, so that we can say to the world: 'Send your ships for our grain and beef, and you shall have a free track up La Plata and back again to the high seas.' It is really very simple. If you had to store a large amount of money in a public square you would want to have some policemen to guard

[378] Livermore, "Battleship Diplomacy," 32.

> your hoard. Perhaps no one would try to steal it, even if it were not guarded. But you don't want to take the risk of tempting your neighbors with an unprotected treasure.[379]

These concerns help explain why the Argentine governments throughout the first half of the twentieth century believed that upholding a regional balance of power, especially on the high seas, was an integral part of maintaining their sovereignty.[380]

With so much at stake, the United States saw the potential for an arms race within its perceived sphere of influence and attempted to head it off before it began. Lloyd C. Griscom, their ambassador to Brazil, wrote to his superiors that a naval arms race in the region could end in potentially ruinous results. At the Pan American Conference, held in Rio de Janeiro in 1906, the administration of United States President Theodore Roosevelt attempted to convince the Brazilian government to halt their naval construction program and forestall the possibility of an arms race. The Baron of Rio Branco, in a response that Griscom cabled home, baldly stated that acquiescing to such a request would reduce Brazil to the status of a mere puppet, matching the relationship Cuba had with the United States.[381]

Similarly, the British had worries about the potential effects of an arms race in the region, namely that any resulting conflict would affect the United Kingdom's extensive commercial interests in the region. Haggard, their ambassador to Argentina, wearily wrote in 1906 that "of course I am being constantly reminded that England is the country which will chiefly lose by any check on the prosperity of the Argentine Republic."[382] Brazil's Baron of Rio Branco recognized

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[379] "A Message From Garcia," *Boston Evening Transcript*, 4 June 1910, 3.
[380] Guillermo J. Montenegro, "An Argentinian Naval Buildup in the Disarmament Era: The Naval Procurement Act of 1926," Universidad del Centro de Estudios Macroeconómicos de Argentina, 16, https://ucema.edu.ar/conferencias/download/naval_buildup.pdf. This paper, or a version of it, was also published in Antony Preston, ed., *Warship 2002–2003* (London: Conway Maritime Press, 2003).
[381] Livermore, "Battleship Diplomacy," 33.
[382] Haggard to Grey, 10 October 1906, no. 69, TNA, FO 420/237. He reiterated this in very similar language in Haggard to Grey, 24 October 1906, no. 71, FO 420/237.

this as well, as he told Milne Cheetham, Britain's *chargés d'affaires* in Rio de Janeiro during Haggard's absences, in 1908 that a regional war would cause a "disaster to [Britain's] trade and finances."[383] Some of these reminders came straight from the elites of Argentine society, as in September of that year Haggard wrote that Ernesto Tornquist, one of—if not the—most successful businessmen in Argentina, had quietly approached him to emphasize that "it would really be British interests that world chiefly suffer in the case of a war."[384]

Meanwhile, the Argentines paid close attention to the evolving designs of Brazil's ordered warships. When the Brazilian government went ahead with an order for three 13,000 ton battleships, the Argentine Foreign Minister Manuel Augusto Montes de Oca stated in November 1906 that any one of the new warships could "destroy the entire Argentine and Chilean fleets."[385] That any one of these ships could accomplish this feat was likely an exaggeration, as both Argentina and Chile still possessed the ships obtained during their arms race that ended only a few years before, but the former's navy had suffered from being starved of funds, which included skeleton crews, neglecting maintenance and upkeep, and a lack of at-sea training.[386] With that said, de Oca's statement was certainly not hyperbolic: on an individual basis, Brazil's three battleships would displace enough to nearly double any one of Argentina's armored cruisers, still only a decade old. They would also each mount twelve ten-inch guns, as opposed to

[383] Milne Cheetham to Edward Grey, 26 May 1908, p. 72, no. 39, TNO, FO, 420/247.
[384] Haggard to Grey, 30 September 1906, no. 67, TNA, FO 420/237.
[385] João Roberto Martins Filho, "Colossos dos mares," *Revista de História da Biblioteca Nacional* 3, no. 27 (2007), via the Internet Archive, https://web.archive.org/web/20101102034637/http://www.revistadehistoria.com.br/v2/home/?go=detalhe&id=1307.
[386] Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247; Townley to Grey, "Argentine Republic: Annual Report, 1909," 29 January 1910, TNA, FO 118/292, 11. Townley added that "during recent target practice the guns were found to be in such bad order, or the powder was so lacking in strength, that the projectiles did little more than roll out of the muzzles of the guns into the sea."

six total ten-inch guns spread across three of Argentina's cruisers.[387] Moreover, the Argentine Navy was acutely aware of the Brazilian battleship's designed draft—how far the ship's hull would extend beneath the surface of the water at a given load. At twenty-four feet, uncommonly limited for warships of this size, Brazil's new ships would measure in right at the River Plate's maximum permitted draft.[388]

Given these dangers and what Haggard called the Argentine government's "seriously mistrustful" attitude towards Brazil, the Argentines planned to order at least two major warships of its own to counter Brazil's planned vessels.[389] Their preference, however, would first be to have no one ordering warships at all. "The Argentine Government will have the ships at their command if Brazil holds to hers," Haggard wrote, "and will get rid of them if Brazil gets rid of them." If that could not happen, Tornquist, the Argentine businessman, hoped to convince Brazil to agree to sell two of their three ships to Argentina and Chile. This would split the vessels equally among the three countries, who were the major powers in the region.[390] This proposal was shot down almost as soon as it was proposed to the Baron of Rio Branco, as well as by Montes de Oca, the Argentine foreign minister, and the Argentine president.[391] Tornquist, however, was unfazed and continued trying to build support for this idea, and Haggard would later credit Tornquist with building a credible opposition within the Argentine legislature to the

[387] Details of the Brazilian battleships are contained in Topliss, "Brazilian Dreadnoughts," 245–46. Most relate to a draft chosen in 1905 and not the final 1906 design, which displaced an additional 1,500 tons, but no change in armament between the two is noted. For Argentina's cruisers, see Lyon, "Argentina," in Gardiner, Chesneau, and Kolesnik, *Conway's 1860–1905*, 403. The fourth of Argentina's four armored cruisers carried four eight-inch guns in two twin turrets, while the other three each had two ten-inch guns in two single turrets.
[388] Quote from Frederic Harford to Grey, 30 July 1906, TNA, FO 371/5; see also Haggard to Grey, 3 September 1906, no. 63, TNA, FO 420/237.
[389] Haggard to Grey, 9 August 1906, no. 63, TNA, FO 420/237; Haggard to Grey, 30 September 1906, no. 67, TNA, FO 420/237.
[390] Haggard to Grey, 30 September 1906, no. 67, TNA, FO 420/237. Tornquist also mentioned the possibility of swapping existing warships, including some of Argentina's *Garibaldi*-class armored cruisers. Haggard to Grey, 10 October 1906, no. 69, TNA, FO 420/237.
[391] Haggard to Grey, 10 October 1906, no. 69, TNA, FO 420/237.

idea of ordering warships to counter Brazil's. Shortly before Haggard was reassigned to Brazil, he wrote that Tornquist's "common sense and cleverness" was behind the new-found movement, "for certainly three months back the Congress would have voted in its favor [i.e. to purchase new warships] almost unanimously."[392] By January 1907, Tornquist was at least briefly victorious: the Argentine legislature's session ended without a vote on the proposal to order new battleships for the country's navy.[393]

The Brazilian government's reaction to its Argentine counterpart was conciliatory yet unyielding. As summarized by and filtered through the lens of William I. Buchanan, a former American ambassador to Argentina, recent delegate to the Pan-American Exposition, and authorized representative of the Roosevelt administration, the Brazilian government was adamant that it was only striving to reconstruct its navy after the domestic conflicts of the 1890s:

> In the matter of Brazil's present moves in connection with her navy, the following reflects exactly the views and expressions of facts and opinions I have secured: That for many years, Brazil was the first naval Power in South America; that during her civil war the major portion of her fleet, together with her marine arsenals, was either destroyed or greatly damaged; that following this an attempt was made to rebuild her fleet, but this was wholly abandoned owing to the strong opposition made by the army, which had no faith in the loyalty of the navy; that since then nothing has been done in the matter beyond the purchase of one—possibly two—small ships, and that as a result Brazil finds herself with obsolete or out-of-repair ships and a run-down marine arsenal; that when Argentina bought ships and built a great naval port Brazil saw no cause for questioning her plans, and *ergo* that now Brazil feels that she is bound, in justice to her own place as a country and to her proper individual interests, to rebuild and refit what she has had and lost she cannot understand why Argentina should question her motives or presume that in this procedure on her part something lay hidden dangerous to Argentina.[394]

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[392] Haggard to Grey, 5 December 1906, no. 77, TNA, FO 420/237.
[393] Townley to Grey, 31 January 1907, no. 11, TNA, FO 420/244.
[394] Haggard to Grey, 24 October 1906, no. 71, TNA, FO 420/237. These remarks were originally sent by Buchanan to Ernesto Tornquist and conveyed to Haggard by the latter. The transcriptions in FO 420/237 and FO 371/5 use "J" as Buchanan's middle initial ("Wm. J. Buchanan") instead of "I." This likely to be a typographical error, as Buchanan is identified in an earlier cable as being "formerly the United States' Minister here [i.e. in Buenos Aires]" in Haggard to Grey, 10 October 1906, no. 69, FO 420/237. Furthermore, the United States State Department's records confirm that William Insco Buchanan served as the American envoy to Argentina from 1894 to 1899. "William Insco Buchanan (1853–1909)," *Office of the Historian*, United States Department of State, https://history.state.gov/departmenthistory/people/buchanan-william-insco. That Buchanan was an authorized

Remarkably, these claims were echoed only a few months later by Jose Carlos Rodriguez, the director of *Jornal do Commercio*, a leading newspaper in Brazil, in statements made to Walter Beaupré Townley, Britain's new minister to Argentina.[395]

By 1907, when the Brazilian government modified its program to feature multiple dreadnoughts, the requirements of an adequate response from Argentina and Chile became clear: under the Mahanian school of naval strategy, dreadnoughts would be required if one was to attain naval supremacy and, if needed, beat another nation's dreadnoughts in a decisive battle—or fight off a blockade.[396] This major change in cost and capability, representing a tonnage increase of nearly fifty percent, was recommended by a commission of naval officers, which issued a study to the Argentine legislature in July 1907.[397] Estanislao Zeballos, de Oca's successor as foreign minister, eventually adopted a short-lived plan similar to Tornquist's proposal: to split the capital warships among the powers of South America. Zeballos asked the Argentine legislature in July 1908 to approve a plan where they would demand Brazil hand over one of its dreadnoughts or face an Argentine invasion. This proposal was quickly scuttled after it was leaked to the media, and Zeballos—who had already been facing severe headwinds in the Argentine press and had been described as "*étourdi*," French for "scatterbrained" or

representative comes from Livermore, "Battleship Diplomacy," 33. With the blessing of the United States government, Buchanan led an effort to "dissuade the Brazilians from starting a naval race in South America," according to Livermore, but was only given that authority at his request after a "spur of the moment" conversation with Tornquist. Haggard to Grey, 24 December 1906, no. 67, TNA, FO 420/244.

[395] Walter Beaupré Townley to Grey, 26 December 1906, no. 84, TNA, FO 420/244. At the end of 1906, Haggard was transferred to the British mission in Brazil after three years of service in Buenos Aires. Haggard to Grey, 16 December 1906, [unnumbered, marked "separate" and "confidential"], TNA, FO 420/244; Haggard to Grey, 24 December 1906, no. 67, TNA, FO 420/244.

[396] Mahanian theory has been referenced in a plethora of works since being first espoused in Alfred Thayer Mahan, *The Influence of Sea Power Upon History, 1660–1783* (Boston, Massachusetts: Little, Brown and Co., 1890).

[397] Francesco Venturini Di Biassi, "Ley de Armamento Naval Nº 6283 [Naval Armament Law No. 6283]," Departamento de Estudios Históricos Navales, 2, http://www.ara.mil.ar/archivos/Docs/ley_armamento_venturini.pdf. Tonnage comparison in Haggard to Grey, 6 March 1907, no. 15, TNA, FO 420/244.

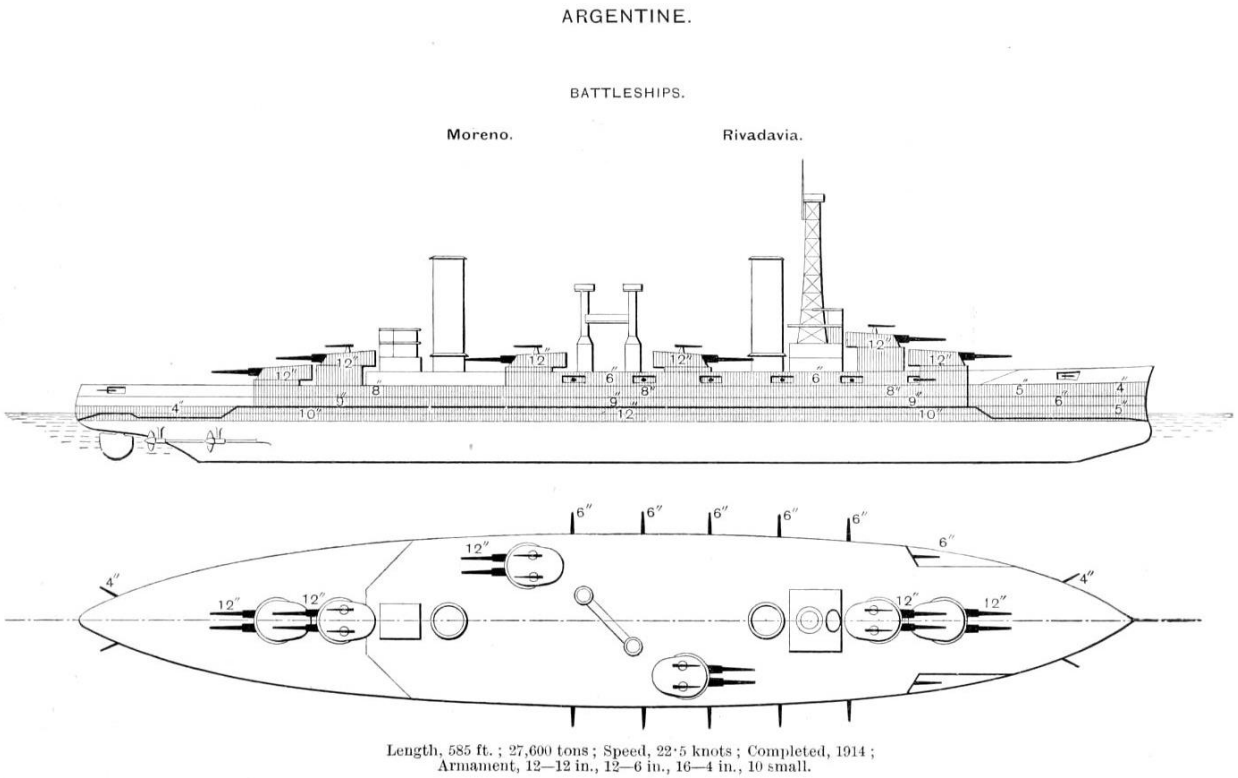
"thoughtless," by Julio Argentino Roca, the former president of Argentina—was forced to resign from his position.[398]

The failure of this scheme meant that the Argentine government quickly began the process of acquiring their own dreadnoughts. In August 1908, the country's Chamber of Deputies, the lower house in their bicameral legislature, passed a bill by a wide margin (seventy-two to thirteen) that would fund the construction of a new fleet that would include the all-important dreadnoughts and several destroyers, which would serve as escorts for the far larger dreadnoughts. The Argentine legislators took this action in the face of legislative and public opposition, which was generally against being dragged into a conflict or committing the country to spending a large chuck of their annual budget for new warships, rather than in a category like internal infrastructure (i.e. railroads). This opposition was, however, weakened with a barrage of newspaper editorials in *La Prensa*—a leading newspaper in Argentina and a loud voice in the debate—and the revival of several border disputes.[399] Still, the Argentine Senate voted down the bill in November, possibly because it had hopes that a last-ditch effort to purchase one of Brazil's dreadnoughts would finally succeed.[400] It did not, however, and the bill was approved by the Argentine Senate by a large margin on 17 December 1908.[401] It allocated $55 million to the navy, $22 million more than the amount recommended by the 1907 committee.[402] An Argentine

[398] Adelar Heinsfeld, "Falsificando telegramas: Estanislau Severo Zeballos e as relações Brasil-Argentina no início século XX," *Vestígios do passado: a história e suas fontes*, Proceedings from the IX Encontro Estadual de História of the Associação Nacional de História, Seção Rio Grande do Sul, https://www.eeh2008.anpuh-rs.org.br/resources/content/anais/1211228384_ARQUIVO_FalsificandoTelegramas.pdf. Roca's assessment of Zeballos from Haggard to Grey, 16 March 1907, no. 20, TNA, FO 420/244.
[399] Livermore, "Battleship Diplomacy," 33; Di Biassi, "Ley de Armamento Naval Nº 6283," 1–2.
[400] Livermore, "Battleship Diplomacy," 33.
[401] Di Biassi, "Ley de Armamento Naval Nº 6283," 3.
[402] "Argentina; Building Program," *Navy* (Washington) 3, no. 3 (February 1909): 38.

naval commission charged with evaluating and approving final warship designs was set up in London not long after.[403]

Figure 4.1: Line drawing of the Argentine dreadnoughts



Source: Sydney Walker Barnaby, published in John Leyland, ed., *Brassey's Naval Annual, 1915* (London: William Clowes and Sons, 1915), plate 18, via Wikimedia Commons. Public domain. https://commons.wikimedia.org/wiki/File:Rivadavia-class_battleships.jpg.

A controversial ordering process

Soon after the Argentine legislature apportioned money for naval expansion, the country's naval commission in London began soliciting tenders for two dreadnoughts and a number of destroyers and smaller warships.[404] For the dreadnoughts, the commission issued a set of vague requirements designed to encourage the companies to present the best and most modern

[403] Friedman, *British Battleship*, 151; Livermore, "Battleship Diplomacy," 33.
[404] "Argentina; Building Program," *Navy* (Washington) 3, no. 3 (February 1909): 38.

ideas they had.[405] These included a maximum cost of $10 million each, a figure which included armament, armor, and equipment; a trial displacement of at least 19,000 to 20,000 tons, the quantity of guns, and a secondary armament of "sufficient" size, which the bemused author of an article in the *New York Times* stated was a precise translation of the original Spanish used in the naval commission's call for bids. "They can hardly be called specifications at all, so general are their terms," the writer added. "The consequence is that a greater number of shipbuilding firms have come forward with bids probably than ever before took part in such a contest [*sic*]."[406]

Thirty-eight firms responded with one hundred thirty-four tenders, of which sixty-seven were for the dreadnoughts; one naval architect later estimated that the combined cost of preparing these was at least £20,000.[407] The bids, due to be opened on 8 March 1909, came from shipbuilders located in five of the eight naval powers of the world: France, Germany, Italy, the United Kingdom, and the United States.[408] With the exception of the United States, all these nations had a track record of purchases from militaries in the region. The Italians, for example, had provided all four of Argentina's armored cruisers, the cornerstone on which the Argentine government had leaned on during their naval arms race with Chile, and as a result Italian shipbuilders were reportedly anticipating that the dreadnought order would be placed with one of

[405] "Argentine's Fleet May Be Built Here," *New York Times*, 28 March 1909, 24. This story may have omitted a minimum required speed, as a separate article published about three weeks earlier stipulated that there had been a floor of 20.5 knots. "Cramps Build on Battleships," *New York Times*, 9 March 1909, 4.
[406] Ibid. The displacement figure is from "Argentina; Tenders Sought for Battleships," *Navy* (Washington) 3, no. 5 (May 1909): 29.
[407] Livermore, "Battleship Diplomacy," 35; J.H. Biles, "The Argentine Battleships," *Times* (London), 25 February 1910, 4c. From the United States, the Fore River, the Cramps, Newport News, and New York shipbuilding companies all bid, and Bethlehem Steel was seeking to build the armor and guns. "After Big Ship Contracts," *Washington Post*, 11 April 1909, 14; "Cramps Bid on Battleships," *New York Times*, 9 March 1909, 4.
[408] "Argentina; Tenders Sought for Battleships," *Navy* (Washington) 3, no. 5 (May 1909): 29; "After Big Ship Contracts," *Washington Post*, 11 April 1909, 14; "Cramps Bid on Battleships," *New York Times*, 9 March 1909, 4. The other naval powers—Austria-Hungary, Russia, and Japan, as defined by Gardiner and Gray, *Conway's 1906–21*—did not bid to construct Argentina's dreadnoughts.

their yards.[409] The Argentine Navy, however, believed that the Italian cruisers had not aged as well as comparable British warships, having had more problems since entering service.[410] In addition, most of these countries, again apart from the United States, had proved that they were willing to deploy their diplomatic representatives to obtain warship contracts for their own shipyards.[411]

As might be surmised, then, this was new territory for the Americans. Under the administration of Theodore Roosevelt, president from 1901 to 1909, the United States' government had expended little effort in seeking armament contracts from Latin American countries, providing little more than letters of introduction to competing armament firms when needed. This changed quickly under the administration of William Howard Taft, who took office in 1909 and quickly instituted a policy of so-called "dollar diplomacy" in concert with his new secretary of state, Philander C. Knox.[412] Taft characterized the shift as being part of an overdue modernization of American diplomacy and its State Department, which was responsible for international diplomacy. "It is an effort frankly directed at the increase of American trade," Taft would later tell the American legislature, based "upon the axiomatic principle that the Government of the United States shall extend all proper support to every legitimate and beneficial American enterprise abroad."[413] As part of these efforts, the State Department created a new Division of Latin American Affairs, and Taft appointed Charles Sherrill as the United States' minister to Argentina, both in 1909. Sherrill, a New York lawyer and personal friend of

[409] Grant, *Rulers*, 165–66; Livermore, "Battleship Diplomacy," 34; "Argentina; Tenders Sought for Battleships," *Navy* (Washington), 29.
[410] Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247.
[411] Livermore, "Battleship Diplomacy," 34–35.
[412] Ibid., 34, 39.
[413] 49 Cong. Rec. S9 (3 December 1912).

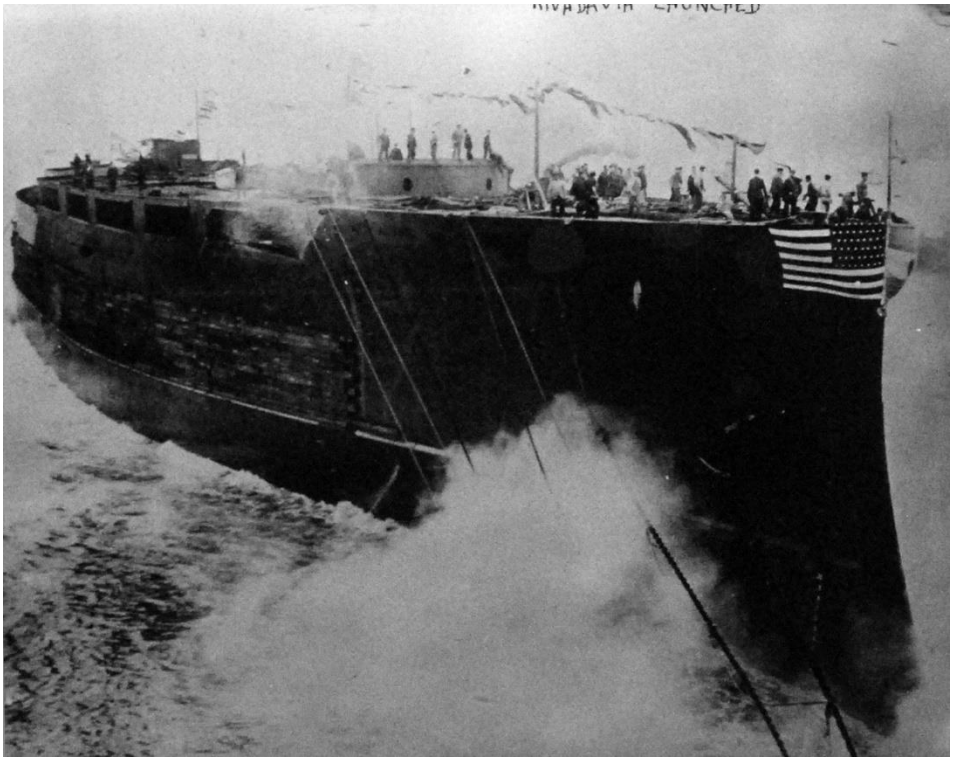
Taft's, was explicitly charged with bringing the contracts to a United States shipbuilder.[414] While the policy was targeted at South America and East Asia, American representatives in countries as far afield as Spain, Russia, Turkey, Greece, and China were involved in attempts to steer contracts for naval armament to shipbuilders in the United States during this time.[415]

Despite this new-found diplomatic assistance, provided without cost, the American shipbuilders involved in the competition remained skeptical that they would be able to beat out the European firms and win the contracts.[416] For one, the European diplomats in the country were not resting on their laurels; promoting the commercial enterprises of one's own country, including France and especially Germany, was part of the job.[417] "The political influence of foreign powers is being exerted in a very forceful manner," the head of the Newport News Shipbuilding and Drydock Company wrote several months after Taft's inauguration to Ormsby McHarg, the assistant secretary at the United States' Department of Commerce and Labor. He protested that American shipbuilders would be given "little consideration" if the government was unwilling to "exert powerful influence," as the Italians, Germany, and British were already making good use of their own diplomatic and political pressure points.[418] Haggard, and later Townley, the British ministers to Argentina, were two of those envoys exerting influence. In a meeting with Zeballos in April 1907, for example, Townley quietly reminded the Argentine politician that their predecessors had met in the preceding August, and that the former foreign minister had given his word that the largest two ships planned would "certainly be ordered in

[414] Livermore, "Battleship Diplomacy," 34–35, 35n24.
[415] Seward Livermore, "The American Navy as a Factor in World Politics, 1903–1913," *American Historical Review* 63, no. 4 (1958): 875–876n64.
[416] Livermore, "Battleship Diplomacy," 35.
[417] Stevenson, *Armaments and the Coming of War*, 38; Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247.
[418] Livermore, "Battleship Diplomacy," 35.

England" should the naval program be funded.[419] Meanwhile, the German government was allegedly offering shipyards in its country a fifteen percent bonus so that they could underbid the other competitors and get the contract.[420]

Figure 4.2: *Rivadavia*'s launch, 26 August 1911



Source: Library of Congress via Wikimedia Commons. Public domain. https://commons.wikimedia.org/wiki/File:ARA_Rivadavia_launch.jpg.

Diplomats were not the only obstacle to the United States, as resistance to them from within Argentina was "formidable," as Livermore would later write: "The naval commission was pro-British; the vice-president of the republic, Roque Sáenz Peña, favored Italy, where he had been the Argentine envoy for many years; and the minister of war wanted the contracts to go to Germany, so as to standardize the military and naval equipment of the country." They were not

[419] Townley to Grey, 11 April 1907, no. 21, TNA, FO 420/244.
[420] "Warship Rumor Denied," *New-York Tribune*, 2 June 1911, 1.

the only Argentine politicians and officials predisposed to one side: early in the process, the Argentine minister of marine actively sought to and successfully disqualified American shipbuilders from the contract competition, a maneuver that was reversed only after Sherrill's fierce opposition.[421]

Finally, all the shipbuilders—not just American—were challenged by the wholly unexpected Argentine decision to change their required dreadnought specifications, thereby moving the goalposts, in early October 1909.[422] Publicly, the decision was prompted by the emergence of details on the new 'super-dreadnought' type, heralded by the British *Orion*. However, as a reporter for the *New York Times* added, it was also a happy aftereffect of the initial requirements even though the Argentine naval commission had been "very much at sea as to just what they really want."[423] The nebulous specifications had enticed the constructors into proposing some of their newest and even secret features, including the United States Navy's brand-new and still secret fire control and torpedo arrangements—an action which later proved controversial.[424]

Unfortunately for the shipbuilders, in addition to seeking super-dreadnoughts, the commission took what they viewed as the best features found on the submitted bids—including cage masts and a main battery with both superfiring and wing turrets—and recast their specifications around those. They then sent these back to all the shipbuilders, no matter how

[421] Livermore, "Battleship Diplomacy," 36.
[422] Friedman, *British Battleship*, 152; Livermore, "Battleship Diplomacy," 37.
[423] "Argentina's Plans Changed; Now Wants Bids for Vessels Equal to Super-Dreadnoughts," *New York Times*, 5 December 1909, 27.
[424] Livermore, "Battleship Diplomacy," 35; "Knox and Meyer Reply; Defend Their Action in Connection with Argentine Warships," *New-York Tribune*, 6 April 1911, 5.

unique the features had been.[425] New bids were due quickly, as they were opened by November at the latest.[426]

Finally, the commission took these new tenders, having been enlarged by several thousand tons to meet the super-dreadnought requirement, and proceeded to again call for new designs based on the best features of those already received.[427] Details on what happened next are difficult to tell apart, but Townley, the British minister to Argentina, stated that these new specifications were given to six of the bidding firms: Armstrong and Vickers from the United Kingdom, Fore River from the United States, Ansaldo from Italy, Forges and Chantiers from France, and Blohm and Voss from Germany. Each were asked how fast they would be able to build such a ship, measuring in at 27,500 tons and not to cost more than £2.2 million.[428] Fore River, which had consistently submitted the lowest bids, asserted that they would be able to build such a ship in twenty-four months; Armstrong stated that they would need both more money and at least an additional nine months.[429]

When the British learned of this development, they immediately pressed the naval commission to allow Armstrong to lower its bid by $570,000, bringing it below Fore River. Sherrill immediately cabled home with what Livermore described as an "anguished appeal" to the State Department to find a way around this "chicanery," and the Division of Latin American Affairs responded with a list of six points which Sherrill could bring to the Argentines. These included a mix of prestige-based declarations and tangible action items, such as funds for the Pan

[425] Friedman, *British Battleship*, 152; Livermore, "Battleship Diplomacy," 37.
[426] Argentina's Plans Changed; Now Wants Bids for Vessels Equal to Super-Dreadnoughts," *New York Times*, 5 December 1909, 27
[427] Friedman, *British Battleship*, 152.
[428] Townley to Grey, "Argentine Republic: Annual Report, 1909," 29 January 1910, TNA, FO 118/292, 11. Other sources report on individual tenders submitted by the shipbuilders, and the six firms above are assumed from: Philip Alger, "Professional Notes," *Proceedings of the United States Naval Institute* 36, no. 2 (1910): 595.
[429] Townley to Grey, "Argentine Republic: Annual Report, 1909," 29 January 1910, TNA, FO 118/292, 11.

American Conference of 1910, due to be held in Buenos Aires, and the State Department's official discouragement of any Brazilian or Uruguayan questions over the jurisdiction of the River Plate. These successfully convinced enough of the Argentine Naval Commission to give the contract to Fore River on a vote of 7–6 on 21 January 1910, with the deciding vote being cast by the minister of marine.[430] As agreed upon by Fore River and the New York Shipbuilding Company prior to any bids being opened, one dreadnought was subcontracted to the latter.[431] The news of the dreadnought contract's destination evidently leaked to the papers before the winners were officially announced and notified, as the head of New York Shipbuilding was exceedingly cautious in response to questions from a *New York Times* correspondent. "If correct," he said, "it is the greatest testimony to American shipbuilders, seeing that all the famous yards of the world are competing for the business."[432] The destroyer contracts had previously been split between France, Germany, and the United Kingdom to soften any political and diplomatic fallout.[433]

The shenanigans surrounding the dreadnought bidding process infuriated the shipbuilders involved.[434] John H. Biles, a well-regarded British professor of naval architecture at Glasgow University who was a former Admiralty and commercial naval architect, wrote a letter to the editor of the *Times* to express his contempt for the way this process had been conducted:[435]

> We may assume that the British battleships embody good ideas and good practice—in all probability the very best. These cannot fail, in a greater or less degree, to become part of the design which the British shipbuilder first submits to the Argentine Government. In the second inquiry it may be presumed that everything that was good in the first proposals had been seized upon by the Argentine authorities and asked for in the new design. This second request went not only to British builders but to all the builders of the world, and in this way it is exceedingly probable that a serious leakage of ideas and practice of our

[430] Livermore, "Battleship Diplomacy," 38.
[431] "Warship Rumor Denied," *New-York Tribune*, 2 June 1911, 1–2. Specifically, the two "ran in couples," meaning that if one company got the contract, the other would build one of two dreadnoughts.
[432] "America to Build Argentine Ships," *New York Times*, 23 January 1910, 20.
[433] Townley to Grey, "Argentine Republic: Annual Report, 1909," 29 January 1910, TNA, FO 118/292, 11.
[434] Friedman, *British Battleship*, 152; Scheina, *Latin America*, 83–84.
[435] On Biles' credentials, see "The Late Sir John Biles," *Engineering* 136 (3 November 1933): 488.

> ships was disseminated through the world by the Argentine government. The British builders, in replying to this second inquiry, would, in all probability, point out that some of the things are impractical, or have been tried and found undesirable in the British Navy, and the Argentine authorities would be informed on additional matters which have come under the builders' knowledge by their acquaintance with British practice.
>
> The third inquiry that was issued showed to all the builders of the world what has been eliminated or modified in the second inquiry; and so the process of leakage went merrily on, and with it that of the education of foreign builders and the Argentine government.[436]

Biles additionally decried the "cheap and pleasant method of education" the "generosity" of the shipbuilders had given the Argentine government and estimated that the final cost of putting all the bids together was a combined £80,000–100,000. It is perhaps notable, however, that Biles only sent his letter after Fore River won the contract.[437]

Townley was frustrated by the decision, which he attributed to Sherrill's exuberance in bringing the contract to the United States. "Hardly a day passed that he did not find some excuse to go to the Government House and press the claims of his countrymen," Townley wrote, adding:

> There is good reason to believe that the American Minister resorted to every sort of political pressure, and that a promise was given that if the ships were built in the United States Brazil should give no trouble until they have been delivered. It is hard to say what Argentina will do with these big ships when she gets them, as she has no port into which she can take them, and even were the money forthcoming for the construction of a new port, or for the enlargement of an old one, there would hardly be time for such works to be completed before the ships are delivered, if the two years limit is strictly adhered to. British naval constructors say that it is quite impossible that the ships can be ready in the time.[438]

British media outlets joined in crediting American diplomacy, calling it "a triumph of the Pan-American idea."[439] Sherill carefully guarded his achievement, writing Fore River's president to admonish him for not giving credit to the State Department in media interviews he had given. On

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[436] J.H. Biles, "The Argentine Battleships," *Times* (London), 25 February 1910, 4c.
[437] Ibid.
[438] Townley to Grey, "Argentine Republic: Annual Report, 1909," 29 January 1910, TNA, FO 118/292, 11.
[439] "Contract Due to Diplomacy; English Press So Explains Argentina's Award to Americans," *New York Times*, 24 January 1910, 1. See also "The Argentine Dreadnought Contracts," *Times* (London), 24 January 1910, 5d.

the other hand, Charles Schwab, whose Bethlehem Steel would be supplying the armament and armor for the dreadnoughts, wrote to the secretary of statement with profuse thanks. "We are glad to say that our success is due entirely to the great interest manifest by your Department," Schwab wrote. "It is, to my mind, the best step ever made towards the further development of America's commercial relations with foreign countries."[440]

The British were not the only ones annoyed at the Argentine government's decision. The Italian government declared that it would no longer send a naval squadron to commemorate Argentina's centennial celebrations, and German press outlets would later charge Fore River with corporate espionage, believing that they had been able to see the bids from opposing shipbuilders and tailor their own to suit, and the American government with secretly guaranteeing to defend Argentina until the battleships were completed.[441] This last point had some basis in fact. Prior to the dreadnought contract being awarded, Sherill had indeed been asked by Argentina's foreign minister if the United States would join Argentina should it find itself in a war with one of its neighboring countries. Sherill replied that he could offer no guarantees about formal support, but that their new capital ships being under construction in the United States would "tend to restrain any power desirous of our friendship from making war upon Argentina during the time of the construction of these vessels in American yards."[442]

The dreadnought sale raised hackles in the United States' domestic politics as well. Robert M. La Follette, a senator from Wisconsin, championed two resolutions in February 1911. One would require the release of all the Argentine dreadnought-related communiques which had

[440] Livermore, "Battleship Diplomacy," 39.
[441] "Argentine Navy; Dreadnought Orders, Why They Went to America," *Evening Post* (Wellington), 23 March 1910, 4; "Accuse America of Unfair Competition," *New York Times*, 26 November 1911, C4.
[442] Livermore, "Battleship Diplomacy," 36–37.

involved the state department, including those passed between it and the Argentine government. The other demanded that the United States' navy department furnish the same information, along with answering several questions about the extent of any aid given to the design and construction of the Argentine dreadnoughts.[443] Both passed, but over the objections of La Follette the resolution targeting the state department was amended on a vote of 44–28 to give the department discretion over releasing the correspondence.[444] The two secretaries of these departments responded in April, stating that their diplomatic and technical support was furnished as part of the Dollar Diplomacy policy instituted in 1909. "It was apparent that if the American competitors in the shipbuilding trade were to offer bids on a footing of equality with their foreign rivals," George von Lengerke Meyer, Taft's secretary of the navy, said, "it was essential that they receive from their government the same assistance and support as that which the great ordnance manufacturers of Europe obtain from their governments."[445] Knox, the secretary of state, took full advantage of the resolution as amended and refused to release any of the communications from his department, fearing possible detrimental effects on relations between the two countries or to American shipbuilders.[446] The navy department was given no such leeway, and the report it gave to the Senate was entered into and published in the *Congressional Record*. It included a lengthy list of the naval technologies given to the Argentine Navy since 1907 and a declaration that the United States Navy would indeed be installing a fire control system on the Argentine dreadnoughts.[447]

[443] 46 Cong. Rec. S3519 (27 February 1911); "Has Argentina Our Plans? Senate Demands Information from State and Navy Departments," *New York Times*, 28 February 1911, 1.
[444] 46 Cong. Rec. S3519–20 (27 February 1911); "Cultivating Argentina's Friendship," *Christian Science Monitor*, 1 March 1911, 24. Specifically, the amendment directed that the department hand over the material only if it was "not incompatible with the public interest."
[445] "Knox and Meyer Reply," *New-York Tribune*, 6 April 1911, 5.
[446] 47 Cong. Rec., S47 (5 April 1911).
[447] 47 Cong. Rec., S46–50 (5 April 1911).

Outside the political and diplomatic realms, press in the United Kingdom and its Commonwealth were surprised that British shipbuilders lost out on the dreadnoughts. As the *Evening Standard* of London put it, the United Kingdom was "Argentina's greatest creditor and greatest client and had a right to expect the naval contract."[448] Indeed, in 1909, Argentina's trade balance with the United Kingdom was $500 million, while its equivalent figure with the United States was a mere $22.573 million.[449] However, the United States possessed a decisive advantage over the British: the secretary of the Argentine Naval Commission would later credit the "manipulations of the Steel Trust" as being able to produce steel at a far lower price than comparable British steel mills despite higher labor costs.[450] This meant that Fore River had large advantages in both the basic building material used to construct a dreadnought and the expensive and thick armor plating it needed to survive in combat.[451] Specifically, this disparity allowed Fore River to submit a bid that was more than £7 cheaper per ton than the next closest tender and exactly £8 lower per ton than the British, representing a nearly ten percent cost advantage.[452] There were also allegations from several sources that Fore River offered such a low contract price because the shipyard was short on work and in need of a large contract which could help keep it open and its staff employed. This was, however, not the case, as the yard launched fifty-three ships between 1905 and 1910 and had "a lucrative and very diversified shipbuilding

[448] Livermore, "Battleship Diplomacy," 39.
[449] Ibid., 37n41.
[450] John Leyland, "Foreign Navies," in *The Naval Annual*, ed. T.A. Brassey (London: J. Griffin and Co., 1911), 46. Similarly, "one firm in England" alleged that Fore River obtained the contract because there were "powerful rings" in the United States capable of controlling and manipulating the supply of guns and armor available to shipbuilders. "A New Battle-ship," *Outlook* 105 (11 October 1913): 297–98.
[451] "Warship Rumor Denied," *New-York Tribune*, 2 June 1911, 1.
[452] Leyland, "Foreign Navies," in Brassey, *The Naval Annual*, 45–46; "Argentine Navy; Dreadnought Orders, Why They Went to America," *Evening Post* (Wellington), 23 March 1910, 4; Philip Alger, "Professional Notes," *Proceedings of the United States Naval Institute* 36, no. 2 (1910): 595. In all, the cost per ton was given by *The Naval Annual* and *Proceedings* as being American, £78.3; Italian, £85.9; British, £86.3; French, £87.4; German, £88.2.

operation," according to a history of the shipyard.[453] This included building steam turbines, something which would later cause them much trouble prior to the delivery of the Argentine dreadnoughts.[454]

Construction and trials of the Argentine dreadnoughts

Construction on the two dreadnoughts, which would be named *Rivadavia* and *Moreno* after two political figures from Argentine history, started several months after the contract was awarded.[455] *Rivadavia*, being constructed by Fore River in Quincy, Massachusetts, was laid down on 25 May 1910 and launched on 26 August 1911.[456] The launching ceremony was filmed by the Edison Company and, like *Minas Geraes*, full of pageantry.[457] *Rivadavia*, weighing in at a bit under eleven thousand tons, was decorated with flags and bunting in the national colors of Argentina (blue and white), and the ship was sponsored by Rosa Isidora González Delgado, the wife of the Argentine president Roque Sáenz Peña. As Delgado did not make the trip, the wife of the Argentine minister to the United States served as her proxy and shattered the traditional bottle of champagne over *Rivadavia*'s bow. Among the one thousand people in attendance at the event were representatives from the Argentine Navy and the country's diplomatic contingent to

[453] Anthony F. Sarcone and Lawrence S. Rines, *A History of Shipbuilding at Fore River* (Quincy, Massachusetts: Quincy Junior College, Department of History, 1975?), http://thomascranelibrary.org/shipbuildingheritage/history.htm; Livermore, "Battleship Diplomacy," 39; "Argentine Navy; Dreadnought Orders, Why They Went to America," *Evening Post* (Wellington), 23 March 1910, 4.
[454] "Great Argentine Warship Disabled," *Philadelphia Inquirer*, 3 November 1914, 12; "New Battleship Disabled," *New York Times*, 3 November 1914, 18.
[455] "Keel for Dreadnought Laid," *Washington Post*, 26 May 1910, 5; "Largest Warship Afloat," *New-York Tribune*, 24 September 1911, 5; "Argentine Ship Named for First Constitutional Ruler," *Christian Science Monitor*, 26 March 1914, 8."
[456] Scheina, "Argentina," in Gardiner and Grey, *Conway's 1906–21*, 401; "Biggest Battleship Afloat," *New York Times*, 24 August 1911, 6.
[457] *Catalogue of Copyright Entries, Part 4: […] Photographs; Prints and Pictorial Illustrations* (Washington: Government Printing Office, 1911), 26495. The short film was released on 18 October 1911. See also "The Launching of the Battleship Rivadavia, Quincy, Mass., Aug. 26, 1911," Internet Movie Database, https://www.imdb.com/title/tt1067193/, which includes a synopsis from *Moving Picture World*.

the United States, and they stood alongside many American government and industry officials, including the assistant chief of the State Department's Division of Latin-American Affairs, officers from the United States Navy, political figures from both the national and state legislatures, the president of Cramps Shipbuilding, and Charles Schwab from Bethlehem Steel.[458]

The actual launch of the hull sliding into the water was delayed by nearly one and a half hours, as according to the *New York Times*, "more and heavier blocking had been built around the massive hull than in the case of any vessel previously launched at the Fore River yards, and the builders failed to realize how long it would take to remove it."[459] To stop the ship once it made it into the water, they employed twenty-four thousand pounds of nine-inch manila cable, and they ended up breaking all of them in the span of about ten seconds; the ship came to a halt some ten feet beyond the final stop.[460] Finally, the company hosted a dinner with the listed speakers including Onofre Betbeder, head of the Argentine naval commission; Captain Aguirre of the Argentine Navy; Francis T. Bowles, Fore River's president; William T. Shea, mayor of Quincy, Massachusetts; and James Michael Curley, a member of the House of Representatives in Massachusetts' tenth congressional district.[461] Taft, the president of the United States, cabled the Argentine minister to his country to convey his congratulations and his "hope" that Argentina will find their new dreadnought "useful only for the peace she insures and never in hostile engagement."[462]

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[458] "Launch Rivadavia, Biggest Battleship," *New York Times*, 27 August 1911, 7; "Launch Argentina's Big Battleship at Yard on Fore River," *Christian Science Monitor*, 26 August 1911, 1; "Giant Ship Launched," *Washington Post*, 27 August 1911, 5; Associated Press, "World's Biggest Battleship is Christened," *Pittsburgh Gazette Times*, 27 August 1911, 3.
[459] "Launch Rivadavia, Biggest Battleship," *New York Times*, 27 August 1911, 7.
[460] "Latest Dreadnoughts for South American Republics," *International Marine Engineering* 17, no. 1 (1 January 1912): 21.
[461] "Launch Argentina's Big Battleship at Yard on Fore River," *Christian Science Monitor*, 26 August 1911, 1. Fore River Shipbuilding was located in Quincy.
[462] "Big Warship Launched," *New-York Tribune*, 27 August 1911, 14.

Figure 4.3: An Argentine dreadnought under construction, 2 December 1912

Source: George Grantham Bain collection, Library of Congress. Public domain. https://hdl.loc.gov/loc.pnp/ggbain.11004.

Neither *Rivadavia* or *Moreno* came anywhere near the guaranteed delivery time of twenty-four months, as delays with both ship's Bethlehem-made guns and problems with their turbine propulsion significantly delayed their completion. By March 1913, a full ten months after the ships were supposed to be completed, only six of *Rivadavia*'s twelve guns had been delivered to the shipyard. Even though the ship was otherwise ninety-seven percent complete, this delay meant that the turrets meant to hold the guns were also behind schedule, and *Rivadavia* was consequently not expected to undergo trials until the middle of 1913, nor be completed and handed over to the Argentine Navy before 1914. *Moreno* was suffering from similar delays.[463]

Rivadavia's main armament was mostly fitted by the end of June 1913.[464] It finally put to sea in August when it sailed from the Fore River shipyard for New York's Brooklyn Navy Yard, where it would be docked at the United States Navy facility's drydock so that its bottom could be scraped and painted.[465] It was, however, then towed into the city by eight tugs, leading to rumors that it had stripped a turbine.[466] This issue proved minor enough that the ship could be repaired with only a two-week delay for its speed trials on 14–16 September, which would test the ship's ability to make a contractually guaranteed 22.5 knots. *Rivadavia* did so, traveling at a maximum of 22.567 knots over the United States Navy's official measured mile off Rockland, Maine. This speed made it the fastest battleship built in the United States, exceeding that of *Wyoming* by

[463] "Rivadavia is to Have Her Trial Trip This Summer," *Christian Science Monitor*, 19 March 1913, 1; "Delays Argentine Warship," *Philadelphia Inquirer*, 23 March 1913, 5; "Dreadnoughts' Trials in May," *Christian Science Monitor*, 9 January 1913, 10. A Bethlehem representative stated to the *Philadelphia Inquirer* that they had obtained a twelve-month contract extension and were "therefore not behind in deliveries." They claimed that any delays were "chargeable to the Argentine government," and that almost all the contracted guns had been sent to the shipyard.
[464] "Work on Argentine Warship Rushed," *Christian Science Monitor*, 30 June 1913, 1.
[465] "Argentine Ship to Make First Cruise," *Christian Science Monitor*, 2 August 1913, 10; "Rivadavia to go into U.S. Dock," *Christian Science Monitor*, 6 August 1913, 5.
[466] "Rivadavia Towed Here," *New-York Tribune*, 8 August 1913, 4.

about half a knot.[467] This was a prestigious-sounding honor which excited the constructors and inspired press headlines, but the speed had previously been exceeded in capital ships abroad. In addition, newspapers expected that the ship would undergo gun, endurance, and economy trials starting on the following day.[468] These were, however, halted to make a fix to the boilers in *Rivadavia*'s starboard turbine, as it was producing too much pressure when the ship traveled at high speeds.[469] This was a recurrence of the problem which had caused it to be towed into New York, and the ship was originally expected to head back out to sea after only a few days of repairs, though this was quickly revised in subsequent reporting to about a month.[470]

The endurance run was, however, not accomplished for several months.[471] In late December, the trials were delayed once more for what the *Christian Science Monitor* bluntly called the "inability of her builders to make her ready in time for today's high tide."[472] This time, there was an issue with the center turbine which reportedly required only simple and quick repairs, yet the trials were delayed yet another time in mid-January, implying that the problem was more serious than originally thought.[473]

It was only in February and March 1914 that the endurance and gun trials were completed. The ship departed Boston on 3 or 4 February for ten days of endurance trials, which

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[467] "The New Argentine Dreadnought 'Rivadavia'," *Scientific American* 109, no. 14 (4 October 1913): 253; "Rivadavia is Coaling," *Christian Science Monitor*, 25 August 1913, 9; "Trial Runs by Rivadavia," *Washington Post*, 15 September 1913, 3; "22.48 Knots for Rivadavia," *New York Times*, 16 September 1913, 12; "Big Rivadavia Speedy," *Washington Post*, 17 September 1913, 4; "Argentine Warship Makes 22.56 Knots," *New York Times*, 17 September 1913, 2; "Rivadavia Makes Required Speed on Mile Course," *Christian Science Monitor*, 17 September 1913, 4. For the two-week delay, see "Accident to Rivadavia," *New York Times*, 19 September 1913, 1.
[468] "Argentine Warship Makes 22.56 Knots," *New York Times*, 17 September 1913, 2; "Rivadavia is in Harbor to Take Gun Trials Next," *Christian Science Monitor*, 18 September 1913, 1.
[469] "Dreadnought Trial is Off," *Philadelphia Inquirer*, 21 September 1913, 2.
[470] "Accident to Rivadavia," *New York Times*, 19 September 1913, 1; "Dreadnought Trial is Off," *Philadelphia Inquirer*, 21 September 1913, 2.
[471] "Rivadavia to be in Boston Harbor 3 Days Next Week," *Christian Science Monitor*, 23 December 1913, 1.
[472] "Rivadavia Not Ready for Tide," *Christian Science Monitor*, 29 December 1913, 1.
[473] "Defect Delays Rivadavia," Washington Post, 30 December 1913, 9; "Rivadavia Trials Against Off," *Christian Science Monitor*, 12 January 1914, 1.

were successfully run at twenty knots for thirty hours.[474] On 17 February, the ship was coaled up for an economy run, testing the ship's fuel consumption when running at fifteen knots, and in March hit a 22.56-knot top speed once more.[475] *Rivadavia*'s gun trials, like those of *Minas Geraes* several years earlier, granted the Argentine ship the record for heaviest broadside ever fired from a warship.[476]

The trials were completed by the middle of March, at which time the Argentine government preliminarily accepted the ship; the ship reportedly only required two to three months of minor finishing work.[477] By the end of June, the families of two Argentine naval officers overseeing *Rivadavia*'s construction departed for home in the expectation that the officers would be heading home soon on the dreadnought.[478] Around the same time, the ship was expected to depart Boston in the following month for a final trial trip before docking in the Charlestown Navy Yard, where it would pick up its Argentine crew.[479] There was, however, yet another delay, this one to the end of August.[480] On 10 August, nine hundred officers and seamen of the Argentine Navy boarded two transport ships, bound for Massachusetts.[481] They reached the navy yard within two weeks, shortly before the official handover ceremony from Fore River to the Argentine Navy was to occur.[482] This was briefly delayed when it was discovered that

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[474] "Rivadavia Coaling at South Boston Dock; New Battleship Starts on her Trials Tuesday," *Christian Science Monitor*, 30 January 1914, 1; "Rivadavia Leaves for Trial," *Christian Science Monitor,* 4 February 1914, 4; "Rivadavia Coals for Another Test," *Christian Science Monitor,* 17 February 1914, 1. The date is uncertain because the *Christian Science Monitor*'s 4 February blurb says that the ship left "just before noon today," but does not specify when "today" was.
[475] "Rivadavia Coals for Another Test," *Christian Science Monitor,* 17 February 1914, 1; "Rivadavia Speed Satisfactory on Offcoast Trials," *Christian Science Monitor,* 11 March 1914, 17.
[476] "Ship Fires 18-Gun Volley; Rivadavia's Broadside Heaviest Ever Discharged by Dreadnought," *Christian Science Monitor*¸ 23 March 1914, 3.
[477] Ibid.; "Rivadavia Back at Quincy After Passing Tests," *Christian Science Monitor,* 16 March 1914, 9.
[478] "Argentine Families go Home," *Christian Science Monitor,* 27 June 1914, 20.
[479] "Final Work is Being Done Upon the Rivadavia," *Christian Science Monitor,* 24 June 1914, 10.
[480] "Argentina to Take Rivadavia," *Christian Science Monitor,* 4 August 1914, 4.
[481] "Crew to Man Rivadavia," *Christian Science Monitor,* 11 August 1914, 4.
[482] "Argentina to Take Over New Dreadnought," *Christian Science Monitor,* 24 August 1914, 5.

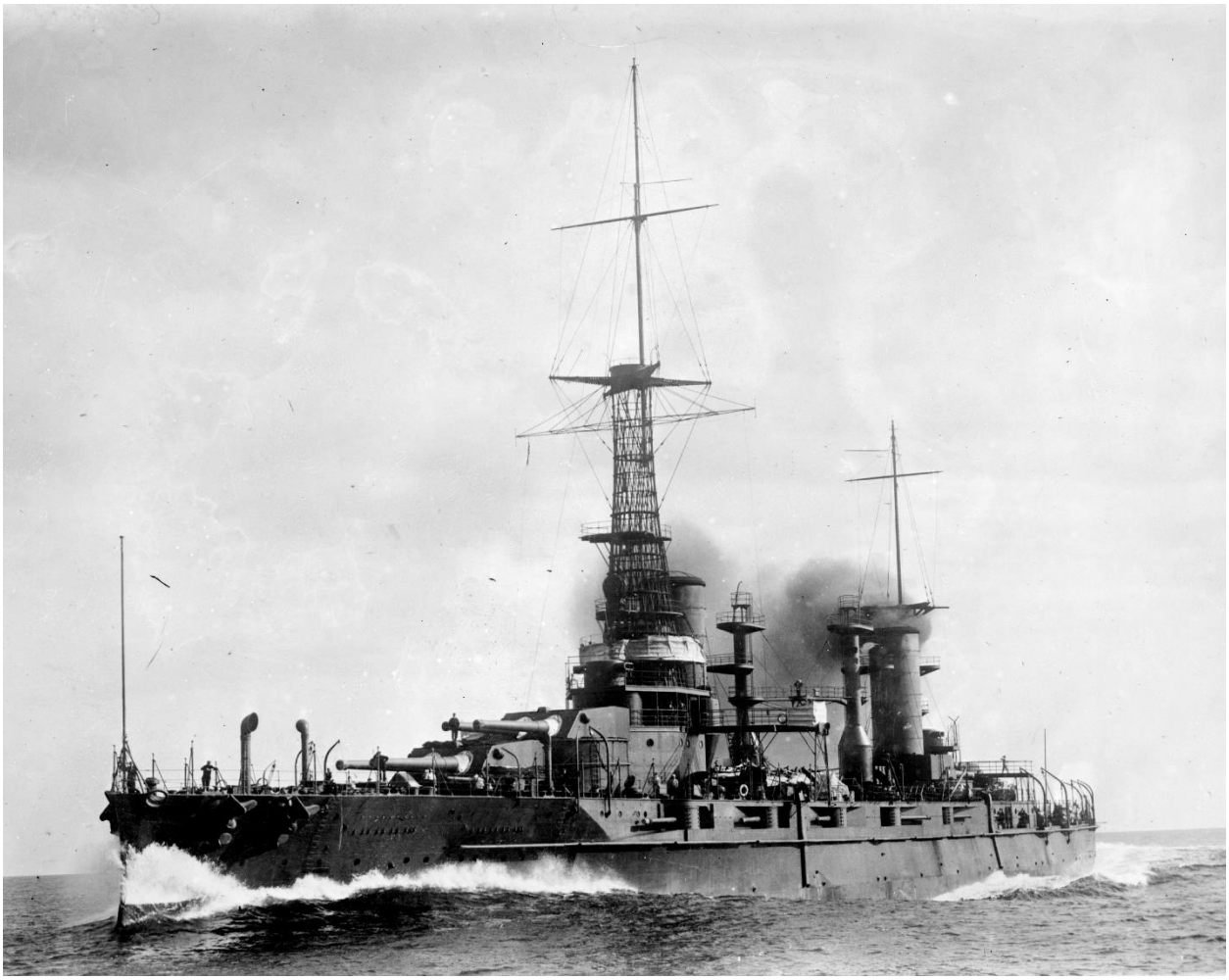
there was yet another problem with the starboard turbine and its forty-ton casing, which had been damaged in July after being dropped ten feet by a crane.[483] The Argentines evidently decided to move ahead nonetheless, however, as the ship was commissioned on 27 August to an audience of six hundred Argentine naval personnel.[484] After the turbine was repaired, the ship left Massachusetts in November, bound for New York where its bottom would once again be scraped and painted.[485] On 21 December, more than three years after the ship had been launched, *Rivadavia* finally departed for Argentina.[486] It arrived there in January 1915.[487]

Moreno was subjected to similarly lengthy delays as its sister ship. The dreadnought, being constructed by New York Shipbuilding in Camden, New Jersey, was laid down on 10 July 1910 and launched on 23 September 1911.[488] The launching ceremony hit many of the same points as *Rivadavia*'s. It was sponsored by Josefa Julia María Bouquet Roldán, the wife of José Figueroa Alcorta, the previous president of Argentina, although she did not attend the launch and was represented by Isabel Betbeder, the wife of the head of the Argentine Naval Commission. Other Argentine and American representatives, again from the government, military, and industry of both countries, were in attendance as well. *Moreno* was approximately seventy percent complete and weighed 12,500 tons at launch; a full 13 tons of tallow were required to

[483] "The Rivadavia Delayed," *New York Times*, 27 August 1914, 7; "Dockyard Notes," *The Engineer* 118 (31 July 1914): 132.
[484] "Argentina's Ship Ready," *New York Times*, 28 August 1914, 7.
[485] "Navy Yard Men Join in Farewell to the Rivadavia," *Christian Science Monitor*, 14 November 1914, 6; "Rivadavia Going into Dry Dock Here," *New York Times*, 27 November 1914, 10; "Rivadavia Docks at Brooklyn," *Christian Science Monitor*, 30 November 1914, 10.
[486] "Gigantic Battleship Sails," *Washington Post*, 22 December 1914, 4.
[487] "Lauds U.S.-Built Warships," *Washington Post*, 22 January 1915, 10.
[488] Scheina, "Argentina," in Gardiner and Grey, *Conway's 1906–21*, 401; "Argentine's Great Battleship is Off," *Philadelphia Inquirer*, 24 September 1911, 8.

grease the ways and help ease the ship into the water. After the event ended, various dignitaries were invited to a New York Shipbuilding-hosted luncheon in New York City.[489]

Figure 4.4: *Rivadavia*, probably on its trials, c. 1913–14



Source: George Grantham Bain collection, Library of Congress. Public domain. https://hdl.loc.gov/loc.pnp/ggbain.14781.

Like *Rivadavia*, Bowles, the president of Fore River, stated in January 1913 that *Moreno*'s trials would not be run until at least mid-1913, having faced delays in getting the guns

[489] "Moreno Launched for Argentine Navy," *New York Times*, 24 September 1911, 12; "Argentine's Great Battleship is Off," *Philadelphia Inquirer*, 24 September 1911, 8; "Largest Warship Afloat," *New-York Tribune*, 24 September 1911, 5; "Giant Ship Launched," *Washington Post*, 24 September 1911, 10; Associated Press, "Greatest Ship is the Moreno," *Los Angeles Times*, 24 September 1911, I9.

delivered from Bethlehem.[490] Construction lagged behind *Rivadavia*, however, and the ship's trials were delayed until October 1914.[491] Late that month, the ship sailed for the Brooklyn Naval Yard for a pre-trials bottom scraping and painting, even though its interior was only partly furnished.[492] During the time it was docked, a reporter for the *New York Times* toured the ship and wrote an entire article about the ship's bar, which openly served alcohol. They called it "the cutest little bar on any of the seven seas."[493] *Moreno* set out for trial runs off Rockland, Maine, on 25 October, but on 2 November news reports emerged that painted a picture of severe engine trouble:

> Men who were aboard the big battleship state that engine trouble was experienced almost from the beginning of the trip. First the port engine went bad and repairs to this were made while at sea. The starboard engine caused a day's delay. No sooner had this been repaired and made ready for the speed trial than the centre engine broke down completely. Efforts to put the big turbine back in commission failed and a quick run for the coast was made.[494]

Worryingly, despite New York Shipbuilding president Samuel Knox's assurance that the problems were not serious and that the ship had slowly proceeded to Fore River only because that was the company which built the turbines, the observers sent aboard by the company to observe the trials were instructed to proceed home via train while the "crippled" ship, using the descriptor in the *New York Times*, remained in Quincy.[495]

Fortunately for Fore River and New York Shipbuilding, the repairs did prove manageable. A few days after the propulsion failure, the ship went out for gun trials, an activity

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[490] "Dreadnoughts' Trials in May," *Christian Science Monitor*, 9 January 1913, 10; "Delays Argentine Warship," *Philadelphia Inquirer*, 23 March 1913, 5.
[491] "Warship Ready for Trials," *Christian Science Monitor*, 8 October 1914, 5.
[492] "Argentine Fighter Sails on Trial Trip," *Philadelphia Inquirer*, 16 October 1914, 3; "Argentine Warship No Dry Territory," *New York Times*, 26 October 1914, 11, "Fire Fighter for Argentina," *Philadelphia Inquirer*, 20 October 1914, 18; "Great Argentine Warship Disabled," *Philadelphia Inquirer*, 3 November 1914, 12.
[493] "Argentine Warship No Dry Territory," *New York Times*, 26 October 1914, 11.
[494] "Great Argentine Warship Disabled," *Philadelphia Inquirer*, 3 November 1914, 12.
[495] Ibid.; "New Battleship Disabled," *New York Times*, 3 November 1914, 18.

which did not require fast steaming.[496] By 16 November, the ship left Quincy once more for additional trials before traveling back to Camden for finishing work and minor repairs. At this time, the shipyard expected that the Argentine government would be able to take over the ship in about three months.[497] This might have proven accurate but for a dispute over who should pay for the year-long delay in delivering the warships. Blame for this went to both the Argentine government and New York Shipbuilding, depending on the specific issue, and according to the *New York Times*, "the contractors have been unwilling to make the delivery until some method of settling the claims … has been devised." Franklin Delano Roosevelt, the American assistant secretary of the navy and future president, served as a mediator in the dispute.[498] This was successfully resolved on 20 February 1915, on which date New York Shipbuilding officially handed control of the ship to the Argentine Navy.[499]

In late February and early March, *Moreno* was supposed to represent Argentina at the official opening of the Panama Canal, one of only a few foreign nations planning to take part now that the First World War had broken out in Europe.[500] The celebration was, however, postponed due to landslides.[501] Instead, in the middle of the same month, *Moreno* left Camden for the Philadelphia Naval Shipyard, where it picked up a crew of Argentine Navy personnel which had been quartered at the United States Navy facility while the dispute was adjudicated.[502] It then traveled to Hampton Roads, Virginia, but was hindered overnight after colliding with and

[496] Associated Press, "Argentine Ship Tests Guns," *Los Angeles Times*, 6 November 1914, 11.
[497] "Moreno Sails for Camden, N.J.," *Christian Science Monitor*, 17 November 1914, 17; "Big Argentine Fighter Sails Back to Camden," *Philadelphia Inquirer*, 20 November 1914, 3.
[498] "Dispute over Warship; The Moreno Turned Over to Argentina After Long Dispute," *New York Times*, 18 February 1915, 9.
[499] "Dreadnought Row Ended," *New York Times*, 21 February 1915, 1; "Argentina Gets Battleship," *New-York Tribune*, 21 February 1915, 12.
[500] Tribune Bureau, "War Hurts Canal Opening Display," *New-York Tribune*, 14 January 1915, 9.
[501] Associated Press, "Congress Refuses Money for Canal Celebration," *Los Angeles Times*, 4 March 1915, I2.
[502] "Takes New Dreadnought," *Washington Post*, 22 March 1915, 4.

sinking a barge on the Delaware River near Newcastle, Delaware, running itself aground in the process. In the end, *Moreno* was undamaged.[503] While at Hampton Roads, Woodrow Wilson, the president of the United States, attended a luncheon and tour on board *Moreno* at the invitation of Rómulo Sebastián Naón, the Argentine minister to the United States.[504] As a battleship commissioned into the Argentine Navy, Wilson was technically on foreign soil while onboard even though it had been constructed in the United States. At the luncheon, he spoke to the gathering about the growing ties between the United States and Latin America:

> I am particularly glad that this great vessel, which I have so much admired, should represent some part of the reciprocity and connection between the United States of American and the great republic of Argentine [*sic*]. … there is a growing warmth of affection as well as understanding for the other countries of the great American hemisphere which we are coming daily to understand better … I want to congratulate you upon the completion of this ship and upon all that she stands for in the way of reciprocity between ourselves and the great country you represent, and I want to express my feeling as President of the United States that we are rapidly approaching a day when the Americans will draw together as they have never drawn together before, and that it will be a union, not of political ties, but of understanding and of mutual helpfulness.[505]

After Wilson's speech, Naón rose to express the Argentine government's gratitude.

> It is probably the first time that a President of the United States of America has set foot on a piece of foreign soil, which like this battleship, springs from the industrial capacity and ability of this great country. … may the ties which have always bound our two countries together daily grow stronger and stronger until they constitute the expression of the most perfect international friendship.[506]

Moreno returned to the Philadelphia Navy Yard after Wilson departed on the presidential yacht *Mayflower*. In April, it left the yard bound once again for Hampton Roads, this time to coal

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[503] "Battleship Sinks Barge," *New York Times*, 28 March 1915, 5; "Barge Sunk by Moreno," *Washington Post*, 28 March 1915, 7.
[504] "Goes to Visit Warship," *Washington Post*, 28 March 1915, 2. A photo of the pageantry involved with Wilson's visit was printed in the *New York Times*, 11 April 1915, Picture section.
[505] Associated Press, "Wilson on Argentine Warship; Praises Pan-American Comity," *Los Angeles Times*, 30 March 1915, I1.
[506] Ibid.

up for its first trip to Argentina. However, it once again ran aground on the Delaware River, this time on the Dan Bake Shoal near Reedy Island. The ship was floated off on the next day, and no damage was done.[507]

Figure 4.5: *Moreno* in the Brooklyn Navy Yard's drydock, October 1914

Source: George Grantham Bain collection, Library of Congress. Public domain. https://hdl.loc.gov/loc.pnp/ggbain.17604.

Both *Rivadavia* and *Moreno* were officially accepted into the Argentine Navy in February 1916. The contract called for both needing to complete a year of service before their final acceptance.[508] By 1917, the sea wall at Puerto Militar, the Argentine Navy's primary naval

[507] Associated Press, "Argentine Battleship Runs Aground Again," *Los Angeles Times*, 16 April 1915, I1; "Argentine Ship Proceeds," *Christian Science Monitor*, 17 April 1915, 9.
[508] "Argentina Accepts Two Battleships," *Christian Science Monitor*, 23 February 1916, 8.

base, had been greatly expanded by almost one thousand feet and a new dry dock had been constructed, allowing them to do routine maintenance on the dreadnoughts. This work took three years and cost them over $8 million.[509] This resolved concerns a British naval officer had about the port in 1908, who worried about the shallowness of the base's water, the space available for safe anchoring ("there is no room for a ship to lie at anchor," he wrote), and the size of the base's drydock, which was in "excellent" condition but not large enough to handle a dreadnought.[510]

Rumored sale possibilities

Construction delays were not the only obstacle faced by the Argentine dreadnoughts. Like their counterparts in Brazil, *Rivadavia* and *Moreno* were subjected to a slew of rumors that the ships would be sold. Unlike Brazil, however, the Argentine rumors had some basis in fact and were the product of entirely different motivation. At the very beginning of 1914, shortly after the Brazilian government sold *Rio de Janeiro* to the Ottoman Empire, rumors that the Argentine government was considering the sale of its own dreadnoughts began. Should they choose to do so, finding a suitor would have been the least of their concerns. Amid naval arms races heating up all around Europe, several countries would have been happy to welcome a new dreadnought or two into their fleets. The United States, however, was not keen on this idea. First, it would give away several of the unique features that they possessed on their own dreadnoughts to an unknown country. Second, having anticipated this, a clause in the purchase contract gave the Americans the right of first refusal, but the United States Navy was not thrilled at this idea. Rapid advances in naval technology meant that the navy could see that these ships were already going to be obsolescent as new ships already under construction came into service. The State

[509] "New Dry Dock at Puerto Militar," *Christian Science Monitor*, 22 June 1917, 3.
[510] Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247.

Department concurred with its navy colleagues, and on 13 April 1914 William Jennings Bryan, the brand-new secretary of state, sent instructions to that effect to his *chargés d'affaires* in Buenos Aires—Sherill had left the post in 1911 due to health problems he said were fueled by being overworked.[511]

In March 1914, the Argentine government denied that there were any truth to the rumors that they might sell their dreadnoughts, and stated that they "had decided to take no action which might tend to modify the status of the forces of the powers."[512] They were perhaps reassured in this stance by the public support for these capital ships. The *Christian Science Monitor* reported in at the end of 1913 that *Rivadavia* was likely "to receive a welcome such as is unprecedented in the naval affairs of this republic" upon its arrival in the country, and in August 1914 this prediction was realized in the form of 50,000 people lining the shore to see off the officers and seamen departing to crew *Rivadavia* and bring the ship home.[513]

Yet days after the March statement, the possibility of a sale was given a lifeline. In legislative elections held that month, socialist parties made large gains, and the new members of government brought with them a desire to put their dreadnoughts on the market and use the windfall to fund improvements in education around the country.[514] "Argentina has made great advances in educational matters, but it appears that the better placed people have been chiefly the ones to process," said the *Christian Science Monitor* in April 1914. "There still is room for much

[511] Livermore, "Battleship Diplomacy," 45n95, 46.
[512] "Argentina Not to Sell Rivadavia," *Christian Science Monitor,* 19 March 1914, 10; "Will Not Sell Warship," *Washington Post*, 20 March 1914, 5.
[513] "Argentina Makes Preparations to Receive Warship," *Christian Science Monitor,* 30 December 1931, 8; "Enthusiasm Runs High in Buenos Aires Over New Ship," *Christian Science Monitor,* 20 August 1914, 6.
[514] Livermore, "Battleship Diplomacy," 46; "Again Schools vs. Battleships," *Christian Science Monitor*, 20 April 1914, 18.

good work in the capital … with its … ever-increasing cosmopolitan population. The public school is a 'melting pot,' in Argentina as in the United States."[515]

Three bills that would have mandated the dreadnought's sale were put forward in May and were debated in secret sessions, but all were defeated by June.[516] The Argentines then publicly stated that would oppose any purchase offers made for their dreadnoughts.[517] The American *chargés d'affaires* cabled home to express the importance of ensuring that there were no further delays in finishing the dreadnoughts, as the lengthy process had allegedly cooled Latin American attitudes towards trade with the United States.[518]

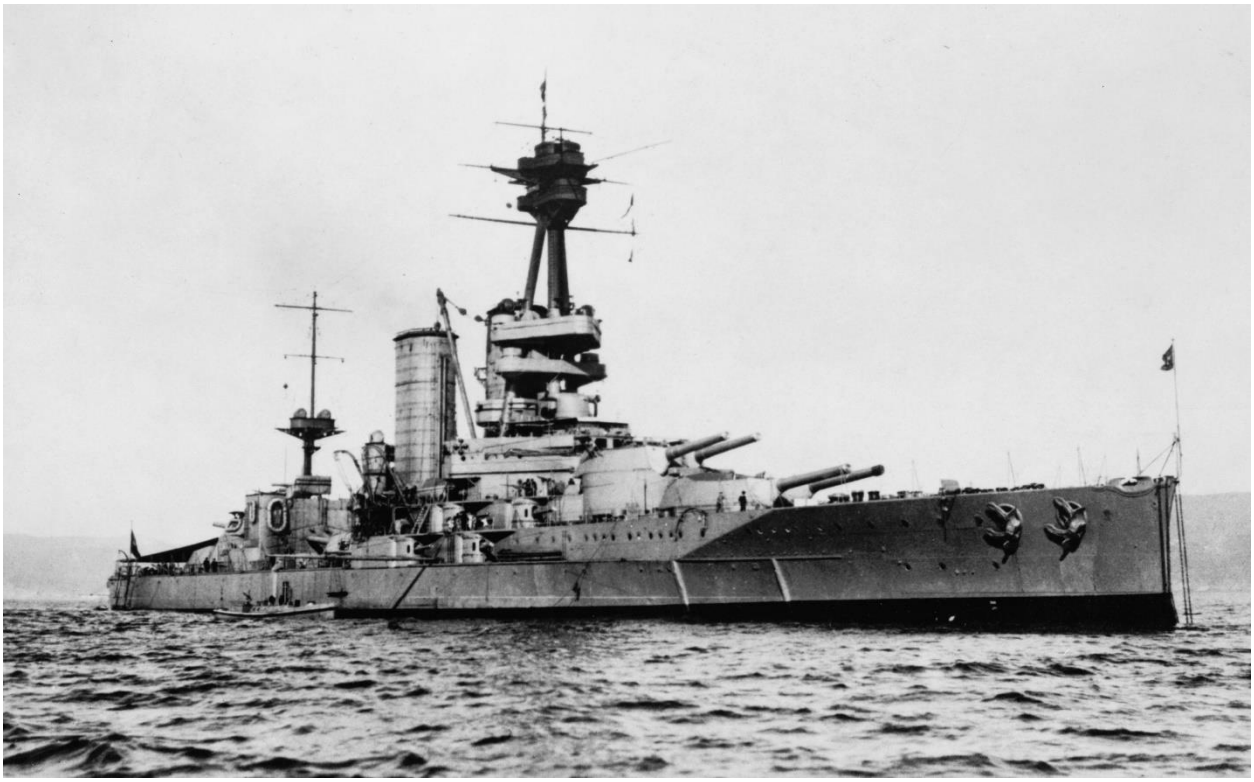
In August 1914, the First World War began in Europe, throwing another wrench into the diplomatic backdrop to Argentina's dreadnoughts. The ambassadors of the United Kingdom and Germany to the United States were both insistent that the Americans enforce their neutral status and ensure that the dreadnoughts would not be sold to the other power. From the industrial side, French bankers were retained by the Russian government to offer twice the contract price of the ships, which would then be turned over to Greece, who shared a natural enemy in the Ottoman Empire.[519] Separately, the Greeks had expressed their own interest in purchasing the ship, likely as a counter to the Ottoman acquisition of *Rio de Janeiro*, and the Italians and Ottomans were reportedly curious as well.[520] All were denied, despite the "splendid prices" being offered.[521]

A contractual option for a third dreadnought was allowed to lapse in 1910, after the Revolt of the Lash in neighboring Brazil, and support for a third from a segment of the Argentine

[515] "Again Schools vs. Battleships," *Christian Science Monitor*, 20 April 1914, 18.
[516] Livermore, "Battleship Diplomacy," 46.
[517] "Argentina Will Keep Battleships," *Christian Science Monitor*, 18 June 1914, 17.
[518] Livermore, "Battleship Diplomacy," 46.
[519] Ibid., 47.
[520] Press Association/*Telegraph*, "Turkey and Greece," *Poverty Bay Herald*, 3 January 1914, 3; "Signs Point to New War in Near East," *New-York Tribune*, 8 June 1914, 3.
[521] "Signs Point to New War in Near East," *New-York Tribune*, 8 June 1914, 3.

senate in October 1912 amounted to nothing.[522] Of the twelve destroyers, the Argentine Navy only accepted the four constructed by the German shipbuilders Krupp and Schichau. The four from the British Laird and four contracted to the French Brosse et Fouché were rejected for not meeting the required specifications, the latter in their speed or coal consumption in addition to delays in construction.[523] The Laird-built destroyers were later sold to Greece, becoming their *Aetos* class, while the others were incorporated into the French Navy after the beginning of the First World War, becoming their *Aventurier* class.[524]

Figure 4.6: *Almirante Latorre*, 1921



Source: Library of Congress. Public domain. https://hdl.loc.gov/loc.pnp/cph.3c03269.

[522] Livermore, "Battleship Diplomacy," 43–45; "Third Dreadnought for Argentina is Asked by Senators," *Christian Science Monitor*, 8 October 1912, 8.
[523] Grant, *Rulers*, 166–67.
[524] Scheina, "Argentina," in Gardiner and Grey, *Conway's 1906–21*, 402.

Chile's path

In Chile, meanwhile, a movement to re-arm the Chilean navy began as early as February or March 1906, shortly after Peru began adding units to its fleet for the first time in many years.[525] It did not, however, come to fruition until 1910–11, after the time the Argentine dreadnoughts were ordered and laid down.[526] This is not an unconscionably long period of time; even Argentina moved to acquire dreadnoughts only after construction began on Brazil's dreadnoughts. However, several sources call out the Chilean government for an alleged delay in ordering their own battleships, and in doing so introduce errors into the narrative that require explanation. Specifically, these sources point to a massive earthquake and the subsequent costs of rebuilding as reasons why Chile ordered its dreadnoughts so long after Brazil and Argentina. In January 1909, *The Engineer* specifically called it the "Valparaíso earthquake," which would presumably refer to the earthquake that hit just off the coast of the Valparaíso region in August 1906, which killed nearly 4,000 people and severely damaged the Chilean city of the same name.[527] Strangely, however, some of those sources pinpoint what one called a "disastrous earthquake" in 1908—not 1906.[528] These could stem from the *Encyclopedia Britannica*'s famed eleventh edition, published in 1910–11, which explicitly and inaccurately refers to a 1908 earthquake.[529] Historian Seward Livermore, however, writing in the 1940s, makes no connection

[525] Hough, *The Big Battleship*, 23; Grant, *Rulers*, 167. The Chilean naval program proposed at that time included four battleships, four cruisers, sixteen destroyers, and sixteen torpedo boats. This was presumably scaled back by August, when the country's naval minister put forward a naval building program proposal which included four battleships and three cruisers, with the acquisitions being spread out over ten years. Grant, *Rulers*, 162, 167.
[526] Grant, *Rulers*, 168–69.
[527] "The Status of South American Navies," *Engineer* 107 (22 January 1909): 90. For more on the earthquake, see: "The Valparaiso Earthquake," *New York Times*, 29 August 1906, 6c.
[528] Livermore, "Battleship Diplomacy," 40.
[529] *Encyclopedia Britannica*, 11th ed., *s.v.* "Valparaiso."

in his footnotes.[530] In any case, there is no evidence to suggest that a major earthquake struck Chile in 1908, much less one that was centered on Valparaiso and, in the words of the *Encyclopedia Britannica*, "caused the destruction of a large part of the city."[531]

The source of Livermore's error is difficult to pin down. It may have been typographical, accidentally entering a different year, but the order of Livermore's sentence ("the collapse of the nitrate market in 1907, and a disastrous earthquake in 1908 had brought on a severe financial depression") would imply otherwise, and both may be inaccurate.[532] Moreover, while Chilean warship acquisition plans were possibly halted in the immediate aftermath of the 1906 earthquake, the theory is broadly contradicted by primary accounts from British diplomats in Chile, who wrote in separate 1906 and 1907 retrospectives that the country's finances were little affected by the earthquake.[533] Any delay was perhaps caused by Pedro Montt, the new Chilean president, who preferred that the proposed naval expenditure go instead to "improving internal communications."[534]

In August 1907 the Chilean legislature voted to allocate £5 million to acquire new naval units, just one year after the devastating earthquake.[535] The 1906 diplomatic report, submitted six months after the disaster, noted:

> It is, of course, impossible to give an approximate estimate of the damage caused [by the earthquake], and ten years is a sanguine estimate of the period required for Valparaiso to

[530] Livermore, "Battleship Diplomacy," 40–41n64. Livermore's footnote generically cites the *Times* (London) *South American Supplement* of 31 January 1911, and presumably refers to E. Hamilton Curry, "Naval Strength of South America," *Times* (London) *South American Supplement*, 31 January 1911, 1, based on the tonnage figures that appear in the same footnote. Curry's article does not mention an earthquake.
[531] *Encyclopedia Britannica*, 11th ed., *s.v.* "Valparaiso." See also Grant, *Rulers*, 168–69, n68, which cites and inadvertently repeats Livermore's error.
[532] Livermore, "Battleship Diplomacy," 40.
[533] "The Status of South American Navies," *Engineer* 107 (22 January 1909): 90; Ernest Rennie to Grey, "General Report on Chile for the year 1906," 8, TNA, FO 118/276; Rennie to Grey, "Annual Report, 1907," 1, TNA, FO 117/281.
[534] Grant, *Rulers*, 167.
[535] Ibid., 168.

> recover fully from the disaster. It is, however, generally conceded that the Chilean nation has shown great courage in this time of trouble, and in the opinion of the majority, the general progress of the country has not been checked to any very great extent, and that commercial activity has possibly been stimulated rather than otherwise by the disaster.[536]

Livermore's other stated reasoning is a drastic decline in demand for nitrates in 1907, Chile's top export. A 1907 report from Henry Crofton Lowther, a British diplomat in Chile, would seem to correlate with Livermore, referring to a "bursting of [an economic] bubble" that was followed by a parade of companies going into liquidation, causing "great financial distress" in the country, and a British naval officer remarked upon Chile's openly professed and "visible indications of poverty." Lowther, however, goes on to state that the economic panic had been managed by the end of 1908, at which time they had been able to obtain a foreign loan without much trouble, and the naval officer added that any financial concerns had not prevented the country from meticulously maintaining its navy nor "spending money freely to attain this object."[537]

What financial volatility there was in the Chilean government's finances occurred four years later, when another British diplomat cabled home to say that the country's finances were in a "chaotic state" even though there was "little justification" for it, as "Chile is not insolvent." The culprit seems to have been the country's excessive issuing of paper currency.[538] By this time, however, the Chilean legislature had allocated funds for naval expansion and modernization, a dreadnought design had been chosen, and the ships had been ordered.[539]

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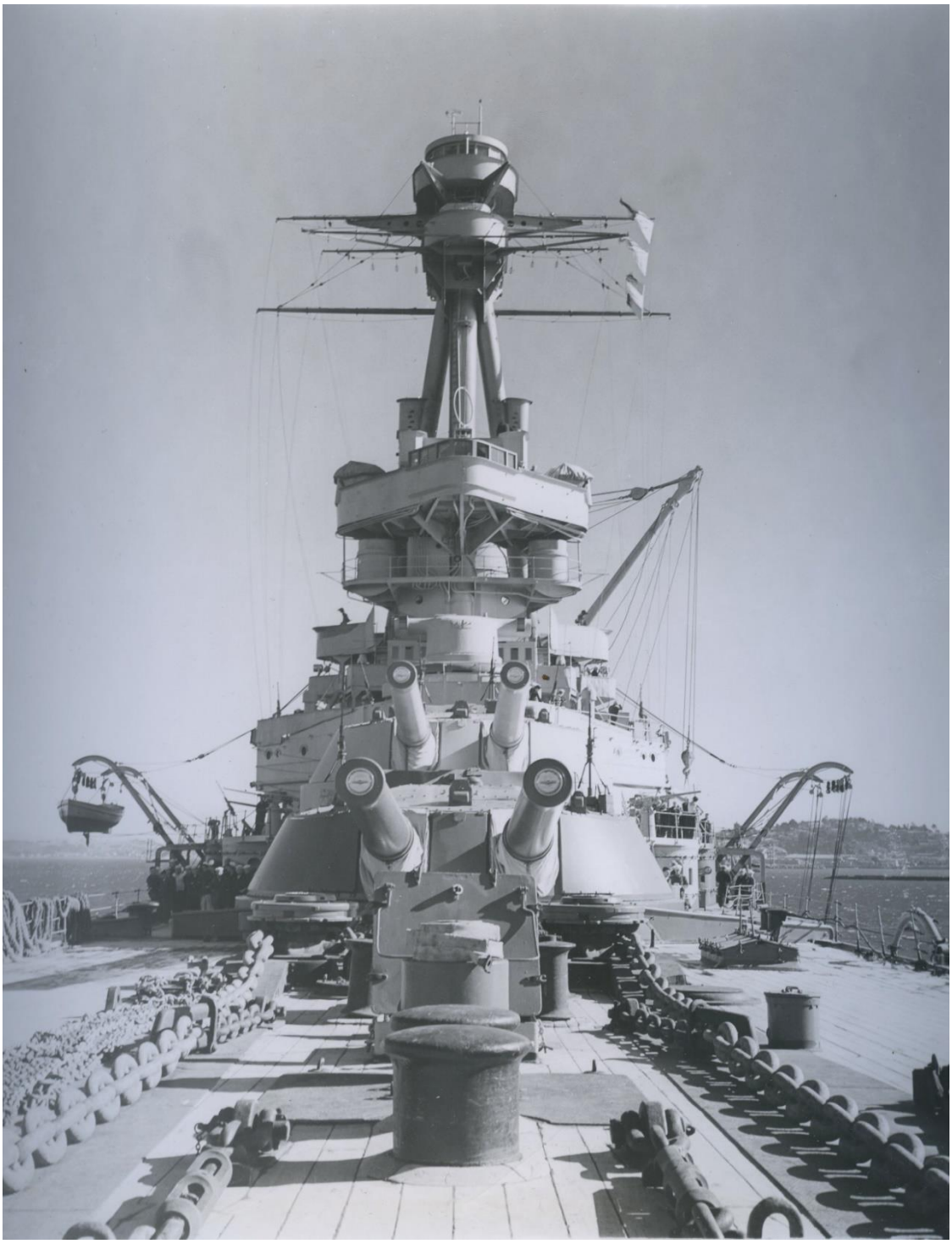
[536] Ernest Rennie to Grey, "General Report on Chile for the year 1906," 8, TNA, FO 118/276.
[537] Henry Crofton Lowther to Grey, "Annual Report, 1908," 6–7, TNA, FO 118/287; Hood to Grey, 3 November 1908, no. 78, TNA, FO 420/247.
[538] J.C.T. Vaughan to Grey, "Annual Report, 1911," 12, TNA, FO 118/305. The report was sent to the United Kingdom in February 1912 and arrived in April. See also "Business Better in Chile," *New York Times*, 18 June 1914, 14, which inaccurately states that Chile had to sell its dreadnoughts because it had no money to pay for them.
[539] Scheina, *Latin America*, 322.

Figure 4.7: Front view of *Almirante Latorre*



Source: National Archives and Records Administration via Wikimedia Commons. Public domain. https://commons.wikimedia.org/wiki/File:Almirante_Latorre_from_bow.jpg.

In any case, the quest to acquire dreadnoughts began in 1908, when a trial balloon floated by the navy was shot down by the legislature and by the indifference of the president, who preferred to put discretionary funds towards improving the country's infrastructure.[540] In August 1909, an official naval council in Chile endorsed a plan for two dreadnoughts.[541] It was only in 1909 that the Chilean legislature allocated $14 million for a naval expansion, followed in 1910 with granting authority to the president to finance one a dreadnought by entering into a £4.48 million loan, with payments to be spread over five years, and to raise government revenue by £400,000 per year. Beyond the outlay for new warships, £1 million was to go towards bolstering the country's sea-facing decisions and another £80,000 for improving the navy's arsenals.[542]

Like in Argentina, international armament firms began lining up to try to win the contract for this massive new vessel, for which bids were called for in July 1910.[543] Unlike them, however, the Chilean Navy's preference for the United Kingdom was abundantly clear. The Chilean and British navies had been closely aligned since at least the 1830s, when Chilean naval officers were billeted onboard British vessels to gain experience in the much larger navy. More recently, Chile was close to accepting a British-led naval mission, which would arrive in 1911.[544] Moreover, the Chilean Navy was particularly fond of Armstrong, with whom they had a good relationship after purchasing eight ships from the company during the naval arms race with Argentina less than a decade prior.[545]

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[540] Grant, *Rulers*, 168; Lowther to Grey, "Annual Report, 1908," 4, TNA, FO 118/287.
[541] "Chile to Build Dreadnoughts," *Washington Post*, 12 August 1909, 5.
[542] Grant, *Rulers*, 168; "$14,000,000 for Chile's Navy," *Washington Post*, 13 November 1909, 2; "Millions for Chile's Navy," *Christian Science Monitor*, 13 November 1909, 19.
[543] "New Battleship for Chile," *Christian Science Monitor*, 8 July 1910, 4.
[544] Scheina, *Latin America*, 138.
[545] Friedman, *British Battleship*, 157; C.C. Gill, "Professional Notes," *Proceedings of the United States Naval Institute* 40, no. 2 (1914): 493.

The United States and the Taft administration, fresh off their victory in the Argentine dreadnought contracts, was keen on the challenge. "The outlook for desirable contractions is encouraging at present in Turkey, Brazil [i.e. the ship that eventually became *Rio de Janeiro*], and Chile," the assistant secretary of state wrote in July 1910, "and there is a probability that similar opportunities will soon be offered in China." The state and navy departments worked together in these goals, and the former convinced the latter in May to send A.P. Black, an ordnance expert, to South America as a naval attaché to the legations there. When the dreadnought competition began, Knox, the secretary of state, quickly installed Henry P. Fletcher, a career diplomat, as the United States' new minister to Chile. Fletcher had previously been posted to China, where as *chargés d'affaires* he had bought into Taft's dollar diplomacy policy and was able to open a proposed Chinese railway construction loan to American banks.[546]

After spending time in Chile, however, both Fletcher and Black, the new naval attaché, were disillusioned at their prospects. "I do not believe that the Chilean Government wants, intends, or can order its ships elsewhere than in England," the attaché wrote. When it came time to tender for the warships in October, the Chilean Navy's required specifications mirrored British practices so closely, including the condition that British-made armament be fitted, that Fletcher raised a formal protest.[547] "The opinion is generally expressed here [in London] that foreigners would not be likely to arrange terms with English manufacturers, which would enable the foreigners to compete," the *New York Times* stated, adding in its headline that the United States

[546] Livermore, "Battleship Diplomacy," 40, 41n65.
[547] Livermore, "Battleship Diplomacy," 41; "Chile Battleship Tenders," *Christian Science Monitor*, 5 October 1910, 2; "Naval and Military Intelligence," *Times* (London), 5 October 1910, 4a; "May Not Bid for Chilean Ships," *Christian Science Monitor*, 17 October 1910, 12; "Chile to Deal with Englishmen," *New York Times*, 16 October 1910, C3.

was likely being "frozen out" of the contract.[548] Unlike Sherill in Argentina, Fletcher was not able to secure any changes to the requirements, but he was able to get the deadline extended from the end of October—already once extended from 15 September—to the end of December so that American shipbuilders could properly accommodate.[549] The United States would also later indicate that it would be willing to provide a $25 million loan to facilitate the ordering of a battleship in the country.[550]

Tenders came in from the United States, Germany, and the United Kingdom, and each country's navies were deployed to support their shipbuilding industries. Each country dispatched naval vessels on South American cruises to show the flag, demonstrate the potential power of their warships, and garner more trade for their country's firms.[551] The Germans moved first, announcing that they would be sending their newly commissioned *Von der Tann*, the fastest operational capital ship in the world, on a two-and-a-half-month-long trip to Brazil, Argentina, and Chile. American newspapers noted that the Germans were frank about acknowledging the purpose of this voyage: "the main purpose of the cruiser is to serve as an advertisement for the German warship building industry." *Von der Tann* left Germany in February 1911.[552] The United States responded with a magnanimous gesture to return the body of the recently deceased Chilean minister to the country.[553] The ship selected for this duty was *Delaware*, a new dreadnought commissioned only a year earlier. Despite suffering from a boiler explosion on 17

[548] "Our Shipyards Frozen Out," *New York Times*, 31 August 1910, 4.
[549] Livermore, "Battleship Diplomacy," 41; "The Chilean Navy," *Times* (London), 22 October 1910, 5d; "American Shipyards May Bid," *New York Times*, 15 September 1910, 6; "To Bid on Chilean Ships," *New York Times*, 22 October 1910, 1.
[550] Livermore, "Battleship Diplomacy," 42.
[551] Ibid., 41–42.
[552] "German Cruiser Off For America," *Christian Science Monitor*, 21 February 1911, 22; "Seeks Warship Orders; Germany Sends Newest Cruiser Off on Advertising Voyage," *Washington Post*, 26 February 1911, 13.
[553] "Rivals the Oregon's Feat," *Washington Post*, 27 April 1911, 11. Don Anibal Cruz, the Chilean minister to the United States, had died in January.

January, killing at least eight people, the vessel was quickly repaired for departure by 31 January.[554] *Delaware* reached Valparaiso, Chile, on 11 March, and its captain was ordered to allow the Chileans access to the entire ship save for its fire-control system:

> You and your officers will endeavor to show the good points of the *Delaware* and to make a good impression upon said officials as to the excellent character of the ships built in this country. The Department has adopted this policy in order to aid the shipbuilding interests of the country to make contracts for the building of men-of-war for foreign countries. This authority to allow inspection without limitation is to hold good both going and returning from Chile.[555]

Specifically, the captain was to carefully toe a line between revealing too much about the fire-control system, which one historian called "one of the most carefully guarded secrets in any navy," while not appearing to be secretive. This restriction, rather than outright ban on, revealing information about the fire-control system demonstrates how far the United States government was willing to go to sell ships to foreign countries. Finally, to counter these new warships, the British dispatched its Fourth Cruiser Squadron to South America.[556]

Eventually, the extensive efforts of the United States and Germany came to naught. Irked at the pressure being placed on them by the German government and viewing the United States' bids as being overpriced, the Chileans went with financing from Rothschilds and the low bid—some $1 million less per ship than those the United States—from Armstrong.[557] Once again, the largest and most powerful battleship in the world would be under construction for a South

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[554] "8 Die on Warship," *Washington Post*, 18 January 1911, 3; "Probing Battleship Deaths," *Washington Post*, 24 January 1911, 11.
[555] Livermore, "Battleship Diplomacy," 42.
[556] Ibid.
[557] Friedman, *British Battleship*, 157; "English Bidders Give Lowest Bids," *Christian Science Monitor*, 8 April 1911, 38; "The Chilean Dreadnoughts," *Washington Post*, 8 May 1911, 6; "To Build Chilean Warships," *New York Times*, 21 May 1911, C3. A separate report in the *New York Times* inaccurately stated that the American bids were lower than those from Europe. "American Bids Lowest," *New York Times*, 8 April 1911, 1. Historian Peter Brook says that Armstrong submitted its first tenders on 4 April 1911, which sounds late; there may be gaps in the documentary record. Brook, *Warships*, 145.

American country.[558] Contracts for six large destroyers, escorts for the new dreadnoughts, went to J.S. White in the United Kingdom.[559] As a sort of consolation prize, contracts for $2 million of coastal artillery and a smaller separate order of two submarines were given to Bethlehem Steel and Electric Boat, respectively.[560] To expand its docking facilities for the new warship, the government called for tenders for the construction of a drydock at Talcahuano that would be over eight hundred feet long and over one hundred feet wide.[561]

The Chilean government moved ahead with a contract for a second dreadnought in 1912 and exercised their contractual option with Armstrong for it in May or June. In contrast with the first bid, there was very little competition, although at least one news cable held that Bethlehem Steel worked with Fletcher for at least two months to try to sway the Chilean Navy.[562] Fletcher "made a routine protest," one historian would later write, "but by this time even Knox had been convinced of Chilean indifference to the United States, and the award was allowed to go almost by default."[563] A total of £7 million later, the Chileans had a new fleet being built for them.[564]

The first dreadnought, which would be named *Almirante Latorre*, was designed by Armstrong's J.R. Perret, ordered on 2 November 1911, and laid down a few weeks after, on 27 November.[565] A late design alteration increased the ship's secondary armament from 4.7 to 6-inch guns, increasing the displacement, decreasing its maximum speed, and submerging its armor best when the ship was at full load.[566] The ship would be the largest ever constructed by

[558] Scheina, "Chile," in Gardiner and Gray, *Conway's 1906–21*, 408.
[559] Grant, *Rulers*, 169.
[560] Livermore, "Battleship Diplomacy," 43.
[561] "Increased Breadth of Warships," *Navy* (Washington) 4, no. 2 (April 1910): 16–17.
[562] Livermore, "Battleship Diplomacy," 43; "Diplomatic Help for American Firms," *New York Times*, 9 November 1911, 7. May date comes from Grant, *Rulers*, 169.
[563] Livermore, "Battleship Diplomacy," 43.
[564] Grant, *Rulers*, 169.
[565] Scheina, *Latin America*, 322; Burt, *British Battleships of World War One*, 231.
[566] Burt, *British Battleships of World War One*, 231; Brook, *Warships*, 147.

Armstrong.[567] Due to the large amount of warship construction happening in the United Kingdom during this time, construction proceeded slowly due to delays in acquiring materials.[568] Its sister ship, to be named *Almirante Cochrane*, was ordered on 29 July 1912 and laid down in January or February 1913, the delay being caused by the need for *Rio de Janeiro* to clear Armstrong's second slipway in Elswick.[569] Armstrong launched *Almirante Latorre* on 27 November 1913, exactly two years to the day after it had been laid down.[570]

In November 1912, a Turkish proposal to buy the first Chilean dreadnought emerged in the press.[571] Fourteen months later, reports came out of Vienna that the Greek government was making a serious attempt to purchase the same dreadnought.[572] This came on the heels of losing out on *Rio de Janeiro* to the Ottomans, Greece's primary rival, and they were willing to offer a "fantastic amount" for the ship.[573] Greece's aspirations were, however, immediately quashed by the Chilean government, which issued a public statement saying that their ships were not on the market and would not be sold.[574] A few months later, the principal conservative party in Chile came out in favor of such a sale. Their official paper questioned why the country was purchasing a dreadnought when it enjoyed warm relations with both Brazil and Chile, and at a time when the country was working to right its economy.[575]

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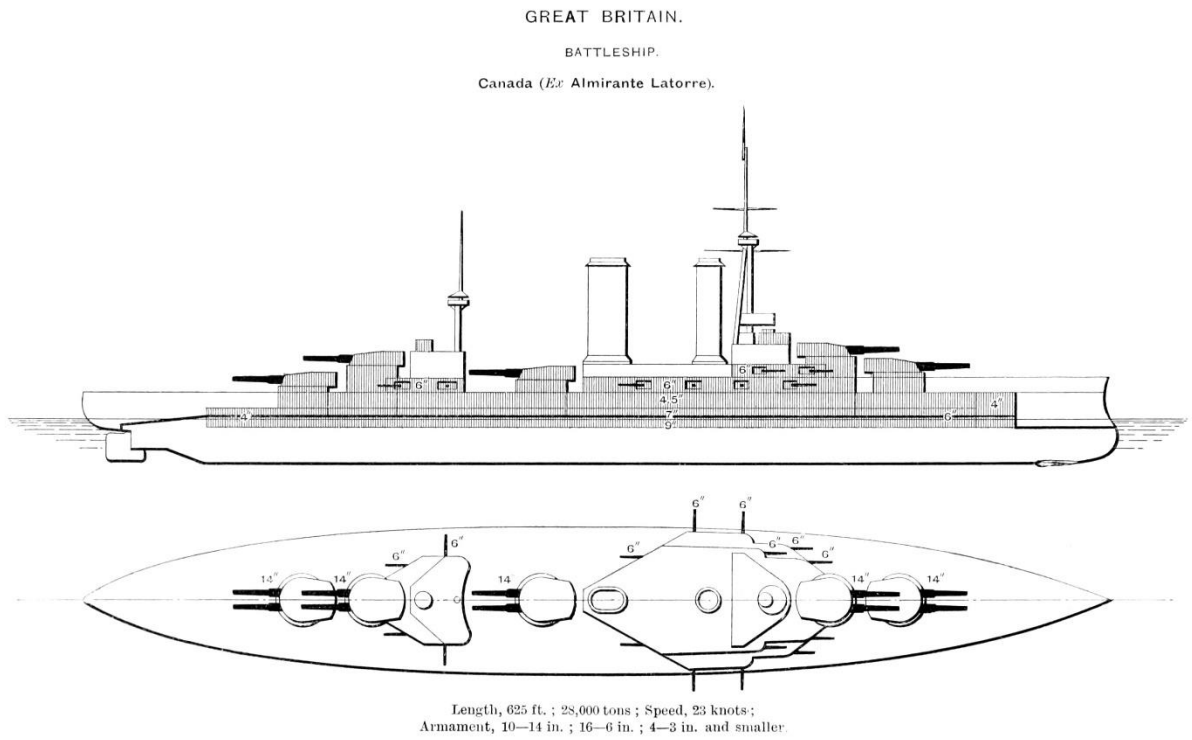
[567] C.C. Gill, "Professional Notes," *Proceedings of the United States Naval Institute* 40, no. 2 (1914): 493.
[568] Brook, *Warships*, 148.
[569] Scheina, *Latin America*, 322; Burt, *British Battleships of World War One*, 231; Brook, *Warships*, 149; Preston, "Great Britain," in Gardiner and Grey, *Conway's 1906–21*, 38, 70. Given dates in these sources include 22 January, 20 February, and 24 February.
[570] Brook, *Warships*, 147; C.C. Gill, "Professional Notes," *Proceedings* 40, no. 1 (1914): 193. Scheina, *Latin America*, 322 erroneously states that the ship was launched on 17 November.
[571] "Turkey Wants Chilean Warships," *New York Times*, 8 November 1912, 2.
[572] "Armament War Between Turkey and Greece," *Economist* 78 (10 January 1914): 78–79.
[573] Gerard Fiennes, "Foreign Navies and the War," in *The Navy League Annual*, ed. Robert Yerburgh (London: John Murray, 1916), 63.
[574] "Chile Won't Sell Dreadnoughts," *New York Times*, 9 January 1914, 4.
[575] "Chile Should Sell Big Ships Says Conservative Press," *Christian Science Monitor*, 21 April 1914, 8.

Figure 4.8: Line drawing of *Almirante Latorre* as *Canada*, 1915



Source: Sydney Walker Barnaby, published in John Leyland, ed., *Brassey's Naval Annual, 1915* (London: William Clowes and Sons, 1915), plate 2, via Wikimedia Commons. Public domain. https://commons.wikimedia.org/wiki/File:Brassey%27s_HMS_Canada_Plan_(1915).jpg.

Any movement towards this was superseded with the beginning of the First World War in Europe. As recommended by the British Cabinet, *Almirante Latorre* was formally purchased from the Chileans on 9 September 1914 for completion and use in the war as *Canada*.[576] In this capacity, the British completed its trials on 13 September 1915 commissioned it into the Royal Navy on the following 15 October.[577] The ship was not seized like two other Ottoman capital ships, including the ex-*Rio de Janeiro,* because of the friendly relations enjoyed between the

[576] Burt, *British Battleships of World War One*, 231, 240.
[577] Ibid., 240; Brook, *Warships*, 147.

British and Chileans.[578] *Almirante Cochrane,* far less complete, languished for several years before being purchased in 1917 for conversion to an aircraft carrier, *Eagle*.[579] The Chileans also lost four of the six destroyers that were on order, with two having been delivered prior to the war's beginning. In partial compensation for the seized ships, Chilean Navy was given five *Holland*-class submarines in July 1917 which had been prevented from being delivered from the United States to the United Kingdom due to the war. They also purchased a sixth.[580]

[578] Preston, "Great Britain," in Gardiner and Grey, *Conway's 1906–21,* 38.
[579] Ibid., 70.
[580] Scheina, "Chile," in Gardiner and Gray, *Conway's 1906–21,* 409.

The legacy of the dreadnought race

While the First World War raged in Europe, Argentina, Brazil, and Chile found themselves unable to acquire additional warships as the major powers, and their shipyards, marched to war.[581] In the years after the conflict, Argentina and Chile purchased a small number of warships while Brazil acquired almost none. The warships acquired during the dreadnought naval arms race were, despite modernizations, rapidly outpaced by advancing naval technology— as newer and more powerful ships and armament were developed and deployed, wing turrets and triple-expansion engines went out of favor and armor dispositions all radically changed in the wartime and inter-war period. This meant that for all the volume generated by the South American dreadnoughts prior to the First World War, in the years during and after the conflict they were comparatively silent. Still, the battleships of Brazil, Argentina, and, eventually, Chile all soldiered on for several decades and remained in service through the Second World War.

Brazil

During the First World War, the Brazilian Navy found that even patrolling its own coasts was difficult, given that it possessed only a limited number of warships suited for the task, and by the time of the country's entrance into the conflict on the side of the Allies in October 1917, many of the warships it had acquired less than a decade earlier were unfit for active wartime service.[582] With the exception of three submarines and an accompanying tender, one historian would later write that the Brazilian Navy's ships were either "run-down or hopelessly obsolete,"

[581] Brook, *Warships for Export*, 133.
[582] Walton L. Robinson, "The Brazilian Navy in the World War," *Proceedings of the United States Naval Institute* 62, no. 12 (1936), https://www.usni.org/magazines/proceedings/1936/december/brazilian-navy-world-war.

referring to the ships acquired under the 1904–07 naval program and everything older, respectively.[583] Both dreadnoughts needed to be modernized, particularly their fire control systems, before the Brazilian Navy could send them abroad for service in the United Kingdom's Grand Fleet. The condensers and boilers on the scout cruisers, *Bahia* and *Rio Grande do Sul*, were in such poor condition that they could make no more than eighteen knots, two-thirds the speed they achieved on their trial runs. Finally, some of the *Pará*-class destroyers had particularly troublesome engines or had problems with their hulls.[584]

Nonetheless, the Brazilian Navy forged ahead. It ordered new boilers and condenser tubes in the United States and agreed to begin full patrols of the green waters of its coastline on 1 September, once they were delivered and installed. The British, French, and American navies would patrol the blue-water territory of the South Atlantic, with each handling a particular sector off Brazil's coasts.[585] The Brazilians would similarly be divided into three divisions, with primarily older ships handling the north; the dreadnoughts handling the center, ranging from Bahia to Rio de Janeiro, and scout cruisers the south. The *Pará* class ships were distributed within all of them.[586] Separately, in August 1917 the Brazilian Navy ordered rangefinders for all its major warships, along with various aircraft and equipment.[587]

The patrolling arrangement was altered in December 1917, after Brazil's entrance into the war and at the request of the British Admiralty. Instead, the Brazilian Navy would send its two scout cruisers and four destroyers abroad for service in European waters. This raised a few problems. First, the Brazilian Navy was wholly unprepared to support a fleet based far from its

[583] Scheina, *Latin America*, 92.
[584] Robinson, "Brazilian Navy."
[585] Ibid., Scheina, *Latin America*, 92, 94.
[586] Scheina, *Latin America*, 92.
[587] Robinson, "Brazilian Navy."

shores. For instance, sailing charts for the coast of West Africa, important for ensuring that a ship could find its destination and would not strike any hidden objects, had to be taken from German merchant ships interned in Brazilian harbors, and once the small naval force departed Brazil, it was entirely dependent on the British for its supplies. Second, the new boilers and condensers had not been delivered yet, and so the Brazilian ships were to be based out of Gibraltar, where there was a British yard that could overhaul the ships. After several months of preparation, training, and repairs, the ships went abroad in May 1918, proceeding first to west Africa to act as convoy escorts. They were accompanied for part of the journey by the old cruiser *Barroso*, in case *Rio Grande do Sul*'s condensers broke; the latter ship would later be forced to stay in Dakar with a destroyer escort due to the troublesome equipment. The other four ships proceeded to Gibraltar in November 1918, arriving one day before the armistice which ended the war was signed.[588]

The dreadnoughts were sent separately to United States shipyards for their refits. The first to depart was *São Paulo*, whose planned departure date of 6 June 1918 was delayed by alleged sightings of nearby German submarines. The Americans offered two protected cruisers as escorts, *Cincinnati* and *Raleigh*, but the latter needed to be repaired before sailing. The three eventually left on 17 June, but on the next day fourteen of *São Paulo*'s eighteen boilers broke. The dreadnought's boilers received jury-rigged repairs in Bahia from the crew of the American battleship *Nebraska*, which was in the port while returning home after repatriating the body of the Uruguayan ambassador to the United States. *São Paulo* would eventually reach the Brooklyn Naval Yard forty-two days after it first departed Brazil.[589] Its refit was estimated as needing six

[588] Ibid.
[589] Scheina, *Latin America*, 97.

months to complete, but the ship remained in New York until January 1920.[590] Given Brazil's allied status during the war, several officers on the ship were placed onboard American warships for training and experience. On its way back to Brazil, *São Paulo* loaded up on ammunition and conducted firing trials near the American naval base at Guantanamo Bay, Cuba.[591] Months later, in August 1920, *São Paulo* briefly served as a royal yacht for the Belgian king and queen when it brought them to Brazil for an official state visit. It also brought them home, and returned to Brazil in January 1921.[592] *Minas Geraes* underwent its own refit in 1920–21, departing Rio de Janeiro in July 1920, arriving in August, and departing New York on 4 October 1921.[593] Both modernizations were completed at the cost price of labor and material.[594]

During this time, the Brazilian government considered or was offered the chance to expand itself but declined to do so. In 1921, for instance, the British offered to sell *Agincourt*, the ship that was once intended to be *Rio de Janeiro*, to the Brazilian Navy. The British were flush with a number of older warships, including dreadnoughts, which would soon be limited by the Washington Naval Treaty. This offer was declined, and the ship was sold for scrap in 1922.[595] Various other naval expansion plans were proposed; for example, around the same time the Brazilian government turned down the ex-*Rio de Janeiro*, its president advocated for adding light cruisers, destroyers, and submarines to the fleet.[596] In 1924, the United States naval mission in

[590] Robinson, "Brazilian Navy"; Wallace L. Lind, "Professional Notes," *Proceedings of the United States Naval Institute* 46, no. 3 (1920): 452. Details of the refit are available in "São Paulo II," *Serviço de Documentação da Marinha — Histórico de Navios*.
[591] Lind, "Professional Notes," 452.
[592] Topliss, "Brazilian Dreadnoughts," 289; "King Albert and His Queen Sail for Brazil Today," *New York Times*, 1 September 1920, 1.
[593] Topliss, "Brazilian Dreadnoughts," 289. Details of the refit are available in "Minas Gerais I," *Serviço de Documentação da Marinha — Histórico de Navios*.
[594] Scheina, *Latin America*, 134.
[595] Burt, *British Battleships*, 250; Scheina, *Latin America*, 135; "Brazil May Buy British Ship," *Washington Post*, 6 March 1921, 30;
[596] John Leyland, "Foreign Navies," in *Brassey's Naval and Shipping Annual 1921–2*, ed. Alexander Richardson and Archibald Hurd (London: William Clowes and Sons, 1921?), 67.

the country, which replaced a British naval mission two years earlier, recommended that the country undertake a ten-year naval rearmament program. The proposed ships included two thirty-five-thousand-ton battleships, for a total of seventy thousand tons; sixty thousand tons of cruisers; fifteen thousand tons of destroyers; and six thousand tons of submarines. Most of these ships would represent expansions of Brazil's navy; not counting the battleships, which would replace *Minas Geraes* and *São Paulo*, only sixteen thousand tons of these ships would replace older vessels. The American State Department was vehemently against this proposal, fearing that it would cause a new naval arms race in the region.[597] Charles Evans Hughes, the secretary of state, wrote to his *chargé d'affaires* in Rio de Janeiro:

> The Brazilian building program is spoken of as a program of defense. The department does not know by what power Brazil is threatened that she should need such a large defensive fleet.
>
> … the new program instead of putting Brazil on a footing of equality with those countries will place her in a very superior position, which will necessitate new naval construction for the same reason which now moves Brazil to desire new construction; namely, the desire not to be left in a position of inferiority.
>
> Any such result as this would be most unfortunate and there would be brought about a condition of rivalry in armaments in this hemisphere which up to the present has happily not existed.
>
> The department's feeling about this matter is so strong that it would rather recall the naval mission than assume the responsibility for the naval program that the mission has proposed.[598]

While the plan was withdrawn, the mission was still requesting battleship design sketches from the United State Navy's Bureau of Construction and Repair as late as 1928.[599]

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[597] Scheina, *Latin America*, 135–36; Hobart C. Montee, "U.S. Restricted Brazil's Navy, Needed Now, Secret Data Shows," *Washington Post*, 10 November 1939, 8; "U.S. Once Told Brazil Not to Enlarge Navy," *New York Herald Tribune*, 10 November 1939, 7.
[598] Hobart C. Montee, "U.S. Restricted Brazil's Navy, Needed Now, Secret Data Shows," *Washington Post*, 10 November 1939, 8.
[599] Scheina, *Latin America*, 136.

Figure 5.1: *Minas Geraes*, c. 1942

Source: Naval History and Heritage Command. Public domain. https://www.history.navy.mil/our-collections/photography/numerical-list-of-images/nhhc-series/nh-series/NH-59000/NH-59893.html.

Meanwhile, the dreadnoughts were employed or caught up in domestic conflicts. In 1922, the dreadnoughts were used to put down the first Tenente revolt, with *São Paulo* bombarding Fort Copacabana in Rio de Janeiro to induce the insurgents to surrender.[600] Two years later, crewmen about *São Paulo* were the ones to mutiny. Finding little support from other warships in the Brazilian Navy, unable to link up with revolutionaries in Rio Grande do Sul, short of food

[600] Scheina, *Latin America's Wars*, 2:128.

and water, and with the ship's condensers acting up, the mutineers left Rio de Janeiro, trading shots with the forts guarding the entrance, and sailed to Uruguay to seek asylum.[601]

By this time, much of the Brazilian Navy was showing its age. Hughes had written in 1924 that the navy's dreadnoughts were "practically obsolete," and the Associated Press wrote in 1930 that Brazil's fleet was "composed of obsolete ships" and that only one of its eleven destroyers was in good condition.[602] To address this, in 1935 the Brazilian government allocated $20 million to its navy for new construction.[603] They had previously considered ordering cruisers, possibly modeled on either the Italian *Zara*, Japanese *Kinugasa*, British *York*, or the French *Duquesne* classes, but did not end up acquiring any.[604] They did, however, order submarines from Italy and six destroyers from the United Kingdom, began domestic construction on three destroyers with a design very similar to that of the American *Mahan* class, and attempted to lease six destroyers from the United States, only to back down after a furious Argentine response.[605] That *Mahan*-like destroyers were being built in Brazil was possible only

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[601] Scheina, *Latin America*, 77–79; Scheina, *Latin America's Wars*, 2:129; "Revolt in Brazil Spreads Rapidly," *New York Times*, 6 November 1924, 21.

[602] Hobart C. Montee, "U.S. Restricted Brazil's Navy, Needed Now, Secret Data Shows," *Washington Post*, 10 November 1939, 8; Associated Press, "Brazil Navy Composed of Obsolete Ships," *New York Times*, 7 October 1930, 3.

[603] "Brazil Would Buy Old U.S. Warships," *New York Times*, 16 April 1937, 2. This was revised down from a reported $41 million in 1933, which itself had been delayed by a revolution in 1932. United Press," Brazil to Spend 41 Million for New Warships," *New York Herald Tribune*, 12 November 1933, A7.

[604] Scheina, *Latin America*, 137; "Brazil Plans Warships," *New York Times*, 26 March 1933, 20. Scheina claims that the Washington and Second London Naval Treaties blocked such purchases, but both treaties merely banned the sale of *existing* warships. In fact, the former explicitly allows for acquiring new warships (Article XVI), and the Argentine Navy ordered two cruisers from Italy, launched in 1929, and one cruiser from the United Kingdom, launched in 1937. Robert Scheina, "Argentina," in Robert Gardiner and Roger Chesneau, eds., *Conway's All the World's Fighting Ships 1922–1946* (London: Conway Maritime Press, 1980), 420. Hereafter cited as *Conway's 1922–46*.

[605] Scheina, *Latin America*, 137; Hanson W. Baldwin, "U.S. Aiding Brazil in Adding to Navy," *New York Times*, 26 June 1937, 1, 7; Frank M. Garcia, "Brazil Increases Her Armaments," 20 November 1938, 69; Paul Vanorden Shaw, "The Six Destroyers for Brazil," *Washington Post*, 11 September 1937, 7. The United States Navy originally denied that it had given the plans for *Mahan* to the Brazilian Navy, claiming that they had only offered "technical assistance" in designing the ships. "U.S. Navy Explains Help Given Brazil," *New York Times*, 27 June 1937, 21. The Brazilian ambassador to the United States denied that any help was given at all, much less the plans to one of the United States Navy's newest destroyer designs, stating that "Brazil is constructing ships in Brazilian shipyards

after recent investments in and the expansion of the navy's shipyard in Rio de Janeiro, part of what *New York Times* military reporter Hanson W. Baldwin called Brazil's "naval renaissance."[606]

Minas Geraes benefited from the shipyard's new capacity, as it was modernized in Rio de Janeiro beginning in June 1931. It ran sea trials in April and May 1938 and returned to service in June of the same year, though it was not until 1940 that the modernization was complete—a lengthy amount of time for such an operation.[607] The changes included a conversion to burning fuel oil, which allowed the ship's two funnels to be combined into one large funnel; new turbogenerators; and mounting two new anti-aircraft guns.[608] *São Paulo* would have been given comparable treatment, but the ship's hull and machinery was in such a dilapidated state that a modernization would have been uneconomical.[609]

Neither ship was fit for active overseas duty in the Second World War, and so after Brazil's declaration of war in 1942, both dreadnoughts were used as harbor defense ships. *São Paulo* was assigned to Recife, the capital of the state of Pernambuco, and *Minas Geraes* was sent to Salvador, the capital of the state of Bahia.[610] Beyond their capital ships, the conflict cost the navy the six destroyers ordered in the United Kingdom, lost to seizure after the beginning of the war, and the old scout cruiser *Bahia*, which exploded and sank in July 1945 after what the United

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unhelped by outsiders and will continue to do so." "Brazilians Deny Asking Aid," *New York Times*, 27 June 1937, 21. This was not the case, and the Brazilian Navy would later purchase $5.5 million worth of electrical equipment and boilers in the United States for the *Mahan*-like destroyers it was building. "Brazil to Purchase Ship Equipment Here," *New York Times*, 18 January 1938, 12.

[606] Hanson W. Baldwin, "South Atlantic Guard," *New York Times*, 23 October 1941, 8.

[607] Topliss, "Brazilian Dreadnoughts," 289. Scheina, in separate works, dates the modernization to 1934 to 1937 and 1931 to 1935, respectively. Scheina, *Latin America*, 153; Scheina, "Brazil," in Gardiner and Chesneau, *Conway's 1922–46*, 416.

[608] Details of the refit are available in "Minas Gerais I," *Serviço de Documentação da Marinha — Histórico de Navios.*

[609] Scheina, "Brazil," in Gardiner and Chesneau, *Conway's 1922–46*, 416.

[610] Topliss, "Brazilian Dreadnoughts," 289.

Press called "one of the worst disasters in Brazil's naval history."[611] However, they commissioned the three homebuilt but long-delayed *Mahan*-class destroyers in 1943 and 1944 and added several American-built destroyer escorts and subchasers transferred under the United States' lend-lease program.[612]

Argentina

The dominant Argentine naval philosophy, which remained neutral in the First World War, in the aftermath of the conflict continued to call for the country to maintain a navy that would be both greater than any one of its neighbors and capable of ensuring that multiple country's navies were not able to combine with each other. A proposed naval construction bill was, however, turned back by the legislature in 1918. By 1922, the navy and the newly installed navy minister agreed that the Argentine Navy was inferior to the Brazilian and Chilean fleets. The accuracy of that statement could be debated, but the bulk of Argentina's fleet was composed of the ships acquired during the arms race with Chile around the turn of the century, and after the modernization of the Brazilian dreadnoughts and the Chilean acquisition of a super-dreadnought and four destroyers in 1920, the materiel gap was at worst worryingly close.[613]

On 20 September 1923, the Argentine legislature allocated 9.5 million gold pesos, or approximately a bit more than $9 million dollars, for the modernization of the country's two

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[611] Scheina, *Latin America*, 153, 160; United Press, "Brazilian Cruiser Sinks in Atlantic," *New York Times*, 10 July 1945, 3. *Bahia* was lost to a gunnery accident. While alone in the Atlantic, serving as a plane guard for transports heading to and from Natal, Brazil to West Africa, *Bahia*'s crew were conducting anti-aircraft drills using a kite towed behind the ship. Unfortunately for the crew, the ship had not been fitted with a safety feature which would have prevented the anti-aircraft guns from firing into the depth charges carried on deck, and someone made an error. Casualty figures vary, but according to *Time*, "only a handful" of *Bahia*'s crew lived to be rescued. See e.g. Associated Press, "Brazilian Cruiser Bahia is Lost in Mid-Atlantic," *New York Herald Tribune*, 10 July 1945, 2; "Rescued Brazilians Tell of Sufferings," *New York Times*, 12 July 1945, 22; "Brazil: Disaster," *Time*, 23 July 1945, http://content.time.com/time/magazine/article/0,9171,803597,00.html.

[612] Scheina, "Brazil," in Gardiner and Chesneau, *Conway's 1922–46*, 417–18; Associated Press, "Brazil Gets Sub Chasers," *New York Times*, 31 December 1942, 16.

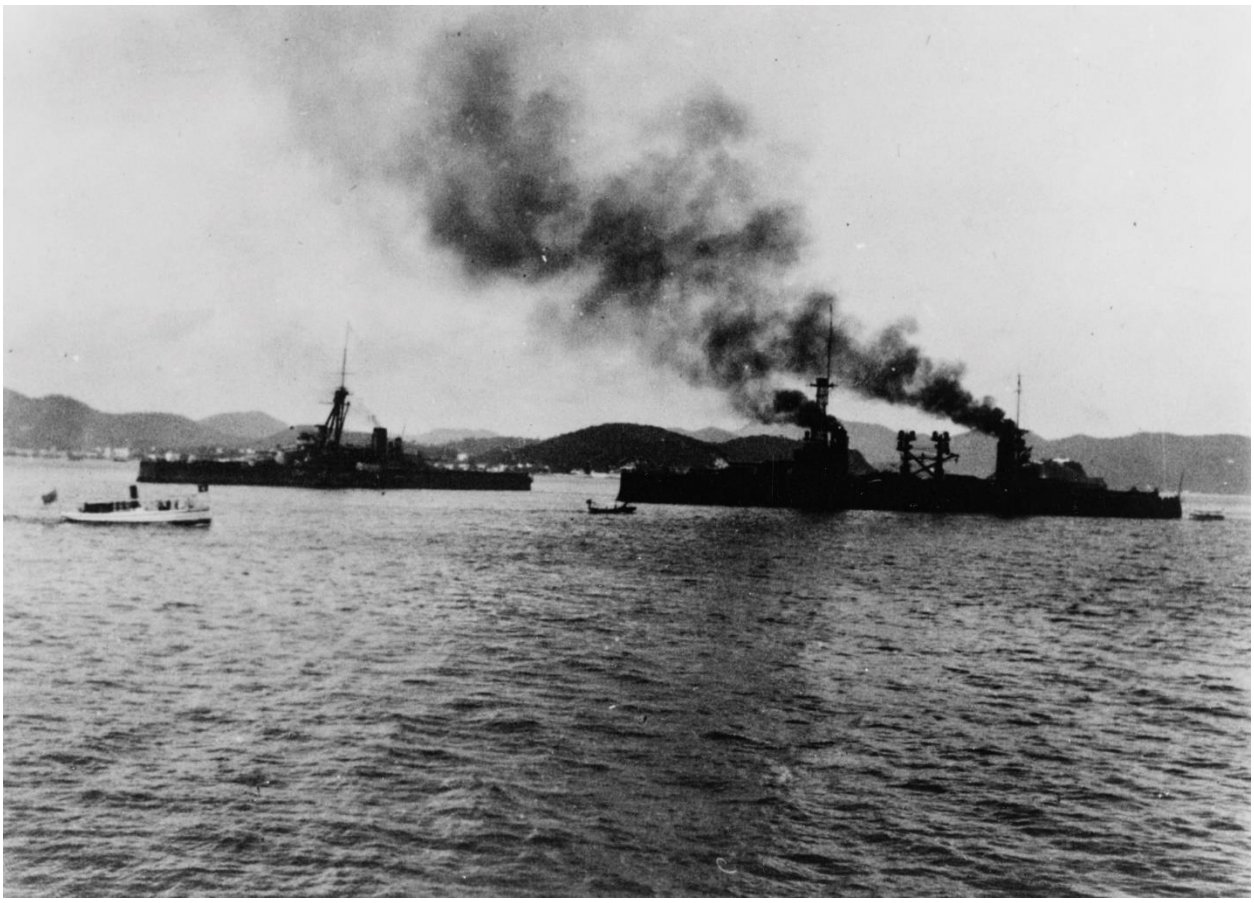
[613] Montenegro, "Argentinian Naval Buildup," 5, 10–12.

dreadnoughts and the four destroyers they had managed to acquire before the First World War.[614] Arguing in favor of this outlay, Marcelo Torcuato de Alvear, the president of Argentina, called attention to the Brazilian and Chilean naval upgrades along with the modernizations of similar American battleships, and advocated that Argentina "follow the example of European and South American navies."[615] For the dreadnoughts, this meant that they received new boilers and turbines, transitioning from coal to fuel oil firing, an improved fire control system, and a new mainmast.[616] Work on *Rivadavia* was completed by the Fore River Shipyard, and the ship departed in March 1926.[617]

The new navy minister commissioned a study in 1922 which came back with three tiered proposals, representing the navy's minimum, acceptable, and desirable expansion plans. Three years later, the government submitted a bill that would allocate £15 million to the navy, a figure which represented a full quarter of the typical naval budgets of the naval powers of the United Kingdom and United States and was more than three times the typical yearly Argentine naval budget. It called for the purchase of three cruisers, six destroyers, six submarines, and two other ships alongside infrastructure improvements for the navy's facilities. Despite strong opposition from socialist representatives, causing a lengthy delay, the bill was passed in late 1926 after the navy was able to win the support of Hipólito Yrigoyen, the former two-time president of Argentina.[618]

Figure 5.2: *Minas Geraes*- and *Rivadavia*-class dreadnoughts in Rio de Janeiro, c. 1918

[614] Ibid., 11; "Argentina to Send Warships to America for Modernization," *New-York Tribune*, 21 September 1923, 2; "Argentina's Expenditure," *Wall Street Journal*, 19 October 1923, 5.
[615] "President of Argentina Asks Modernized Navy," *New-York Tribune*, 18 June 1923, 4.
[616] Montenegro, "Argentinian Naval Buildup," 11–12.
[617] "Argentine Battleship to Leave Shipyards," *Christian Science Monitor*, 27 February 1926, 4A.
[618] Montenegro, "Argentinian Naval Buildup," 12–14. Notably, these would be the Argentine Navy's first submarines.



Source: Naval History and Heritage Command. Public domain. https://www.history.navy.mil/content/history/nhhc/our-collections/photography/numerical-list-of-images/nhhc-series/nh-series/NH-50000/NH-50068.html.

Beginning in the late 1920s, the navy purchased two cruisers and three submarines from Italy, three destroyers from the United Kingdom, and two similar destroyers from Spain. Residual funds allowed the navy to add an additional cruiser and seven destroyers from the United Kingdom, along with nine Argentine-built minelayers and minesweepers, in the 1930s. With these additions to the Argentine Navy, the country could theoretically deploy a battle force comprised of two modernized, if aging, battleships, escorted by three modern cruisers, and twelve modern destroyers. This gave them an overwhelming naval superiority on the continent

against any one nation.[619] As Argentina remained neutral for nearly all of the Second World War, however, none of these ships were tested in battle.[620]

Chile

The First World War severely disrupted the Chilean Navy's reconstruction plans, as the two gems in the order—its two super-dreadnoughts—were purchased by the United Kingdom after the conflict broke out. At the end of the conflict, the navy began to piece its program back together, and it was a good time to do it; the United Kingdom possessed a large surplus of warships which would eventually be scrapped as part of the terms of the Washington Naval Treaty. The Chilean Navy took advantage in April 1920 by purchasing five warships it had ordered and were under construction before the war's intervention: *Canada*, the ship which would have become *Almirante Latorre*, and three large destroyers. They were able to do this at comparatively cut-rate prices; *Canada* was given away from £1 million, less than half of what it had cost to build it.[621] The Chileans formally regained control of the ship on 27 November 1920.[622]

The other battleship it had ordered, what would have been named *Almirante Cochrane*, had been converted during the war into an aircraft carrier and renamed *Eagle*. The Chilean government asked about the possibility of re-converting it back to a battleship, but the cost of

[619] Ibid., 15–16.
[620] Scheina, *Latin America*, 162.
[621] Ibid., 139; Brook, *Warships*, 148; Livermore, "Battleship Diplomacy," 48; Leyland, "Foreign Navies," in Richardson and Hurd, *Brassey's Naval and Shipping Annual 1921–2*, 66–67. Prior to the First World War, Chile had six destroyers on order in the United Kingdom. Two, *Almirante Lynch* and *Almirante Condell*, were delivered before the beginning of the conflict. Three, re-named *Almirante Riveros*, *Almirante Uribe*, and *Almirante Williams*, were purchased in 1920. The last, which had been named *Almirante Riveros* prior to the war, was sunk during the Battle of Jutland. Heavily modified but worn out from heavy war service, the three ex-British destroyers were decommissioned in 1933, more than a decade before the other two. Scheina, "Chile," in Gardiner and Gray, *Conway's 1906–21*, 409; Scheina, "Chile," in Gardiner and Chesneau, *Conway's 1922–46*, 422–23.
[622] Burt, *British Battleships*, 240.

doing so turned out to be prohibitive.[623] The British instead offered the two remaining obsolescent *Invincible*-class battlecruisers.[624] This was briefly contemplated, and the Maritime League of Chile came out strongly in favor of acquiring a second battleship, but in the end monetary concerns took precedence over naval expansion. Still, when the possibility of purchasing the *Invincible* class became public knowledge, it turned out to be highly controversial among a contingent of new-guard middle-ranking naval officers who believed that the war had proven that military aircraft and submarines were more affordable and better suited to Chile's naval requirements.[625]

In the inter-war years, the Chilean government continued its naval expansion, albeit slowly. They added six *Serrano*-class destroyers and three *Capitan O'Brien*-class submarines in the late 1920s, perhaps in reaction to Argentina's naval buildup, and sent *Latorre* to the United Kingdom for a modernization at the Royal Navy's Devonport Dockyard from 1929 to 1931.[626] They also considered, but did not go through with, acquiring an 8,600-ton cruiser or two smaller cruisers, with the latter option being closed off by the beginning of the Second World War.[627]

During the 1930s, the Chilean Navy went through its own naval mutiny which *Latorre* participated in. During the Great Depression, in which demand for nitrates fell precipitously, the Chilean government's economic minister cut the salaries of government employees making over $3,000 pesos by up to thirty percent. This included naval personnel, who had already had their salaries cuts and overseas bonuses removed. A reactionary mutiny developed quickly, and

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[623] Preston, "Great Britain," 70.
[624] Leyland, "Foreign Navies," in Richardson and Hurd, *Brassey's Naval and Shipping Annual 1921–2*, 67.
[625] Somervell, "Naval Affairs in Chilean Politics," 389–90.
[626] English, *Armed Forces*, 148–49; "Chilean Battleship Being Modernized," *Christian Science Monitor*, 27 June 1929, 5.
[627] English, *Armed Forces*, 148–49; "Americas Scan Type of Arms Needed to Solidify Defense," *Christian Science Monitor*, 8 June 1940, 6.

Latorre was taken over by a group of enlisted men (led by petty officers) early on the morning of 1 September 1931. Most of the rest of the northern fleet—at this time, the Chilean Navy was divided into a northern fleet at Coquimbo and a smaller southern fleet at Talcahuano—followed *Latorre*'s example. The demands they sent to the government ranged widely. On a professional level, they included restoring their salaries, better rations, the provisioning of free clothing, changes in retirement and promotion policies, the closure of several naval schools, and ceasing the use of contracted pilots. However, a more radical faction within the mutiny, influenced by Communism, added political goals as well, including demands of action with Chile's foreign debt, bank interest rates, and subdividing land, financed by new taxes and seizures from wealthy individuals and families. After these initial demands, several land installations and the southern fleet rebelled as well; the latter sailed north to join with the other rebel ships, carrying sailors who were more radical the most of their compatriots in the north. The mutiny fell apart soon after this thanks to a confluence of factors, including worsening disagreements within the mutineer contingent between professional and political demands, the use of troops to rush the land-based rebels, and—importantly—the use of air power to strike the combined fleets. While this strike did little damage, it shook several of the mutineers who began to slip away, bound for ports to surrender. The first to depart were the *Serrano*-class destroyers *Hyatt* and *Riquelme,* and the rest of the fleet followed quickly.[628] Like the aftermath of the Brazilian Navy's similar action in 1910, the mutiny severely damaged the Chilean Navy's prestige and public confidence.[629]

Despite the depression-fueled economic problems, *Latorre* was in good-enough condition by 1941 to be the subject of a purchase offer from the United States, along with two destroyers

[628] William F. Sater, "The Abortive Kronstadt," *The Hispanic American Historical Review* 60, no. 2 (1980): 239–53.
[629] Scheina, "Chile," in *Conway's 1922–46,* 422.

and a submarine tender, in the wake of the attack on Pearl Harbor.[630] Chile refused the entreaty, and *Latorre* was used for neutrality patrols during the war.[631]

The aftermath of the Second World War

South America's dreadnoughts, already obsolescent prior to the war, were thoroughly obsolete by its conclusion. The war had demonstrated the immense superiority of modern aircraft carriers which could sink battleships from far beyond the range of their main armament. In the immediate years after the Second World War, Argentina, Brazil, and Chile began seeking cruisers, destroyers, and submarines. Though none were initially successful in acquiring anything larger than frigates, the United States' Mutual Defense Assistance Act allowed for six modern light cruisers to be sold to the three countries, with two going to each country. This gave each navy an acceptable parity in the new warship type and therefore did not begin a new major arms race.[632]

The dreadnoughts continued in service into the 1950s, though all deployed to sea less and less as time when on. *São Paulo* would last leave Rio de Janeiro under its own power in 1946 and was drydocked for the last time in 1948, by which time *São Paulo* had been decommissioned—likely a result of the substandard condition it had been in since the 1930s, along with the scout cruiser *Rio Grande do Sul*.[633] *São Paulo* was unsurprisingly also the first to

[630] Scheina, *Latin America*, 164; "Americas Scan Type of Arms Needed to Solidify Defense," *Christian Science Monitor*, 8 June 1940, 6.
[631] Burt, *British Battleships*, 240.
[632] Scheina, *Latin America*, 172–74; "U.S. to Supply Six Cruisers To South American Nations," *Christian Science Monitor*, 6 January 1951, 14. However, a Brazilian purchase of an aircraft carrier five years later threatened to create a new arms race. Norman Ingrey, "Arms Race or Defense Pact? Brazil's New Carrier Stirs River Plate," *Christian Science Monitor*, 26 December 1956, 6.
[633] H.O. Austin, "Brazil: Small, Modern Ships," *All Hands* no. 375 (May 1948): 16–17; Board of Trade, "'Sao Paulo' (Ex-Battleship)," The Merchant Shipping Act, 1894; Report of Court no. 7984, 14 October 1954, 1, via the Southampton City County Libraries, https://southampton.spydus.co.uk/cgi-bin/spydus.exe/ENQ/OPAC/BIBENQ?BRN=1247081.

be sold for scrap, departing the country under tow in 1951. The tow line parted during a storm north of the Azores, however, and the ship was never seen again.[634] *Minas Geraes* was sold in 1953 to a New York company for $556,500, and was towed to Italy in 1954.[635] Argentina's dreadnoughts were both sold for scrap in February 1957, with *Moreno* going to Japan and *Rivadavia* to Italy. The former was "the longest tow ever undertaken of such a heavy ship," according to the firm hired to move the ship.[636] *Latorre* was given a "complete repair" and had been used for training new enlisted personnel as late as 1948, but a boiler explosion in 1951 was never fully repaired.[637] It was the final dreadnought to depart South American waters. Having been formally decommissioned in October 1958, *Latorre* was sold for scrap to a Japanese firm in early 1959 for $881,000 and towed across the Pacific, arriving on 28 August.[638]

With the departure of South America's dreadnoughts, the governments of Argentina, Brazil, and Chile each made the decision to acquire new capital warships in the form of six light cruisers, divided two each between Argentina, Brazil, and Chile. These ships were supplied by the United States, the clear dominant power in the Americas after the conclusion of the Second World War, under separate bilateral agreements reached in January 1951. The United States deliberately distributed the warships equally between the South American countries to codify a newly balanced level of naval power between the three, but this effort was not entirely successful: before the end of the decade, both Brazil and Argentina each purchased a *Colossus*-

[634] Board of Trade, "'Sao Paulo' (Ex-Battleship)," 1–7.
[635] Scheina, *Latin America*, 321; United Press, "Brazil Sells Warship for Scrap," *New York Times*, 6 August 1953, 2; "Minas Gerais I," *Serviço de Documentação da Marinha — Histórico de Navios*. *Serviço de Documentação da Marinha* records the sale as being to an Italian firm.
[636] Scheina, *Latin America*, 321; "Argentine Warship on Long Tow," *New York Herald Tribune*, 14 April 1957, A10; Associated Press, "96-Day Tow of Warship Ends," *New York Times*, 18 August 1957, 61.
[637] Brook, *Warships*, 148; H.O. Austin, "The Fleets of Chile and Peru," *All Hands* no. 379 (September 1948): 24–25.
[638] Scheina, *Latin America*, 322; Brook, *Warships*, 148; Burt, *British Battleships*, 240; Reuters, "Chilean Warship in Japan," *New York Times*, 30 August 1959, S13; Associated Press, "Chile Battleship Scrapped," *St. Louis Post-Dispatch*, 18 March 1959, 7E.

class light aircraft carrier from the United Kingdom. Two aircraft carriers and six cruisers would thusly serve as the capital ships of Argentina, Brazil, and Chile into the 1980s and 1990s.[639] All but one cruiser would eventually be sold for scrap—the notable exception being Argentina's *Belgrano*, sunk by torpedoes during the Falklands War—and today, the sole remaining traditional capital ship in South America is Brazil's *Atlântico*. A former British helicopter carrier, the Brazilian government acquired *Atlântico* in 2018 to replace the country's second aircraft carrier, which despite frequent and expensive refits proved to be unable to stay in service for sustained periods.[640]

Appraising the dreadnought race

By ordering three dreadnoughts in 1907, Brazil became the third country in the world to have this innovative warship class on order. Dreadnoughts were now a symbol of national prestige and a cornerstone upon which a country's maritime defenses could be constructed around. The Brazilian government and its societal elites believed that their own dreadnoughts would provide the first step towards achieving the Brazilian government's goal of moving up in the world's ranks, help them become the dominant regional power, and ensure that no nations outside the continent could come metaphorically knocking on Brazil's door, weapons in hand. All these goals began with Brazil's naval power, and Brazil's dreadnoughts would become "the role of totems of an ascending and powerful" nation, in the perceptive words of one present-day

[639] Scheina, *Latin America*, 173, 194–97. While not traditional capital warships, the light cruisers were the most powerful surface warships in the region and stepped into the strategic role vacated by the departure of the dreadnoughts.
[640] ibid, 251–52; George Allison, "Brazil announce purchase of HMS Ocean for £84 million," *UK Defence Journal*, 2 January 2018, https://ukdefencejournal.org.uk/brazil-purchase-hms-ocean-84-million/.

expert in international relations with Brazil's Ministry of External Affairs.[641] Such a progression was a natural result of the country's growing wealth and population.

With their order, however, the nation became the talk of the naval world, much of it questioning their reason for acquiring such ships, stemming from a sense that Brazil was only a minor nation with no immediate military use for dreadnoughts. Amidst as rash of conspiracy theories claiming that Brazil was planning to sell the ships to another nation, these views primarily coalesced around on Brazil's lack of standing among the great powers or the world and the dreadnought ship type's lack of usefulness in maintaining Brazil's territorial integrity over the entirety of its lengthy coastline. However, these commentators glossed over the potential of the purchases for international 'soft' diplomatic power, especially in regional politics.

Brazil's diplomats spent much time shooting down these rumors, perhaps fearing that if Brazil's dreadnought ambitions were not taken seriously, the prestige acquired at their delivery would be lessened. In any case, the hopes of the country's elites were dashed by these dreadnought's potential for misuse, something which was emphatically demonstrated to the capital in November 1910. This event caused the influential *Naval Annual* to remark that "these events suggest the reflection that great armaments are valueless to a State unless that State possesses also trained and disciplined officers and men."[642]

Looking south, the calculations of Argentina were comparatively simple: under the pervading naval doctrines of the day, only dreadnoughts could counter other dreadnoughts, and the Argentines needed to respond to the Brazilian acquisition of such ships, which threatened to

[641] Alsina Jr., "Rio Branco," 24.
[642] John Leyland, "Secondary Navies," in *The Naval Annual*, ed. T.A. Brassey (London: J. Griffin and Co., 1911): 46.

alter the balance of power in the River Plate. As the Navy League of the United States opined in early 1909:

> The Argentine Republic is coming to the front as a formidable rival of Brazil in naval development … The Argentine government is following the example of Brazil by making statutory provision for a building program.
>
> … If Argentina seriously aspires to compete with Brazil she must build at least three large battleships equally as good as the *Minas Geraes* and not make the mistake of creating a coast-defense navy—a policy which has given France a lower place than she formerly occupied among the world's leading navies.[643]

Despite a controversial bidding process which saw shipbuilders furious at the dissemination of some of their unique designs, Argentina's dreadnoughts were constructed in the United States and delivered before that country's entry into the First World War. Like falling dominoes, this course of action by Chile's chief rival, a country with which they had unresolved border disputes, induced the Chilean Navy to seek their own dreadnoughts. They ordered theirs in the United Kingdom, a country and navy with which they had long-standing ties, over the bids of the United States and Germany.

Even before the completion of the Brazilian and Argentine dreadnoughts, however, they were set to be outclassed on an individual basis with ships being constructed elsewhere in the world. In April 1910, the *New-York Tribune* praised Brazil's *Minas Geraes* as "a ship whose fighting power is superior to that of any other fully armed vessel afloat."[644] Three years later, the president of Fore River Shipbuilding acclaimed the speed of Argentina's dreadnoughts as "a record … never equaled by any battleship of this country, and only slightly exceeded by any of the powers."[645] The qualifiers in both statements are telling: naval technology was advancing so

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643 "Argentina; Building Program," *Navy* (Washington) 3, no. 3 (February 1909): 38–39.
644 "Half Billion in Ships; Powers Spending This Sum for Half a Hundred Dreadnoughts," *New-York Tribune*, 24 April 1910, A4.
645 "Rivadavia Makes Required Speed on Mile Course," *Christian Science Monitor*, 17 September 1913, 4.

rapidly that the designs of *Minas Geraes* and *Rivadavia* were already being rendered outmoded by ships under construction and obsolescent by ships being designed. As newer and more powerful ships and armament were developed and deployed in Europe, the United States, and Japan, features like wing turrets and triple-expansion engines went out of favor and armor disposition would radically change.[646]

Moreover, the dreadnoughts of South America were built as part of a naval arms race which paled in comparison to the output of the dreadnought and super-dreadnought arms races raging across Europe, much less naval construction in the United States and Japan. "Nearly every great power in the world now has in commission or is building or is plan[ing] one or more warships of the Dreadnought class," the *New-York Tribune* intoned in same article which praised *Minas Geraes* and unintentionally foreshadowed its fate.[647] The sheer weight of numbers ensured that the question of a South American dreadnought sale would become a largely moot point. Once the traditional naval powers were able to construct and maintain large and more technologically advanced dreadnoughts, the addition of one or two no longer had the capability of swinging the perceived balance of naval power in entire oceans.[648] Therefore, crushed under the weight of time, technology, and numbers, the "curious anomaly" of their dreadnoughts remained just that—a curiosity in the footnotes of history.[649]

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[646] *Almirante Latorre* was also on its way towards being obsolescent, but British-completed wartime improvements, its main armament of fourteen-inch rather than twelve-inch guns, the end of the First World War, and the subsequent Washington Naval Treaty helped keep it merely outmoded, at least on paper.
[647] "Half Billion in Ships; Powers Spending This Sum for Half a Hundred Dreadnoughts," *New-York Tribune*, 24 April 1910, A4.
[648] After wartime seizures, by 1916 there were only six dreadnoughts in existence that were not held by a major power, four of which were in South America. Gerard Fiennes, "Foreign Navies and the War," in *The Navy League Annual*, ed. Robert Yerburgh (London: John Murray, 1916), 64.
[649] "Brazilian Battleship 'Minas Geraes'—Most Powerful Fighting Ship Afloat," *Scientific American* 99, no. 24 (12 December 1908): 428.

With the benefit of hindsight, the Argentine, Brazilian, and Chilean decisions to purchase dreadnoughts might be categorized as another entry in a long tradition of countries purchasing military hardware beyond their means or strategic requirements, much like Thailand's aircraft carrier *Chakri Naruebet*, commissioned in 1997, or Angola's and Uganda's Su-30 fighter jets, delivered in the 2010s.[650] Yet an examination of these examples shows that each were purchased at least in part as part of broader military and diplomatic strategies, even if each country's ability to maintain their equipment has been or could be subsequently degraded.[651] This is similar to the South American dreadnoughts, which were purchased for their potential use in regional diplomacy (Brazil) and regional defense (Argentina and Chile).[652] Moreover, regardless of the South American dreadnought race's scale or long-term impact, it can be viewed as a microcosm of the changes in international power and politics wrought by the introduction of dreadnoughts into the world's fleets.

[650] Mike Yeo, "Aircraft Carriers or Not? Flattops in the Pacific," *The Diplomat*, 8 September 2013, https://thediplomat.com/2013/09/aircraft-carriers-or-not-flattops-in-the-pacific/; "Uganda receives final Su-30s from Russia," *Defence Web*, 7 June 2012, https://www.defenceweb.co.za/aerospace/aerospace-aerospace/uganda-receives-final-su-30s-from-russia/; "Angola receives final Su-30K fighters," *Defence Web*, 20 May 2019, https://www.defenceweb.co.za/aerospace/aerospace-aerospace/angola-receives-final-su-30k-fighters/.
[651] Mike Yeo, "Aircraft Carriers or Not? Flattops in the Pacific," *The Diplomat*, 8 September 2013, https://thediplomat.com/2013/09/aircraft-carriers-or-not-flattops-in-the-pacific/; Peter Dörrie, "Why Are African Countries Buying All These High-Tech Jet Fighters?," *War Is Boring*, 26 March 2014, https://medium.com/war-is-boring/why-are-african-countries-buying-all-these-high-tech-jet-fighters-55a07133bc79; Tom Cooper, "Why Uganda Needed Sukhoi Fighters," *War Is Boring*, 18 January 2018, https://warisboring.com/why-uganda-needed-sukhoi-fighters/.
[652] Grant, *Rulers*, 146–47; Alsina Jr., "Rio Branco," 22–24.

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