### The Significance of a Spanish Imperial Enterprise:

## The Historical Importance of the Malaspina Expedition (1789-1794) in Defining Republican Chile

# La proyección nacional de una empresa imperial: la expedición Malaspina (1789-1794) en Chile republicano

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During the 19th century, the nations of Latin America made a continuous effort to recover the research done by several scientific expeditions that arrived to America during the last century of colonial domination. The lack of up to date information and the need for details about the characteristics and economic potentials of those territories, aroused in republican authorities the interest to recover any information from the past that might be useful to the needs of the new political reality. The dazzling sense of urgency with which ethnographic observations, botanical and zoological notes, essays on mineralogy, iconography and surveys on cartography were recompiled, confirm the intensity with which this task was undertaken; not only investigating in local archives, but also financing recurrent visits to libraries and collections of documents in Europe. It is precisely in this setting that a relationship was formed between the last great expedition sponsored by the Spanish Crown - led by the Italian sailor Alejandro Malaspina - and the challenges experienced by Chile in its first century of republican life.

The Malaspina Expedition (1789-1794), planned to scrutinize and meticulously study every corner of the Spanish domains, is one of the most brilliant episodes of naval, scientific and political history of 18th century Spain. It is the expression of the untiring spirit of the Enlightenment and, at the same time, a sign of the rivalries that in those years marked the tone of the relationships between empires of the old world of Europe. Without risk of exaggeration, this journey can also be interpreted as an event of global importance. Preparations for this expedition included the import of knowledge and instruments from France, England and Germany, and the scope of its purposes made it necessary to hire scientists from different countries. It was the mounting of an international team for a multidisciplinary venture. The route followed during the trip also confirms this image: in the five years of navigation, the ship would visit the whole American continent, New Zealand, Australia and the Philippines, becoming a fundamental milestone in the expeditionary tradition of Europe. It was, without a doubt, an enterprise of colossal proportions which would be of supreme help in the adjustment of the Bourbon's reform

plan to modernize the control of an empire in crisis. (1) More than anything it was a belated attempt to catch up with other European powers.

During both stays at the coasts of Chile, the members of this committee had an intense schedule that included such varied tasks as the exploration of the territory, the study of flora and fauna, the exploration of mineral deposits, making drawings and sketches of landscapes and inhabitants and taking many geographical measurements that were used to make very exact maps and plans. It would unfair however, to give all of the credit to the members of the expedition. One should not forget that a big part of these tasks were developed satisfactorily because of the irreplaceable contribution of local authorities and of some distinguished members of the Chilean aristocracy who supplied them with resources and information of inestimable value for these purposes and for the success of the enterprise. Considering the magnitude of the work schedule previously described, it is not hard to imagine the large amount of notes left by the members of the expedition about this phase of the journey. One only has to look at the pages of the book by Rafael Sagredo and José Ignacio González, *La Expedición Malaspina en la frontera austral del imperio español*, to discover that this committee left us one of the most complete portraits of Chile before the Independence. This portrait is even more valuable considering that it is not conditioned by the perceptions and interests of the enlightened travelers:

"As for the report of the voyage of the illustrated committee across America, it must not be seen as the recounts of a particular journey, even when it is essential to establish the characteristics of the overseas possessions to evaluate them. In this process, the testimonies given by the inhabitants of this part of America to the members of the expedition are fundamental, as are the daily activities, common preoccupations and aspirations that were shown spontaneously to the Europeans. In this way, we can maintain, perhaps contradicting or complementing other studies, that the notion, representation or characterization that the scientists made of the diverse imperial possessions and of the sum of them, is a result both of their own making and of the picture shown by their hosts. Thus, in opposition to the mainstream approach of historiography about the Malaspina Expedition, American societies and their inhabitants have an essential role in the process of understanding, and so, of projecting themselves through the imperial committee." (2)

However, our interest in the documents produced by the Malaspina Expedition is not confined to its value as a record of colonial reality during the 18th century. In the present article, we want to demonstrate how and why the investigations of this scientific-political committee managed to transcend beyond its immediate period. In other words, we intend to inquire into the relationships that made it possible for the enlightened imperial expeditions to be still useful in the postcolonial period, when authorities and intellectuals of the new republics used them as a starting point in the process of territorial construction of the nation.

Argentinean historiography offers a clear example of the way in which this tie was forged. The works published since 1930 by the frigate captain Héctor Ratto revealed the role of the cartographic data produced by the travelers of the 18th century - among them Malaspina - in the subsequent configuration of Argentinean territorial conscience. As they established the size and

characteristics of their geographical patrimony accurately, the 18th century explorations became an invaluable source for the aspirations of the authorities who, after the uprising of May 1810, took upon themselves the government of what had been the Viceroyalty of Río de la Plata. Even more so when the principle of *uti possidetis* was institutionalized as the core pillar for the resolution of possible territorial disputes. That is why they did not hesitate to compile the existing documents and put them in order according to the needs that arose with the new political circumstances and the challenges associated with the fact of being an independent nation. Administrative demands made it necessary to have a complete and detailed image of the limits and real dimensions of the territory of the new jurisdiction, and faced with the lack of up to date information, there was no other choice than to value the historical precedents and legacy. In this way, all surveys ordered by the Monarchy turned out to be useful for the Republic. (3)

It is precisely this process of giving new meaning to the existing cartography- from an imperial mode to a national one - that we intend to study when linking the Malaspina Expedition to the territorial history of our country. And, to this end, we think it is appropriate to start with the following premise: the importance of this scientific - political committee in Chile cannot be limited only to the period in which it happened, that is to say, the last quarter of the 18th century. Because during different moments of the next century, the republican authorities would need to turn to the documents produced by the scientific expeditions, particularly to that of Malaspina, to confront the lack of up to date data on geographical matters to resolve territorial disputes with neighboring countries, and to start new explorations to know accurately the areas recently joined to national sovereignty.

From this point of view, it seems there were no obstacles to this exercise of giving new meaning to the existing maps. That which used to serve for a better administration of the imperial system, was now of supreme help for the destiny of the new republics. And this attitude of the Latin American patriots towards the scientific - geographical knowledge of the previous century can be tracked down successfully in the different publications that they spread through Latin America and Europe after the independence movement. This was demonstrated by Chilean historian Iván Jaksic in his interesting biographical study about Andrés Bello, when he analyzed in detail the cultural offensive displayed by Latin-American residents in London during the 1820's. In the pages of magazines like El Censor Americano, Biblioteca Americana and El Repertorio Americano, important figures like Antonio José de Irisarri, Juan García del Río, José Fernández Madrid and Bello himself, published long articles and features that presented the new states to the rest of the world and insisted on their huge economical potential. (4) Not everything was done to promote the continent with the aim of diplomatic recognition; there was also the need to spread knowledge that could turn out to be fundamental for the construction of the Latin American republics after the Independence (5) An interesting example of this is the comment published by Andrés Bello in London when an English edition of Jorge Juan and Antonio de Ulloa's *Las noticias secretas de América* was published:

"The book we mention here deserves a longer article than the one we can destine to it now. It is divided in two parts: the first one describes the military and political condition of the coasts of

the Pacific Ocean; the second one refers to the government, justice administration, state of the clergy, and customs of the Indians of the mainland. From one and the other very great utility can be obtained, not only for history, but also for the subsequent governing of the vast regions that free from Spanish domination- are called to unfold the immense resources for prosperity that they foster. From this point of view, none of the travels and descriptions that have been brought to light until now can equal these Secret News, gathered with the sanest of intentions, with the most illustrated commitment, with the most efficient means, and set out with the most noble and unselfish honesty." (6)

However, the conclusions of some studies about the cartographic information of the 18th century can lead to think that this intellectual operation could not be done very easily. This can at least be inferred from the article of Pablo Heredia "Cartografias imperiales. Notas para una interpretación de los discursos cartográficos del siglo XVIII en el Cono Sur", published in 1998. (7) Based on three texts of verified explorations in the last quarter of that century, Heredia tries to demonstrate how the territorial representations registered by these fall within a logic of appropriation that is eminently colonial. Logically it denies the possibility of existence to other spatial identities, and thus sustains and justifies the totalitarian imperial project, in the same way as the Spaniards did in their confluence of the "holistic" spirit of the Enlightenment. In the face of this reasoning, it seems logical to ask oneself how the republican authorities could gather those territorial representations and adapt them to the administrative needs they confronted. Or in other terms, in which way they valued something that were essentially colonialist interpretations, useful only to the interests of a political structure they forswore and, at least in the beginning, showed to despise. One possible answer has already been given when we pointed out that considering the lack of up to date geographical information, the national authorities did not have any other choice than to assign value those records already available, despite the fact that they were articulated during the period before the independence. However, we do not think this is the main reason. More than insisting on the classical position of the political breakup, this kind of contradiction can be solved using the angle of intellectual continuity.

Giving new meaning to the existing knowledge was possible because the subject in question was scientific, rational, and ultimately independent from the political structure in which it originated. It remained valid and was accepted by citizens because the basic cultural substratum, the trust in science as a privileged authority to know reality, still prevailed. And in the case of geography this is even more apparent, because the practical character of its results confirms the notion of utility. This, and the fact that scientific knowledge was considered to be a tool of modern life according to the 19th century idiosyncrasy, helps us understand the ease with which the Latin American men of science chose to be the receivers of the already known.

But the reception of that scientific tradition not only expressed itself in the valuing of its conjectures, but also in the identification with the prejudices that conditioned the observations of the Enlightened travelers. This is what Pedro Navarro Floria demonstrated recently when he investigated the content of the ethnological inquiries of two explorers that traveled through Patagonia at the end of the 18th century: Antonio de Córdoba and Alejandro Malaspina. When

both of them, in the recounts of their travels, described the naturals of these regions as "wild" men or "barbarians", they just projected an evolutionary vision of the history of humanity over a different culture. This interpretation, according to Navarro Floria, would become the argument with which the final decision to abandon Patagonia was made, because it confirmed that it was an unwelcome environment, improper for civilized life. Also, it was not an important area for imperial interests and that is why it was excluded from any attempt of colonization and even from administrative preoccupations.

The novelty in Navarro's analysis is the subtlety in which he suggests that this interpretation remained during the republican period, which in turn explains the negative view that weighed upon Patagonia until the last quarter of the 19th century. More important, he gives us a new clue to study the brutal war that the Argentinean state sponsored against the Indians of the south, which ended in the complete depopulation of the region between 1875 and 1885. This fight, that according to the commonly accepted notion "was fought against a wild enemy, inadaptable to the dominant society, who had to be eliminated to include big areas to the national market", did not only have an economic reason, but also a scientific one, because the general contempt towards Indians was endorsed by the incipient anthropological "knowledge" of the 19th century, whose roots lay in the ethnographical observations articulated in the previous century. If in their time, the Enlightened travelers advised to leave Patagonia without harming its "backward" inhabitants, the republican authorities decided to conquer it later, annihilating its "useless" inhabitants first. (8)

Be it one way or the other, the truth is that during the 19th century there would be a strong relationship with the expeditionary tradition of the previous century. The most important representatives of this tradition -Cook, Bougainville, Juan y Ulloa, Lapérouse, Moraleda, Vancouver, Malaspina- would become a source of consultation not only for the scientists who proved themselves while traveling through the American territories of the New World, but also for the statesmen when making governing decisions. Stronger still would be the bond formed with them by the members of national navies, who took those travels as a starting point for the explorations they had to take on because of their proven scientific value.

#### The Decade of 1830: El Araucano and Claudio Gay

The spreading of geographical knowledge among the Latin American Enlightened groups is a clearly perceptible phenomenon from the second half of the 18th century onwards, when different periodicals that published articles and reflections about this science started to circulate, especially in the territories from Nueva España and Nueva Granada. (9)

Even though the diffusion of these writings had an explicitly instructive end, to aid in the knowledge of American territories and to stimulate its study and help its potential, it also contributed in political and economic decision making, as its data was allowed to define with bigger precision the directives to be taken by colonial authorities in their governing measures.

That is why the information published was mainly descriptive, with only a few occasional theoretical digressions: for contemporaries, geography was mainly a practical science and its importance depended on the ability to help the satisfaction of the most urgent deficiencies. This is how it was defined by Francisco José de Caldas, editor of *Semanario del Nuevo Reino de Granada* in its first issue, which started to circulate at the beginning of the 19th century:

"Semanario del Nuevo Reino de Granada will start by the condition of this country's geography. Geographical knowledge is the thermometer by which illustration, trade, agriculture and prosperity of a population is measured. People's stupidity and barbarism is always proportional to its ignorance in this subject. Geography is the fundamentals of all political speculation; it gives the extension of the country over which to work, it shows the relationships with other peoples of the world, the good coasts, the navigable rivers, the mountains that cross it, the valleys that conform it, the reciprocal distances established between populations and those that can be established, the climate, temperature, level of altitude above the sea level of all places, the temper, customs of its inhabitants, its spontaneous productions, and those that can be attained by art. This is the great aim of the economical Geography... and this Semanario, committed mainly to the happiness of this colony, can not start in a more dignified manner than by presenting the framework of our geographical knowledge (...)" (10)

We can see that not only the practical character attributed to geographical knowledge is present, but also its value as a criterion of modernity. Thanks to this, geography will gradually become a subject of general discussion, an issue of supreme interest for public opinion, because when it is treated as news, it will necessarily be integrated in the community's preoccupations and its material progress. And this tie between press and science, already established at the ending of the colonial period, would gain force during the republican period, when the investigative impetus characteristic of the century of Enlightenment was adopted with special intensity.

The Chilean case, as is well known, is different from the experience in the other kingdoms of the viceroyalties: there was no colonial journalistic hustle and bustle in the intellectual circles in Nueva España, Nueva Granada and Perú, that bequeathed so much to the first republican generation. However, at the beginning of independent life, the enthusiasts of science in Chile also felt the need to share their knowledge and modest investigations through the press, bringing up to date, on a local level, the tie that already had some years of existence in other countries. This explains the appearance in the first national periodical, La Aurora de Chile, of many articles of scientific discussion that slowly stimulated citizens' interest. To mention, for example, news about the propagation of vaccines and the quicksilver mine in Punitaqui by Judas Tadeo Reyes, or the meteorological observations of the Spanish merchant Felipe Castillo Albo, that were published regularly at the end pages of each number. (11) Of particular interest is the scientific explanation of the earthquakes that Camilo Henriquez would publish in January 1813, a true revelation for a population used to listening to supernatural speeches when these phenomena occurred. (12) Even when the data in these thoughtful articles were erroneous or were not at the level of global discussions on scientific matters, there is no doubt that they contributed enormously to the growing confidence in the use of reason.

However, during this period the publications strictly related to geography were scarce. More than of lack of interest, this was a consequence of the complete ignorance of the territory and the lack of individuals competent in this branch of science. Because of this, early the republican authorities were interested in bringing in foreign intellectuals willing to make a scientific travel through the national territory to draw a geographical map from direct observations. Juan José Dauxion Lavaysse, José Alberto Backler d'Albe and Ambrosio Lozier were hired to this end in the 1820's. Even though they seemed to initiate a promising expeditionary tradition, none of them succeeded with satisfaction. The anxiety to obtain fast results and the undying political quarrels of the period hobbled the work of these scientists to such a level that the efforts and resources invested turned out to be useless. As the attempt was frustrated, these studies which were so necessary to know precisely the characteristics and natural riches of the country remained wanting. (13)

Given this reality, no another solution seemed possible other than to use the data inherited from the 18th century to momentarily meet the lack of up to date geographical information. In this context, the hydrographical information produced by the Malaspina Expedition during its passing along the coasts of Chile was recovered for the first time. In 1823, the renowned pilot Claudio Vila submitted a report to the Rector and Consuls from the Tribunal of the Consulate stating the need to make a new hydrographical survey of the coasts of the republic, because the only reliable information known until that date came from the "Carta esférica de las costas del Reino de Chile comprendidas entre los paralelos de los 38 y 22 de latitud Sur. Levantada por orden del Rey en el año de 1790 por varios oficiales de su Real Armada; presentada a S. M. por mano del Exmo. Sr. Don Juan de Lángara, Secretario de Estado y del Despacho Universal de Marina. Año de 1799" (Spherical map of the coasts of the kingdom of Chile located between the parallels 38 and 22 Southern Latitude. Raised by order of the king in 1790 by various officials of the royal navy; presented to H.M. by hand of his Excellency Sr. Don Juan de Lángara, Secretary of State and of the Universal Depot of the Navy. Year 1799), a valuable portrait of our coasts made by the members of the expedition. Because only the principal ports of the republic were considered those in which Malaspina and his men stopped to take measurements - Vila insisted on the need to organize a new survey to draw a more detailed cartography that would fulfill the needs of the new republic. (14)

The comments of the pilot Claudio Vila to the observations by the members of the committee in the western coasts of mainland Latin America, is an expression of the bond the republican authorities, as well as the investigators who traveled our territory in the 19th century, intended to establish with the scientific-geographical knowledge produced in the previous century. In the case of the Malaspina Expedition, this renewed interest would manifest itself for the second time in February 1831, when *El Araucano* published an extensive toponymic list - with the respective latitudes and longitudes - established on the basis of the calculations and measurements previously mentioned. More than the list itself, the relevance of this is evident in the reasons presented by the author: how up to date and useful these measurements still were at this period of the century:

"The observations that lead to the calculations of the following results were done during the celebrated expedition of Malespina [sic] by the official scientists Espinoza and don Felipe Bauzá. Malaspina was stripped of his papers, and with them the hydrographic Deposit in Madrid made a general map of South America that has been reprinted in many countries. Despite this, the calculations that served as basis for this map are in many cases erroneous. Espinoza and Bauzá had to flee to England with their papers. Currently Bauzá lives in London: some years ago he sent the papers he had kept (wanted by Napoleon when he studied the occupation of Spain) to Baron Humboldt, who decided they had to be measured again by Oltmanns, member of the Berlin Academy. These results are thought to be trustworthy because of the merits of those who contributed to them and because of their possible usefulness for those who sail to the coasts of Chile and Peru" (15)

Despite the fact that the information had some errors, the trust in the talent of the travelers and the demands posed by the commercial flow, advised for its publication. There does not seem to be a doubt that, faced with the lack of modern and safe maps, it was reasonable to appeal to a moderately trustworthy source. In fact, the observations verified by the members of the Malaspina Expedition were the only data known worldwide about the location of the main features of the southwestern coast of America.

According to the quotation, these measurements had remained because of a map of South America, also drawn by the members of the Malaspina Expedition and presented by the Spanish Admiralty in 1798. (16) This map and the portrait of the Chilean coasts cited by Claudio Vila were the only and closest signs the Chilean authorities of the 19th century had handy about the passing of the Malaspina Expedition through these coasts, at least until 1859. As we will see later on, they would even be of great use for resolving territorial disputes. And in the 1830's, when there still was no research that refuted the geographical information in these writings, the only choice was to continue using them.

However, this position could not be maintained for long. We have already seen that the Chilean state had shown deep interest in sponsoring a scientific journey to know the national territory in its totality. And even though the first steps were not productive, the interest in continuing them was undiminished. That is why the government eagerly accepted the project presented in July 1830 by Claudio Gay, a young French scientist, that had arrived at the end of 1828, and was employed as a teacher at the Colegio de Santiago. His proven scientific competence, the possibility to satisfy his requests without great costs and the critical necessity to study the subject, convinced the Chilean authorities of the viability of this initiative and the timeliness of its realization. (17) The relevance of the agreement was expressed in the pages of the official paper, which published in detail the contract between the Chilean government and Claudio Gay. In addition there was an editorial that explained the advantages that would be obtained from the expedition, and the future tasks to which the French scientist would be committed. (18)

In the context of our study, the importance of the research that this renowned man of science would verify in his planned journey, lies in the fact that he would also use information from the

Malaspina Expedition during its stay in Chile. But Gay would not do it in the way it had been done up until then. Gay, without devaluing the studies of the committee of the Italian seafarer, would constantly analyze the Malaspina observations as an accredited interlocutor. In other words, Gay would make his own conclusions.

In this way a new relationship with the explorers of the previous century was formed: even with all the respect due, they tried to better their explanations, correct possible mistakes or complete what they did not explore. From then on, the progress of science in this country would consist on the reevaluation of that already known. (19)

According to his contract, Gay had to report his progress and investigations on a regular basis to a scientific committee that would compile and review his work. This committee was formed by the pharmacist José Vicente Bustillos, renowned for his vast knowledge of pharmacopoeia and local botany; the clerk of the cathedral church José Alejo Bezanilla, a student of physics and mechanics; and, Francisco García Huidobro, director of the National Library, who had a vast enough intellect to have an opinion about any matter. (20) The reports were published frequently in the journal, *El Araucano*, as an example of the benefits this scientific journey would give to the natural history and geography of the country. In these pages, the readers would again learn about the Malaspina Expedition.

Gay's journey started in December 1830 going first to the province of Colchagua. While he traveled the coasts of that jurisdiction taking the necessary measurements, he discovered that his calculations for the location of the cap of Topocalma did not match up with the data in the map he carried, made by Juan de Lángara in 1799 during the Malaspina Expedition. Intrigued, he repeated his measurements using different methods and while finding similar results, he was convinced that he Spanish map had an error in the location of this spot. As it was the only trustworthy map of the Chilean coasts, and knowing that clearing it of errors was essential not only for geography but also for navigation, he decided to register his correction in detail in the second report he presented to the Scientific Committee. The following quote not only shows the seriousness the French scientist used in his work, but also the knowledge he had of the works of the Malaspina Expedition and their invaluable importance considering the condition national cartography was in:

"I must make an observation of supreme importance, which is the rectification of the situation of Topocalma. You know, sirs, that Chile does not have any other geographical maps than those of the coast, and that those made of the inlands are very imperfect, most of the time drawn from data that are completely false. Those of the coast, however, are based on astronomical observations and made by many officers of the Spanish navy and above all by the famous yet unlucky Malaspina and Bauzá. Unfortunately, they had to include the whole western coast of America, and the small amount of time they had to complete them did not allow them to do it with all the details that a maritime map demands. In their maps, they must have incurred many errors, however involuntary, and the one I have rectified is even more useful for geography and navigation, as it is on a coast that will be visited frequently, and that the best geographers have

tried to draw. In fact, both authors place Topocalma to the north of Navidad and at the mouth of the Rapel river, while it is really located at least five leagues to the south of that spot. Before rectifying this error I wanted to investigate its origin and I found that these astronomers had done their observations at the mouth of the Rapel river, and that they had been fooled about the real name of the place, or that they had taken measurements on Topocalma itself, and that they had mistaken the lagoon of this valley, which meets the sea during winter, for the Rapel river. To determine which of these two suppositions caused the error, I repeated the observations of both wise men, that is to say, I took many measurements of the meridians of Navidad, close to the mouth of the Rapel river, I went to Topocalma to do the same operation, and the calculations I did later in San Fernando with mister Silva have given us Navidad on latitude 33° 56' (Topocalma 33° 55' Malaspina), and Topocalma on 34° 13', which proves that Malaspina and Bauzá had not known Topocalma, that this name must be erased from their map, be placed to the south, and write in its place Punta de la Boca del Rapel". (21)

After finishing all the tasks he had planned for his visit to the province of Colchagua, Gay decided to return to Santiago to put his notes in order from the material collected during the excursions. There, he planned a new journey, this time to the north, because he intended to travel through the inhospitable desert of Atacama in winter. Unfortunately, he only reached Puchuncaví: the hard drought in the province of Coquimbo making it impossible to continue his excursion, as it was very difficult to feed the mules and horses that were his transportation. Back in Santiago, he found out that the Scientific Committee was studying the possibility of requesting the Chilean officer in charge of business in France to import some books and instruments to facilitate the French scientist's investigation. Gay, who thought these errands would take too much time, presented a request to the government offering to travel to France and acquire the things that he needed himself. His request was accepted and at the beginning of December 1831 he found himself in Valparaiso waiting for a ship that would take him to Europe. However, as the possibility to set sail soon seemed remote, he decided to use his time to compile new materials for his investigations. So, while he occupied himself with the study of the natural history of the port, he came to know that the schooner *Colo Colo* was about to sail off to Juan Fernández. Convinced that the archipelago would offer a vast field for his interests, he petitioned the government for a ticket to embark on it, which was duly given to him without delay.

During his stay on Juan Fernández, which lasted for a fortnight, Gay was able to collect valuable botanical and zoological materials, as well as to analyze the geological and climatic characteristics of the place. His observations were communicated to the Scientific Committee on February 23rd 1832, four days after his return to Valparaiso. This report is of supreme importance for our study, not only because of the valuable data it contains, but because of the immediate responses it received on the pages of *El Mercurio* after its publication in *El Araucano*. (22) Signing as "The pilot's apprentice", an informed reader commented with irony on Gay's affirmations about the shape of the island Más a Tierra:

"I have read in n° 77 of El Araucano the description and discoveries of a scientific journey to Juan Fernández made by Mr. Gay a few days ago on the war schooner Colocolo, sent to the sirs

of the committee. I have read with indescribable pleasure the news he gives about the important plants and products discovered on that spot, and it is not less of a pleasure to know that this island is longer from north to south than from east to west, because to this day and age, it has been measured by those who have visited it as being 12 miles from east to west, or 37.440 British feet, and only 41/2 miles from north to south measured at the broadest part or 27.540 feet. The officers from the Spanish war schooners Atrevida and Descubierta, sent to these seas with the only end to draw maps, have demonstrated it so, and the map drawn by the British admiral Anson, agrees with them. I have passed frequently next to it, and no doubt my limited knowledge about this issue have made me imagine it according to the shape described by them; but now my error is amended, and I see it was reserved to the traveling scientist Mr. Gay to give a truthful idea of the configuration of this island, which no doubt will be as exact as the other observations (...)" (23)

In this humorous impugnation, it is meaningful that there is a detailed knowledge of the observations done by expeditions from the previous century. In the case of the Malaspina Expedition, it is confirmed that their measurements were known thanks to the map presented to the King in 1799, which undoubtedly was well known in Chile during the 19th century. Paradoxically, the same measurements that Gay had refuted with authority, would lead an anonymous reader to correct him in turn. However, this did not obscure the important cartographic precision made in Topocalma.

News of this well measured correction were not only known by the Scientific Committee, the government authorities and the readers of *El Araucano*: they also came to the attention of members of the prestigious *Academy of Sciences* in Paris. While in France, acquiring the instruments that had motivated his trip there, Claudio Gay took the opportunity to get in contact with his teachers and inform them of the labors he was pursuing in Chile. Because of his amazing discoveries, the *Academy* destined one of its sessions to this young scientist so he could expose his investigations. Among the data exposed, Gay concentrated especially on the narration of the measurements taken in Topocalma to prove the value of his correction for the cartographical representation of the republic he was studying, because all the extant maps of the Chilean coasts published in France and England still used as source those old measurements of the Malaspina Expedition that were the basis for the spherical maps of Juan de Lángara. (24)

Far from being a local phenomenon, the use of information obtained by the imperial commissioners seems to be common in South America during the 19th century. This is confirmed at least by the case of Argentina, where in 1837 an extensive toponymic list was published called *Tablas de latitudes y longitudes de los principales puntos del Río de la Plata nuevamente arregladas al meridiano que pasa por lo más occidental de la isla de Ferro (Tables of latitudes and longitudes of the principal points of the Río de la Plata newly corrected to the meridian that passes the most western end of the island of Ferro)*, based on the astronomical observations by Alejandro Malaspina during the visit of the scientific committee along the Atlantic coast. Of particular interest are the vindictive reflections added as a preface by the editor of the book, Pedro de Angelis, who tries to restore the memory of the lamented Italian navigator:

"The few pages we are proud to publish, are a sample of the method he had adopted in his observations. The smallest irregularities of the territory are submitted to astronomical calculations, and determined with a precision that, if possible to equal, does not seem possible to surpass. However, in this over-careful acknowledgement we miss the sounding of the river, not because Malaspina omitted it, but because in his handwritten notebook the graphic part of his travel could not be conserved. This void, if it deserves to be called so, was filled by don Andrés de Oyarvide, who spent five years sounding the bed of the Río de la Plata, in which he would end submerged. His map, the most perfect one of those who have been made until now, was published for the first time in 1812, sponsored by the Hydrographic Department of Madrid, that reproduced it in 1815; and it was used by the practically minded don Benito Aizpurua, who copied it in 1827 in the United States. There might be some differences between the Malaspina observations and those of the other astronomers (...), but those calculations are the ones closest to those of Azara, Souillac, Cerviño and Mossotti, who have best observed the position of this city, where they lived for many years. All these works followed those of Malaspina. The latter's observations have allowed them to achieve the level of perfection they currently have." (25)

If Pedro de Angelis' prelude only shows what the Malaspina Expedition meant for Argentinean cartography, his words can also be used to understand how this same relationship was defined in the case of Chile during the 1830's. If we consider that the lack of up-to-date knowledge in geographical matters was an insurmountable problem for at least the first twenty years of Chilean republican life, one can understand more easily why these measurements were so highly valued locally. As we said previously, the use of this data constituted a logical and necessary custom. However, as the first investigations sponsored by the Chilean state were done, all information started to be evaluated, corrected, and augmented. And, more than a scientific conquest, truth is a big part of the efforts of 18th century explorers and was always a starting point for those men of science who obtained fame traveling and analyzing the territory of these young Latin American republics. This is what we intend to illustrate when we try to understand how 19th century Chile benefited from the scientific geographical knowledge generated in the previous century. (26)

#### The Decade of 1860: the border problems with Bolivia

As we have analyzed, the data produced by the investigations of the Malaspina Expedition were highly useful for cartographic needs. We have already seen how Claudio Gay used them to draw his own maps correcting, when appropriate, the inexactitudes he encountered. However, because of the continual diplomatic friction between Chile and Bolivia during the 19th century, slowly their value would be interpreted under a new light. The specific context in which this process took place was the territorial dispute caused by the discrepancy about the limit between both nations, a delicate issue if we consider that the controversy - when defining the ownership of the Atacama Desert - implied that one of the countries would have control of the nitrate and guano deposits of Mejillones. One has to ask oneself, then, what role the royal expedition of Malaspina had in this delicate matter? The measurements of the Malaspina Expedition would be part of the

historical arguments presented by the Chilean Ministry of Foreign Affaires when encountering the demands of Bolivia. (27)

At the beginning of 1842, President Manuel Bulnes sent an exploration commission to the shore located between Coquimbo and Mejillones to investigate if there were guano deposits inside the national territory which could be exploited for the public treasury. Even when this expedition did not satisfy all expectations, the government decided anyway to declare "national property all guano deposits that exist between the coast of the province of Coquimbo, at the shore of the desert of Atacama, and on the neighboring islands" (28) With this law, promulgated on October 31st 1842, the northern limit of Chile was established at the Loa River, northern limit of the desert at parallel 21° 30'.

When the government of Bolivia was informed of this measure, it immediately instructed its Plenipotentiary Minister in Chile, Casimiro Olañeta, to present a formal protest to Chilean authorities claiming that the northern limit of Chile was the 26° parallel, at the Salado River, and that it was counter productive to declare sovereignty over territories in which there had never been exerted real authority. In his official letter, sent on January 30th 1843 to the Chancellor of Chile, Ramón Luis Irarrázaval, Olañeta had the sagacity to present forcible historical-geographical arguments that strongly endorsed the position of Bolivia. Not only did he quote fragments and notes of geographical writings of the 18th century, but also the descriptions from the main universal atlas recently published in Europe. No doubt, the Chilean minister was unpleasantly surprised by the letter. In his reply to the president of Bolivia, he expressed his surprise to the demand and acknowledged that in his archives he hadn't found any documents that could clear up the doubts related to that demand. (29)

Aware of the value of the letter, Irarrázaval was forced to double his efforts searching documents that would question, with the same intensity, the arguments of Olañeta. Thus he addressed the National Congress in August 1843, when he informed of the diplomatic incident:

"To the notes the Plenipotentiary Minister of Bolivia sent me exposing the fundamentals of his demand, I have answered asking for the necessary time to investigate all documents, all ancient memoirs, that could illustrate the issue; and among other measures to establish precisely the northern border that separates the territories of Chile and Peru under the colonial regime, I have ordered a close examination of the parts still conserved in the Spanish administration's archives, especially those in the city of Copiapó. Such is the present state of the discussion (...) about this matter caused by the Bolivian cabinet; and I believe it hardly necessary to assure the houses that it will be maintained by ours with all impartiality that justice prescribes, and with the seriousness imposed by the need of custody and defense of this republic's rights." (30)

Faced with this situation, one would expect the debate to be resumed soon, once Chile exposed the discharges prepared following Irarrázaval's instructions. However, the issue remained at a dead point for two years until 1845, when the new chancellor, Manuel Montt, informed the

Congress of the first results of the investigations. This would be the first time in which the marks of the Malaspina Expedition were quoted as an historical argument during the controversy, even when it was only done indirectly, through the letter presented by the secretary of the Universal Navy Office of Spain, Juan de Lángara, in 1799. After quoting some royal orders and a map of the Viceroyalty of Peru drawn in 1792, he added:

"I have also had in front of me a "Carta esférica (copio literalmente su título) de las costas del reino de Chile comprendidas entre los paralelos de los 38 y 22 de latitud Sur; levantada de orden del rey en el año de 1790 por varios oficiales de su real armada; presentada a S. M. por mano del Exmo. Sr. don Juan de Lángara, Secretario de Estado y del despacho universal de marina: año de 1799 " (Spherical map (I copy its title literally) of the coasts of the kingdom of Chile located between parallels 38 and 22 southern latitude; drawn by order of the king in the year 1790 by different officials of his royal navy; presented to H.M. by hand of his Exc. Sr. don Juan de Lángara, Secretary of State and of the universal navy office: year 1799'). In this letter, which is typical of a minister of the Spanish State, the coasts of Chile are designated as all those located between parallel 38 and 22, and they are not limited either by the north or south, so clearly they can be enlarged more to the north of parallel 22, as they are enlarged to the south further from parallel 38; which fits entirely with the map of the viceroy -of Perú Francisco Gil y Lemus- that places the southern border of Perú at 21° 48' southern latitude. So (as concluded from authentic documents) not only does Nuestra Señora Bay belong to Chile, but also the bay of Mejillones and Cobija and, in a few words, all the coast up to the Loa river mouth."(31)

Two years after Montt presented the thesis, and after some serious incidents between Chilean workers and Bolivian troops in Mejillones that culminated with the sending of a national frigate to restore sovereignty, the Bolivian Officer in Charge of Business in Chile, Joaquín de Aguirre, presented an extended letter to reactivate the efforts started three years before by Olañeta. The diplomatic situation was more tense than ever: until now, what had been a discrepancy about documents, now displayed signs of war that could only be contained by the prudence and discretion of both governments. That tension was reflected in the letter presented by De Aguirre, who not only repeated the arguments of the Bolivian chancellor in 1843, but also supplied new quotations and documental references from both the 18th and 19th centuries, indicating a detailed study, much better than that of the Chilean ministry of Foreign Affaires. (32) Sensing his advantage, Because of this, he refuted, one by one, all the data mentioned by Manuel Montt that supposedly confirmed the sovereignty of Chile up to the Loa river.

According to his analysis, the "Carta Esférica de las costas del Reino de Chile (1799)" had no value as historical document because it was "plagued by inexactitudes" and "denied by the Laws of Indies, those of the Viceroyalty of Buenos Aires, by all the maps, Chilean constitutions and by coincident testimonies of Peruvian and Chilean writers". His main objection to the document was that it adjudicated the coasts of the South Pacific only to the jurisdictions of the Viceroyalty of Peru and the government of Chile, disregarding that between them there was a fringe belonging to the domains of the Viceroyalty of Río de la Plata. This omission, in his opinion, was understandable if one reviewed the itinerary of the journey:

"The error of the captain of the Atrevida, the vessel that passed the shore in question, can easily be explained. He did not see anything but Chile and Peru, no doubt because of the distance of Viceroyalty of Buenos Aires authorities to the small part of their shore at the Pacific; and this is more evident since we know from the ship track marked on the map that he did not stop at the port of Cobija, the only one where he would have found authorities that did not depend on Peru or Chile. The Atrevida only stopped at Mejillones, an inhabited place, and from there on withdrew from the coast, mainly in front of Cobija, and did not come close again until Arica, a Peruvian port".

Less scientific, but just as impressive, is the refutation about the doubtful competence of the "unknown officials who wrote the letter of 1790", whose opinions, he claims, cannot be compared to the credited testimonies of Jorge Juan and Antonio de Ulloa, who "were captains of the Royal Navy", and of course would prove that the shore of Atacama depended historically from the jurisdiction of Alto Perú. (33)

No doubt, the Bolivian defense had an endorsement of documents that the Chilean ministry of Foreign Affaires could not deny during the debate. Both Olañeta and De Aguirre quoted with complete familiarity the most important geographical and historical books of the 18th century, illustrated with documents dated from the period of the Spanish Conquest up to the beginning of the 19th century; it also mentioned other travel diaries that referred to the Spanish colonial cartography; in short, the rebuttal showed a solid and well thought out work. But not only had they preoccupied themselves with compiling the innumerable testimonies that supported their claims, they also found ways with surprising exactitude to invalidate the few documents on which Chile based its point of view.

However, a few years later, the Chilean captain of frigate Miguel Hurtado Guerrero published a valuable text, product of a judicious historical investigation: "Memoria sobre el límite septentrional de la República de Chile" (Memoir about the northern limit of the Republic of Chile), dated Ancud, January 3rd 1859. (34) This book, that can be considered to be the first to defend with some degree of propriety the titles of Chile up to the Loa River, not only had objections about the sources cited by Bolivia in its overall argument but it went even further and dismissed criticism against the documents presented in 1845 by Manuel Montt.

We have already seen that both the Chilean and Bolivian authorities referred in different occasions to the "Carta Esférica de las costas del Reino de Chile" published in Madrid in 1799, not knowing that it had been made by the members of the Malaspina Expedition during their journey through the western coasts of America. The only mention of this was the little information in the letter itself: the map was drawn by "different officials of the royal navy" who manned the "sloops Atrevida y Descubierta". Nothing more. Let us remember that Joaquín de Aguirre even had the nerve to doubt the soundness of the data collected by these "unknown" navigators. Miguel Hurtado would be the one to show for the first time the real scope of the cartographic enterprise the litigants tacitly referred to. In the third part of his memoir, the Chilean captain quoted extensively some pages of the Discurso sobre los progresos y estado actual de la

Hidrografia en España (Discourse about the progress and actual state of hydrography in Spain) by Luis María de Salazar, published in Madrid in 1809. Here the aims of this important expedition were exposed in detail, its complex preparations and the tasks done during the journey. The tone of the text left no doubt as to the value of the investigations of the committee lead by Alejandro Malaspina and José Bustamante. In refuting the imputations of De Aguirre in 1847, Hurtado stubbornly points out:

"Considering all preparations and efforts, could one doubt of the exactitude of the maps drawn during this trip? Are these done by chance, are not the navy officers versed in geography that errors could be made when pointing out the coasts that belong to a nation? (...) There can not be the slightest doubt, considering all the background exposed, that the officials of the sloops Atrevida and Descubierta knew perfectly well the countries in which South America was divided, as well as the Royal Audiences it contained. It is clear that the Viceroyalty of Buenos Aires did not have a coast in the Pacific as it was not assigned one. And if the Viceroyalty of Buenos Aires did not have coast, it also should not have had the Audience of Charcas, one of its integral parts. So: how is it the Bolivians deduce that their coastline is located at parallel 26° south? Can the series of foreign geographical maps be compared with the Spanish hydrographical maps we refer to?" (35)

This memoir, according to Óscar Espinoza "fortunately filled the lack of defendants of the titles of Chile over the whole Atacama dessert domain" was the basis of the letter the Chilean chancellor Jerónimo Urmeneta sent in 1859 in answer of the letter by the Bolivian chancellor Manuel Salinas dated November 8th of the previous year. (36) After many years, the Chilean ministry of Foreign Affaires at last had a solid document to confront the historical-geographical arguments of the Bolivian cabinet.

All reports mentioned were published and constantly quoted by the press in 1863, while diplomatic relationships between both nations showed the first clear signs of a breakup. Years before, Chilean Matías Torres exploited some guano deposits south of Mejillones with authorization from the government. However, by order of the Bolivian government, Torres was arrested, prosecuted, and stripped of his properties in October 1862, under the argument that those guano beds were located in Bolivian territory and would be exploited by Pedro López Gama, who had signed a contract with the government of Sucre under the company Myers and Bland. This awoke an angry response from the Chilean authorities and started off a complicated diplomatic incident: already in May the following year, the president of Bolivia, José María Achá, suggested that the Legislative Assembly of Oruro should initiate military actions against Chile.

As soon as this became known, Chilean newspapers were full of editorials and articles that debated the legitimacy of the Bolivian intention and the alternatives to resolve the conflict. (37) The discussion, rich in historical and geographical references, was initiated on the basis of the detailed reproduction published by *El Ferrocarril* about the diplomatic letters exchanged by the chancelleries of both countries since 1842. (38) The readers, besides acknowledging the different

arguments presented by the parts, learned about the main scientific expeditions that had visited the continent during the 18th century, among them Jorge Juan and Antonio de Ulloa's, perhaps the best known of those sponsored by the Spanish crown in that century. But the last of those official letters, written by Jerónimo Urmeneta in 1859, was different: it was the only one that told in detail the visit of the Malaspina Expedition, explaining the real origin of the much quoted "Carta esférica de las costas del reino de Chile". This 1863 publication could be considered as the first time in which Chilean readers could learn about the real historical significance that this enterprise had for them.

While reviewing his presentation, there is no doubt that the "Memoria sobre el límite septentrional de la república de Chile" was Urmeneta's main source, because he included the same data that Hurtado quoted in his text, adding new arguments to prove the validity of this testimony. After analyzing the Relación del Obispado de Santiago y del Reino de Chile, written by Francisco de la Sota and José Fernández Campino, he indicated:

"Fifty years after this report was sent to the Court, the Spanish government decided to send a scientific commission that would examine and explore its domains in South America and other parts. To this aim, says don Luis María de Salazar, General Commandant of the Navy, in his speech about hydrography in Spain published by the royal press of Madrid in 1809, two sloops called Descubierta and Atrevida were built, which would be manned by the frigate captains don Alejandro Malaspina and don José Bustamante. The equipment of these vessels was made with all possible efforts and perfection, manned by people and officials chosen to the taste of their commandants; credited botanists and naturalists, painters and teachers of experimental physics and natural history. During six months, both the officers and the midshipmen exercised and practiced in all astronomic nautical observations. At the same time, the Archivo de Indias and the navy were copied in detail, extracting from them many strange data to guide the navigation about to begin. Moreover, each sloop was endowed with a collection of books and instruments related to the nature of the mission.

After these preparation, the expedition sailed from Cádiz in August 1789, arrived in Montevideo, and from there, passing Cape Horn and at the height of Chiloé, they traveled along the whole coast of South America to Acapulco, and from there passed to other seas.

One of the fruits of this expedition, so hard to prepare and with all the elements needed for the perfect and complete attainment of its purpose, was a spherical map of the coasts of Chile, drawn by order of the king and presented to him by don Juan de Lángara, Secretary of State and of the Universal Bureau of the Navy in 1799.

This map must be considered a true reflex of the expedition members ideas -very illustrated people who had compiled all data related to the purpose located in the Archivo de Indias- and the Spanish government itself had about the northern extension of Chile. It adjudicated to Chile

the whole Desert of Atacama, located between degrees 23 and 26, and 40-something minutes latitude south.

The 9th law, title 15, book 2 of the Recopilación de Indias, quoted by mister Salinas to prove that the writers of the map were wrong when they gave the desert to Chile, in my opinion, if it proves something, it is not that the desert belongs to Bolivia, only at the most that the Audience of Charcas touched the beaches of the Pacific at the west; and the prescription of this law is not incompatible at all with the territorial possession of Chile over the desert. Besides, if in the works of a scientific expedition like that of Malaspina and Bustamante there can be errors, and thus it must not be considered impossible to encounter a mistake in the map of Chilean coasts, one can not easily suppose this mistake to be so big as to give Chile four or five degrees of extra extension to the north not belonging to that country. An error of that magnitude would have stroken the universal secretary of navy and other members of the Spanish government, who are supposed to examine the map presented to the King, and would have been corrected immediately. The mistake of one degree can be admitted; but that of four to five is not conceivable.

The fact that in this map only the coasts of Chile are drawn until degree 28 does not prove, in my opinion, that its authors did not know the real extension of Chile, as mister Salinas claims, because it does not say that the coasts drawn are only those of Chile (...)" (39)

In the course of thirty years, and as an indirect result of this territorial controversy, a considerable part of the passing of the Malaspina Expedition along Chilean coasts had become known. We say *considerable* because until that date had not been published any complete edition of the logbook, and the other books did not have a considerable impact in our country. (40) If in the 1830's there were only some isolated references thanks to the "Carta esférica...", in the 1860s, owing to the memoir of Miguel Hurtado, there was enough information circulating so as to be able at least to gauge the real importance of this illustrated commission. It is also true that the references were still minimal and that it was hard to imagine how rich were the registers of that journey, stored almost completely forgotten in the archives of Madrid.

#### The Decade of 1870: Carlos Morla Vicuña and the Spanish Archives

A few years after the diplomatic debate with Bolivia had started, the Chilean government had to face the territorial demands of another neighbor: the Argentinean Confederation. From 1847 onwards, an intense discussion would start in which both countries made their historical-judicial arguments public to confirm their sovereignty in three disputed areas: Patagonia, Strait of Magellan and Tierra del Fuego. Just as with the controversy with Bolivia, the information collected by the members of the expeditions of the 18th century would play a main role in the historical arguments used by the ministry of Foreign Affaires to refute the Argentinean demands. But in this occasion -and coincidences apart- we find a totally different situation.

The references to the registers of these scientific committees were not based on secondary sources or references that were frequently imprecise. Now, thanks to the untiring search of the diplomat and historian Carlos Morla Vicuña in the Spanish archives, the Chilean government relied on *primary* sources to back its defense. And among the numerous documents this commissioner managed to compile during his visits to Spain in the decade of 1870, were those of the famous expedition lead by Alejandro Malaspina.

To put an end to the diplomatic friction that arose in 1847, after the Argentinean government presented a formal complaint to Chile about the establishment of a colony on the Strait of Magellan, both countries agreed to sign a special treaty in 1856 to define the way in which the territorial controversy would be resolved. (41) As stipulated in article 39 of the agreement, the signers committed themselves to resolve their controversies according to the principle of *uti possidetis*, trying to reach a direct, peaceful and private agreement; and in the case that no satisfactory solution for both parties could be met, the decision would be given to the arbitration of a neutral-friendly nation, thus preventing violent measures. (42)

With this agreement, both nations started to sponsor important historical investigations to compile all documentary evidence that would credit their claims of sovereignty in the southern territories of the continent. Between 1850 and 1870, backed by their governments, Chilean and Argentinean intellectuals published vast allegations in defense of those interests. At the Argentinean side were Pedro de Angelis, Dalmacio Vélez Sarsfield, Manuel Ricardo Trelles, Juan Martín Leguizamon and Vicente G. Quezada; while at the Chilean side, Diego Barros Arana, Miguel Luis Amunátegui, José Victorino Lastarria, Ramón Sotomayor Valdés and Benjamín Vicuña Mackenna, among others.

Until 1870, all allegations published in Chile were based primarily on the data from archives and libraries of the country. And even when these presentations offered solid arguments for the local cause, the government considered it wise to broaden the investigations to find information that would widen the range of primary evidence. (43) The idea of sending a representative to Spain to examine carefully the documents about the colonial history of both republics, took root. That is how in 1873 the new minister of Foreign Affaires, Adolfo Ibáñez, decided to assign this task to the young Secretary of the Legacy of Chile in France, Carlos Morla Vicuña.

Before becoming a diplomat, Morla Vicuña had started studies of Law at the Universidad de Chile, but his inclination towards the written word, journalism and politics distracted him so much from his academic occupations, that finally he did not obtain the title of attorney. In 1870, barely 23 years old, he traveled to Washington to work as secretary for the diplomatic corps. The next year he was destined to Paris, to occupy the same office under orders of the plenipotentiary minister of Chile in Great Britain and France, Alberto Blest Gana. It was precisely in this place that he received the task order from Adolfo Ibáñez to go to Spain to investigate everything related to the border issue and the far southern end of South America. (44)

During the three months that he dedicated to this mission in the Spanish peninsula, he had the opportunity to look into the main historical collections in Madrid and Seville. In the first one, he visited the Sala de Manuscritos in the Biblioteca Nacional, the Archivo de la Academia de la Historia, the Depósito Hidrográfico, the Biblioteca y Archivos of the Departamento de Marina, the Biblioteca del Escorial and the archives of the ancient State papers in Alcalá de Henares. In Seville, where he stayed longer, he examined in detail the Archivo de Indias. (45) With the data compiled, he was able to write an extensive memoir to Alberto Blest Gana from Madrid on September 18th 1873. The text, titled "*Primera Memoria dirigida por el Secretario de la Legación de Chile en Francia al Ministerio de Relaciones Exteriores en 1873*" (First Memoir sent by the Secretary of the Legacy of Chile in France to the ministry of Foreign Affaires in 1873) was sent to Chile immediately, where it was received with enthusiastic approval by the minister Adolfo Ibáñez. The new documents, plus the antecedents already exposed in the books of Chilean intellectuals, allowed them to prove with historical strength that Patagonia, the Strait of Magellan and Tierra del Fuego were all under the jurisdiction of the Chilean authorities during the whole Colonial period.

As for our objective, this text shows that during his visit to the Depósito Hidrográfico of Madrid, Morla Vicuña had an attentive reading of the documents of the Malaspina Expedition about the visit to South America. Moreover, they were so useful to confirm the Chilean thesis that he did not doubt to copy those pieces he considered important for his task, and dedicated many pages of his exposition to the briefing of the information they contained. (46)

When he referred to the scientific expeditions of the 18th century, he considered that the most important ones for the border issues were those of Antonio de Córdova and Alejandro Malaspina. As for the last one, he presented a brief account of his main objectives, described the tasks done by some members of the crew -Felipe Bauzá, José de Espinosa and Antonio Pineda- and their defeat in South America. He also mentioned the sad destiny of the committee and how its papers were left abandoned, to be finally archived in the Depósito Hidrográfico of Madrid. About this, he said that the main reason the Crown had to order the ostracism of Malaspina and take away his documents, was the danger associated with the publication of his critical reflections on the Spanish imperial system.

Among the documents of his repport, Morla Vicuña quotes "Reflexiones Políticas sobre los Dominios de S.M. desde Buenos Ayres hasta Chiloé por el Cabo de Hornos" (Political Thoughts about the Possessions of His Majesty from Buenos Ayres to Chiloé through Cape Horn), from which he extracted a piece on the eastern coast of Patagonia. Here, Malaspina reflects about the abandonment and almost nonexistent possibilities of the region. Though Vicuña does not explain it clearly, he does in the reading of the original text confirm that the reference shows where the limits of the Viceroyalty of Río de la Plata. In the next sentence he then mentions some data of the account of the same journey written by Antonio Pineda, which includes a geographical description of the provinces of Río de la Plata that clearly states the limits of that jurisdiction. (47) Later on, to confirm the truthfulness of the account about the episcopate and its districts made by the Royal Officials of Santiago in 1744, he quotes Malaspina again, whose description

of the south border of the government of Chile corroborates the limits consigned by those officials. (48)

Following the same argument, he declares to have found "a report of the Spanish cosmographer and marine geographer Sr. Don Felipe Bauzá (...) who ascribes to the Kingdom of Chile the Patagonia and the space that extends from the Negro river and even from the Colorado river to Cape Horn". Next, he cites a fragment of the instructions written by Malaspina to father Manuel Gil, where the former clearly explains the aim of the important cartographical tasks assigned to Bauzá. (49) The insertion of that fragment only makes sense when one considers the personal reflection that follows, a clear testimony of the fact that Chilean authorities were not the only ones interested in the information and the geographical maps of the Malaspina Expedition:

"In Buenos Aires they have an exact idea of the importance and authority of Don Felipe Bauzá in matters of American geography. In a report by D. Juan María Gutiérrez, Vicente F. López and Andrés Lamas and sent, by order of the government, to a Commissioner who should go to the archives of the Peninsula to obtain copies of documents that are interesting for the history of Río de la Plata, it is recommended "to obtain the spherical map of the interior part of South America to show the road from Valparaíso to Buenos Aires, constructed according to astronomical observations made in 1790 by Don José de Espinosa and Don Felipe Bauzá, officials of the Hydrographical Direction. This map, as these sirs say, is as interesting as it is curious"" (50)

The insistence in the image of Bauzá as a real authority in geographical matters justified the mention of a later quote in which the credited cartographer confirmed, again, the sovereignty of the Government of Chile over the disputed territories. In 1813, Spain studied the possibility of sending a considerable contingent to increase the troops of General Goyeneche, who was fighting in Peru to maintain the Spanish colonial possessions. Bauzá was asked which was the most appropriate point in the Atlantic coast to disembark the reinforcements, and he remarked that it was impossible to verify in the outskirts of the Río de la Plata, because it was an area already controlled by the uprising. That is why he proposed to disembark south of the Negro river, on the coast of the Patagonia, indicating that those lands corresponded to the jurisdiction of the former General Captainship of Chile. Finally, Morla Vicuña said he had looked at the maps drawn by the expedition - the maps that the Argentinean investigators looked for - and that he had the pleasure to conclude that they did not alter the arguments previously mentioned. (51)

To buttress his arguments, Morla Vicuña had legalized copies made of those parts he considered most significant for his litigation. Besides an important number of royal decrees and accounts of the 16th, 17th and 18th centuries, he adjoined -as registered in his memoir- three documents of the Malaspina Expedition: a fragment of the letter with the instructions of Alejandro Malaspina to Padre Manuel Gil, the quoted "*Reflexiones Políticas sobre los Dominios de S.M. desde Buenos Ayres hasta Chiloé por el Cabo de Hornos*" and the account of the journey from Buenos Aires to Chiloé, by Antonio Pineda.

Strictly speaking, these documents are the first ones that returned to Chile after the expedition ended. Although partial editions of the journey of Alejandro Malaspina and José Bustamante were published during the 19th C., these were still largely unknown, because they were part in the collection of the Depósito Hidrográfico of Madrid. These documents would only be published in 1885 in Spain when Pedro Novo y Colson edited a carefully chosen selection of the reports of the committee. (52)

The work performed by Morla Vicuña in the Spanish archives is not only important because of its usefulness during the territorial dispute with the Argentinean Confederation, but also because he was able to document and copy a large amount of historical documents from the rich Spanish collections. In this case, the recovery of the registers of the Malaspina Expedition confirmed the richness of information embedded in the descriptions and the hydrographical maps left by these explorers. In fact, Morla Vicuña's name is referenced often by researchers in regards to the Malaspina documents and shows the recognition that all neo-American nations gave to those works.

The broad scope of the Malaspina investigations and the rigorous precision of the data would turn this expedition in an inexhaustible source in searching solutions to the innumerable deficiencies and conflicts the Latin American republics suffered during the 19th C. Even if, at the beginning, this research was used to fill the lack of up to date information in geographical matters, as time passed, it would provide the historical arguments used by different republics to back their territorial claims.

Far from what could be expected, the ministry of Foreign Affaires decided not to publish the documented memoirs of Morla Vicuña. Even though the author was congratulated by the minister Adolfo Ibáñez, who praised his "*industriousness, intelligence and continuing effort*" during this mission, the report was finally archived and did not reach the presses until after the diplomat's death. (53) However, Morla Vicuña had the chance to publish a brief booklet in which he presented part of the information gathered during his first stay in Spain.

During 1876, the *Revue des Deux Mondes* published a series of articles titled, "*Les conflits de la Republique Argentine avec le Brésil et le Chili*", written by Emile Daireaux, a French writer living in Buenos Aires, which presented a series of arguments that refuted the antecedents used by Chilean government to justify its domain over the Patagonia. To counteract the effects of this campaign, the Ministry of Foreign Affaires entrusted Morla Vicuña with the writing of a solid response that would prove the truthfulness of the Chilean thesis. At the end of that same year they published his awaited booklet: *La Question des Limites entre le Chili et la Republique Argentine*.

According to the author, this text was widely distributed in Europe and America as part of Chilean politics of publishing the titles that backed its claims in the southern territories. Three years later the Spanish version was printed in Valparaiso under the title of *La cuestión de límites* 

*entre Chile y la República Argentina*. At the same time, it was edited in Montevideo by Francisco Hurtado Barros. (54)

As expected, Morla Vicuña offered a clear synthesis of the results of his first investigations. Comparing this text with his memoire from 1873, there is a notorious change in this edition, combining rigorousness and style. He avoids transcriptions that are too long and eliminates notes that only made sense in the original diplomatic report. Furthermore, one must not forget that the main objective of his booklet was to refute the articles published by Daireaux and to carefully explain the documents that invalidated his claims. The Malaspina Expedition documents were fundamental.

One of the recurring arguments in the Daiteaux's exposition was that the Chilean defense had not handled documents written after the royal decree that established the Viceroyalty of Río de la Plata, which he claimed, had transformed significantly the colonial map. With this clever argument, Daireaux started a new wave of discussion in the area where Chilean representations had not been very clear. In fact, almost all allegations published in Chile until the decade of 1870 were focused on documents of the 16th century and beginning of the 17th century, and even when they quoted later texts, they did not do it with the same conviction as in the period of discovery and conquest. Because of this, Morla Vicuña placed special emphasis on the last quarter of the 18th century, in his intent to save the topic of discussion. Using the information he had quoted in his memoir of 1873, he argued:

"Now Daireaux cannot say that Chile has not presented documents of a later date than the royal decree that constituted the Viceroyalty of Buenos Aires, and which show the justice of Chilean intentions. Since the date of that decree up to the year of the independence, several authorized proofs have been presented to confirm the rights of Chile. In the description of a scientific journey made by the Spanish sloops Descubierta and Atrevida in 1790, lead by the wise Malaspina, the limits of the viceroyalty are determined in the following fashion: Its extension, from north to south, ranges from the lands next to Marañon, on parallel 18 southern latitude, until the cape of San Antonio, at the mouth of the Río de la Plata, at 36 degrees southern latitude. Don Juan de Lángara, secretary of state and navy presented the king in 1796 [1798] with a map of South America drawn by officials of the Spanish navy in which that viceroyalty had been assigned the same limits as those determined by Malaspina. In this map the current extremity of the continent presents, written in big letters, the following inscription: 'Kingdom of Chile'. In 1813, when the colonies of South America were already at war with their rulers, the director of the Hydrographic Office in Madrid, the distinguished geographer Felipe Bauzá, who had visited these austral regions with Malaspina, calls in a memoir to the King Reino de Chile' the territory south to the rivers Colorado and Negro. Without appealing to other documents nor other authorities than the word of the king of Spain himself and the official geographical descriptions, I believe to have shown that the southern extremity of America between the Colorado river and the Diamante river, at the north, and Cape Horn, always belonged, until independence day, to the Kingdom of Chile." (55)

It seems unnecessary to insist that the data from the Malaspina Expedition was important for Morla Vicuña. In the history texts he wrote between 1873 and 1876, references to the journey take several pages and reveal a thoughtful study of those works. In that line, we could think that his interest in these documents had to do only with the use they had for his mission. It might be obvious, but if they had not confirmed the Chilean position, he would not have quoted them. However, some later events show us that Morla Vicuña had completely understood the importance of this scientific-political journey for American history, beyond the fact of being a simple source of information to solve a certain diplomatic impasse.

The same year that the booklet of Morla Vicuña was published, the governments of Argentina and Chile decided to start negotiations again to solve the pending territorial issues.

And faced with a possible arbitration trial, the ministry of Foreign Affaires asked the secretary to go to Spain again to gather more information. It was a perfect opportunity to complete the investigations initiated three years before. Again he visited all archives and collections that had registers about the Government of Chile, the Viceroyalty of Río de la Plata and the Audience of Charcas. And he carefully consulted the catalogues of the Hydrographic Office of Madrid, which housed the documents of the Malaspina Expedition. During this stay, he embarked upon an important project.

As he informed in the memoir for the ministry of Foreign Affaires once he finished this second visit, he became friends with important civil servants of these archives, as well as with the main experts on America of the Peninsula, among them Valle del Zarco, Zaragoza and Marcos Jiménez de la Espada. Among the civil servants, he became close to Martín Ferreiro, Secretary of the Geographic Society of Spain and first draftsman of the Hydrographic Office, who, according to Morla Vicuña, helped him significantly in his investigations. (56) A letter of 1880 sent from Spain by Juan Eyzaguirre to Morla Vicuña reveals the contents of that project, and the importance of these friendships.

Juan Eyzaguirre was entrusted with directing the transcription of the documents at the Hydrographic Office of Madrid that were sent regularly to Morla Vicuña in Paris. The letter was written to comment on the viability of publishing the documents of the Malaspina Expedition, something in which Martín Ferreiro and Marcos Jiménez de la Espada were interested as well:

"Madrid, December 7th, 1880:

Dear friend Morla:

You have already been asked by Ferreiro to consider the matter of Malaspina and just as he and Espada and yourself are the parties interested, I do not really have more vow than that given by the enthousiasm and activity I put to your disposition. I do not think the idea of Ferreiro is a bad one, that of associating Espada because of his special knowledge.

The big question in particular to my way of looking at it, is to know if the enterprise has to be Spanish or American. Ferreiro, Espada and all other real Spaniards will never be able to mingle with something that reeks as depression of nationality. My situation does not allow it either, for reasons that cannot escape to you. Naturally, you will want all publicity. So in my opinion the book should be Spanish or neo-American. In the first case, the request and compilation have to be done here and according to the taste of these sirs. In the second case, you and yours could not do more than to edit and copy everything related to the matter. So, at risk of being tiresome, I insist this is the main issue unless you with your superior discernment find a way that satisfies all possible particular demands. I would greatly appreciate it if you reserved this little insinuation I make about this matter to yourself because, unless it is completely gratuitous, I would not wish to help raising obstacles to fulfill the project that, after all, has so much merit and because, if you find a way not to (unreadable) if it is to combine all, it would be completely useless and even pernicious for my interests and friendly relationships to aid suppositions that I have been cause of delay (...)"57.

The fragments that follow to this interesting register only confirm how serious the project was and how advanced the labors initiated by Morla Vicuña were. To the letter, Eyzaguirre adjoined various papers with the references to all manuscripts of the Malaspina Expedition that existed in the Hydrographic Office of Madrid. This was meant to provide the Chilean secretary with the complete list of the documents so he could ask precisely for those of his interest. Also, the letter shows that Eyzaguirre had told him of the important works of father Manuel Gil, which, according to the Spaniard, would be of great use in any National Library of the American republics. Furthermore: a week later, Eyzaguirre sent a new note in which he adjoined the complete copy of the report that Malaspina wrote for the cleric that registered the journey. He also said that the abstract of the tasks done by the expedition during its first year was about to be finished and would be sent to him as soon as possible. (58)

From this point of view, there is no doubt Morla Vicuña had serious intentions to publish the registers of the Malaspina Expedition. (59) Clearly, he had understood the importance of this journey, and was convinced of the need to publish the detailed information it had produced. However, what Juan Eyzaguirre said in his letter to Vizcuña, dated December 7th 1880, still astonishes us. The fact that a Chilean (neo-American) pursued this enterprise would without a doubt hurt the Spanish national pride and sentiment. In that sense, his allusion to Jiménez de la Espada and Martín Ferreiro speaks for itself. Confluence was impossible: "(...) the book should be Spanish or American. In the first case, the request and compilation have to be done here and according to the taste of these sirs. In the second case, you and yours couldn't do more than to edit and copy everything related to the matter (...)".

Though Morla Vicuña did his research motivated by the territorial controversies we analyzed, it is meaningful that his commission gave a new value to the tasks performed on these latitudes by the expedition. These will not only be rescued for their use in geographical matters or their

relevance in judicial terms, but also for their richness as a historical source. No doubt, this had to do with the broad scope of subjects the committee studied during the journey: ethnography, mineralogy, botany, zoology, cartography, politics, economics, etc. This expedition was a fundamental landmark in colonial Latin-American history. Though we could say this historical-documental value was underlying in previous interpretations, it became more defined in the work of the diplomat. Perhaps Morla Vicuña's project was implemented during an inconvenient moment. We will recall that at that moment the diplomatic ties were not restored yet, after being broken in 1865 because of the war that confronted Spain with the republics of the Pacific. Signs of the conflict still remained, in spite of the generous act of the Spanish government to allow an American nation access to its archives. We do not know why the idea did not succeed. It is true that Morla Vicuña was sent to Brazil in 1885 in representation of the Chilean government, and perhaps the distance did not allow for the continuance of his work. In any case, there is a persisting element: the strength of Spanish nationalism. And it would be put to the test when another Chilean, frigate captain Francisco Vidal Gormaz, started to transcribe a large part of the documents about the Malaspina Expedition in the decade of 1880.

#### Vidal Gormaz and the Malaspina Expedition

Francisco Vidal Gormaz, distinguished navigator and outstanding member of the Chilean Navy, has an important place in the naval history of our country. When he was very young he carried out several expeditions to the southern regions of the continent, and during them produced an important progress in geographical matters. (60) In fact, he would be part of the generation of officers that followed the expeditionary tradition of the previous century, surveying, under the sponsorship of the State, those territories that were slowly being integrated to the national sovereignty since the middle of the 19th century. On account of his merits, he became director of the Hydrographic Office of the National Navy, when created in 1874. There, he started publishing the *Anuario Hidrográfico*, a magazine which collected the results of the new explorations as well as the historical investigations carried out by members of the Navy.

The relationship between Vidal Gormaz and the Malaspina Expedition begins in 1878, when the frigate captain publishes a pleasant text titled "Alejandro Malaspina" in the *Revista Chilena*, where he covers the biography of the Italian navigator and the itinerary of his expedition up to the tragic destiny that he faced back in Spain. At this point, when he analyses how Malaspina had been completely forgotten even by his travel companions, he inserts a thought that, seen from our time, seems at least peculiar: calibrating the relevance of the studies of Malaspina, he wishes that the Hydrographic Direction of Madrid whould publish the documents related to the voyage that remain "covered with dust" in the Peninsular files. As we will see, Vidal Gormaz would exert an important degree of influence in the fulfillment of this desire. (61)

In 1884, the minister of Public Instruction, José Ignacio Vergara, assigned him the mission to represent Chile as delegate at the Congress of the Meridian to take place in Washington that same year. The minister ordered him also to visit the different hydrographic offices of Europe and the United States, to study their organization and administrative methods, to apply some of those

ideas in the national office. In the course of this mission, he received a new instruction, this time from the minister of War and Navy, Carlos Antúnez, who asked him to transcribe the most interesting manuscripts he could find about the nautical history and geography of the country. (62) So he set out for Spain where he contacted the Minister of the Navy to request a royal decree allowing him to visit the files and offices of that ministry without restriction. His petition was accepted and on January 16th he started on the work to identify the geographical books and documents of interest for the naval history of South America.

As the transcriptions would prove to be arduous, he requested assistance from the Plenipotentiary Minister of Chile in Paris, Alberto Blest Gana and cooperation from the new secretary of that embassy, José Toribio Medina. Together, they concentrated all their attention in the Hydrographic Deposit of Madrid, which had the most appropriate documentation for their study. Among his significant discoveries was the logbook of Malaspina and well as other interesting documents related to the expedition. Vidal Gormaz knew the immeasurable value of those still unpublished texts and was certain of their usefulness. Thus, he arranged to have them copied systematically. With the help of several copiers, most of whom he paid from his own funds, he oversaw the transcribing of more than two thousand manuscripts and four original maps over a period of nearly two months. On May 5th 1885 he was already back in Chile armed with this valuable documentation.

This important mission did not go unnoticed in Chile. A few days after his arrival, the newspapers of Santiago published extensive notes with details of the trip by Vidal Gormaz and added reproductions of the manuscripts brought from Madrid. This was done, for example, by *El Estandarte Católico* in June 7th and 10th, 1885. Moreover, the official himself made the results of his commission public, giving the press a brief summary that stated his instructions, his observations in the Madrid hydrographic office and a list of the transcribed documents. The last one was also published that same year in the *Anuario Hidrográfico de la Marina de Chile* (Hydrographic Yearbook of the Navy of Chile). (63) But the effects of his trip were not finished there.

In his article about Malaspina which was published in 1878, Vidal Gormaz suggested that the Hydrographic Office of Madrid should publish the reports of the navigator (Malaspina) that were stored in the Spanish archives. Now that he had copies on hand, the proposal seemed appropriate. However, when Spain got wind of his investigations, they awoke the zeal of the naval historian Pedro de Novo y Colson, who quickly prepared an edition of the manuscripts. Let us see one of his motives:

"To such good reasons we only need to add the most powerful one: to spare Spain from receiving a shameful lesson, because a shame it would be that another country, anticipating us, would give birth to this same work. This danger is not remote. It is evident that a man of science and high civil servant of Chile has made a copy (by order of his government and with permission of ours) of all the manuscripts, letters and even drawings belonging to the journey of the sloops. A laborious and expensive task that honors that model republic and that once more confirms its

culture and love for study. I do not know if it was his purpose to publish them or to enrich their libraries with the copies; but in that case it does not harm anyone if, by printing them, I give everyone the chance to access a select reading. If that was also his purpose, then let the patriotic Chile forgive me, considering that since biblical times it is a divine command to give to Caesar what belongs to Caesar". (64)

We remain with the last words of Novo y Colson: "to Caesar what belongs to Caesar". No doubt this expression reveals an obvious issue: namely that the Malaspina Expedition constituted a particular episode in the history of Spain and that simple fact required that a publication of its documents be done on its ground. Indisputable. It was an event that belonged to them and therefore they wanted to proudly present it to the world themselves. Besides, one only has to remember the letter of Juan Eyzaguirre to Morla Vicuña to understand the intensity of this conviction.

Nevertheless, behind the actions of Vidal Gormaz there was a lot more than the simple initiative of a Latin American republic devoted to study. If we pay attention to the investiture of the commissioner, there is no doubt that the information related to the journey would be of supreme usefulness for the tasks entrusted to the Hydrographic Office of Chile, of which Vidal Gormaz was the director.

According to Aníbal Pinto, minister of Navy in 1874 and main promoter in the establishing of the Hydrographic Office of Chile, this office was entrusted with the organization and direction of the hydrographic inspections the ships of the Navy carried out with a certain assiduity. Its existence, he added, would allow the fulfillment of a desire that had been postponed for a long time: to concentrate the results of those explorations to delinate a complete nautical map of the coasts of the republic. (65) That would be the main goal of the Office, and as registered in the memoirs presented to the National Congress, the secretaries of the ministry of Navy would return to this office to analyze the results of the explorations.

During the first year of its existence, the office organized four important expeditions to different points of the national coast. The minister of Navy, Mariano Sánchez Fontecilla, said in 1875 that if the study of the shores continued in this rate, they would not have to wait many years to have a complete picture and so be able to "publish a complete navigation track and the corresponding general map." (66) However, the Pacific War put a stop to the development of those works. The multiple and unavoidable attention related to the conflict, deterred the ships of the Navy of their scientific labors and exploration. And although there had been some very important progress in the study of the northern coast, some areas still remained uncharted- such as the Strait of Magellan, and those of the western channels of the Patagonia. These studies were paralyzed since the declaration of war. (67)

The data clearly showed the lack of precise information on geographical matters and how they had become an unavoidable obstacle at this point in time. It is surprising to see that the same problems still persisted at the beginning of the century, despite the efforts undertaken earlier. (68)

From this point of view, it is easy now to understand the meaning of the mission entrusted to Vidal Gormaz in the Spanish files. The transcription of the information from the Malaspina Expedition and the copy of its main hydrographic maps -most of them unknown to that date-would be a fundamental reference for the organization of new explorations. In that sense, and as said before, the importance of the scientific-geographical knowledge produced in the previous century is recognized as an precious instrument for future investigations, in the understanding that its precision and rigorousness allowed them to be integrated as reliable antecedents and a solid foundation.

However we can see that behind this mission there is also an interest of geographical strategy intensified by the War of the Pacific and the diplomatic tensions with Argentina that culminated with the signing of the Treaty of Limits in 1881. About this, we consider it pertinent to transcribe a letter sent by Vidal Gormaz himself in 1881 to Cornelio Saavedra, Political Head of the Chilean troops in Lima:

Santiago, February 2nd, 1881.

Sir.

As the Office in my charge is busy organizing a library on S. American geography in anticipation to future emergencies, and as we already have a good basis, to which our diplomats and consuls in both Americas cooperate by order of a brief of September 10th by the minister of Foreign Affairs, I request you to dispose that cooperative work be done to this valuable end. This Office would be interested to see the increment of its material about railroads, general geography, statistics, legislation on roads, telegraphs, rivers, industries, and everything related to the administration of Peru. As main subject of this Office, hydrographic knowledge has preference. Perhaps the city of Lima has elements about this subject that are important for the future, as well as materials that could contribute to our development and prepare us for future problems that we must foresee. By virtue of this, I request you to order that all data and publications indicated to be remitted to this Office, to increase the Peruvian section of the geographical library.

I permit myself to mention the existence, in the library of Lima, of an unedited volume written by don José de Moraleda y Montero, titled "*Descripción de Chiloé*" written at the end of the last century. This original manuscript is very interesting for the geography of Chiloé. In the library of Santiago we have a copy of this manuscript; but it is very inaccurate.

God save you

Francisco Vidal Gormaz.

don Cornelio Saavedra

Political Head in Lima" (69)

The letter does not hide the importance geographical knowledge had, beyond its usefulness as a science, after the military problems the Chilean republic had faced in the 1880's. What had already been prefigured during the 19th century in the continuous diplomatic debates with the neighboring nations, would return unresolved to the point of being considered as "a preparation for future problems".

The mission of Vidal Gormaz closes a cycle where the two main uses of the information generated by the scientific expeditions of the Enlightenment: a) to repair the lack of up to date geographical information; and, b) to solve possible territorial controversies with the neighboring countries.

It provides the clearest example of how these royal enterprises, conceived as part of a colonial logic, would gain unexpected prominence in the postcolonial period with the authorities and intellectuals of the new republics using them as a starting point in the process of territorial delineation of Latin American nations.

In this way, the sustained recovery of the records left to us would give life to a new union between the last colonial century and the first of Chilean republican history, a place where science would have a fundamental prominence. It enabled Chile of the 19th century to receive and give a new meaning to the geographical knowledge generated in the previous century.

#### **FOOTNOTES**

<u>1</u> Though the Malaspina Expedition is a subject of interest for specialists around the world, the greater part of bibliographical publication about the circumnavigation is concentrated in Spain and Italy. The list of titles in Spanish historiography is long and exceeds largely the scope of this work; however, there are some books and authors we cannot fail to mention. Juan Pimentel is one of the historians who had studied with greatest detention the figure of Malaspina and the details of his travel around the world. One of his books seems particularly interesting to us: *La fisica de la monarquía. Ciencia y política en el pensamiento colonial de Alejando Malaspina (1754-1810)*. Ediciones Doce Calles, Madrid, 1998. [<u>Links</u>] Years before, with Manuel Lucena Giraldo and the same publishing house, he published *Los "Axiomas Políticos sobre la América" de Alejandro Malaspina*. Madrid, 1991. [<u>Links</u>] To the contributions of Pimentel we could add those of Andrés Galera Gómez, who analyzed this journey in his book *La Ilustración Española y* 

el conocimiento del Nuevo Mundo. Las Ciencias Naturales en la Expedición Malaspina (1789-1794): la labor científica de Antonio Pineda. Consejo Superior de Investigaciones Científicas, Madrid, 1988; [Links] two years later he would present a new reflection in Alejandro Malaspina. En busca del paso del Pacífico.

For a review of the travel registers of the imperial committee, see the compendium *La Expedición Malaspina 1789-1794*, published in nine issues by the Naval Museum of Madrid between 1987 and 1999. The Italian investigations about Malaspina and his expedition have a consecrated signature: Dario Manfredi. Since 1984 he has published a series of studies related to the intellectual schooling of the traveler, the suspicions of the Tribunal of the Inquisition regarding his philosophical inclinations and his first trip around the world on the frigate *Astrea*. See *Alessandro Malaspina dei Marchesi di Mulazo. La inclinazioni scientifiche e reformatrici*, Sarzana, 1984; *L' inchiesta dell' Inquisitore sulle eresie di Alessandro Malaspina*, La Spezia, 1987 e *Il viaggio attorno al mondo di Malaspina con la fregata di S.M.C. "Astrea", 1786-1788. Con lettere inedite del navigatore (a cura di Bruna Reggi)*, La Spezia, 1988. Together with F. Remedi he presented a biographical approximation in *Alessandro Malaspina. Studi e documenti per la biografia del navigatore*, La Spezia, 1985.

- Rafael Sagredo and José Ignacio González. La Expedición Malaspina en la frontera austral del imperio español. Editorial Universitaria, Centro de Investigaciones Diego Barros Arana, DIBAM, Santiago, 2004, 28. [Links] Even when this work is essentially an anthology of the documents produced during the transit of the Malaspina Expedition through South America, his introductory study reveals a clear interest to offer a renewed and comprehensive interpretation of the significance of this expedition in understanding the American colonial reality and that of Chile in particular. It is precisely this characteristic that differentiates it from previous analysis in Chilean historiography, which had only tried to reconstruct in detail and little analysis the particulars of the passing of this commission through the coasts of the country. We are referring specifically to the work of Isidoro Vázquez de Acuña, "La expedición científico-política del Capitán de Navío don Alejandro Malaspina (1789-1794)", published in *Boletín de la Academia* Chilena de la Historia, Nº 108-109, Santiago, 1998-1999, 133-174; [Links] and to the text of Alessandro Monteverde, "El primer viaje al territorio chileno de Alessandro Malaspina (1789-1794)", part of La Gran Expedición Española de Alejandro Malaspina en América (1789-1795), Comisión de Historia, Instituto Panamericano de Geografía e Historia, México D. F., 2001, 71-104. [Links]
- 3 Among his numerous investigations about the maritime history of the Río de la Plata and the Patagonia, the author touches upon different aspects of the passing of the Malaspina Expedition in front of the Atlantic coast. See: *Actividades marítimas en la Patagonia: durante los siglos XVII y XVIII*. Guillermo Kraft, Buenos Aires, 1930; [Links] *Hombres de mar en la Historia Argentina*. Luis Bernard, Buenos Aires, 1936; [Links] *La expedición Malaspina en el Virreinato del Río de la Plata. Reedición de los documentos relativos al viaje de las corbetas Descubierta y*

Atrevida e informes de sus oficiales sobre el Virreinato, extraídos de la obra de Novo y Colson. Con prólogo y adición por el Cap. de Fragata (R) Héctor R. Ratto. Biblioteca del Oficial de Marina, Buenos Aires, 1936; [Links] and La expedición de Malaspina (Siglo XVIII). Emecé Editores, Buenos Aires, 1945. [Links]

- 4 Iván Jaksic. *Andrés Bello: La pasión por el orden*. Editorial Universitaria, Santiago, 2001, 95. [Links] For the analysis of the Latin-American press in London, see chapter "La diplomacia de la Independencia 1820-1829", 93-104. Also pertinent is the reflection by Mary Louise Pratt in *Ojos imperiales. Literatura de viajes y transculturación*. Universidad Nacional de Quilmes, 1997, 301-328. [Links]
- 5 For an internal version of this offensive, it is highly useful to know the scientific notes published by Andrés Bello in *El Araucano* after he arrived in Chile in 1829. There is a detailed index of these texts in *Obras completas de Andrés Bello. Cosmografia y otros artículos de divulgación científica*. Vol. XXIV. La Casa de Bello, Caracas, 1981, XXII-XXXIV. [Links]
- 6 "Secret information of America about the naval, military and political state of the kingdoms of Peru and provinces of Quito, coasts of Nueva Granada and Chile (...) by don Jorge Juan y Antonio de Ulloa (...). D. David Barry. In two parts, London, 1826; 4th major; XIV y 707 pp.". El Repertorio Americano, Nº 2, London, January 1827. Reproduced in Obras completas de Andrés Bello. Temas de Historia y Geografía. Vol. XXIII. La Casa de Bello, Caracas, 1981, 443-444.
- 7 In Silabario. Revista de Estudios y Ensayos Geoculturales. Year I, Nº 1, Argentina, December 1998, 77-91. [Links]
- 8 Pedro Navarro Floria. "Córdoba y Malaspina: antropología y política ilustrada en Patagonia y Tierra del Fuego". In *Revista Española de Antropología Americana*. Vol. 33, Madrid, 2003, 231-251. [Links]
- 9 At this point we follow the ideas presented by Alberto Saladino García in his article "Informaciones geográficas en la prensa durante la Ilustración latinoamericana". In *Noticias Históricas y Geográficas*. Nos 5-6, Valparaíso, 1994-1995, 31-47. [Links]
- 10 Francisco José de Caldas. Semanario del Nuevo Reino de Nueva Granada. Santa Fe de

Bogotá, no publishing house, 1808-1809, Tomo I, N° 1, January 3rd 1808, 2. [Links] Extract by Alberto Saladino, *op. cit.*, 32.

- 11 Diego Barros Arana, *Historia General de Chile*. Editorial Universitaria and Centro de Investigaciones Diego Barros Arana, DIBAM, Santiago, 2001, Vol. VIII, 404-405. [Links]
- 12 La Aurora de Chile, Santiago, 28 January 1813. Quoted in Simon Collier. Ideas y política de la Independencia chilena 1808-1833. Editorial Andrés Bello. Santiago, 1977, 159. [Links]
- 13 For a revision of the efforts by the Chilean state to increase geographical knowledge, see José Victorino Lastarria. *Recuerdos Literarios*. Ediciones LOM, Santiago, 2001, 22-27 [Links] and Diego Barros Arana. *Don Claudio Gay: su vida y sus obras*. In *Obras completas de Diego Barros Arana*. Imprenta Cervantes, Santiago, 1911, book IX, 272 and ss. [Links]
- 14 Originally, the project of Claudio Vila consisted in the establishment of a Naval Academy in Valparaiso, which would be entrusted with the drawing of the coastal map of the country. Ernesto Greve. *Historia de la Ingeniería en Chile*. book III. Imprenta Universitaria, Santiago, 1944, 138-139. [Links] This reference also appears in another work by the same autor: "Breve resumen de la historia de la Cartografía Nacional". In *Revista Geográfica de Chile Terra Australis*, Year III, N° 4, October 1950, 11. [Links]
- 15 El Araucano, Santiago, February 26 1831, 2-3.
- 16 It is the "Carta esférica de las costas de América Meridional desde el paralelo 36° de latitud Sur hasta el Cabo de Hornos, levantada por orden del Rey, en 1789, 90, 94 y 95 por varios oficiales de su Real Armada, presentada a S. M. por mano del Exmo. Sr. Don Juan de Lángara, Secretario de Estado y del Despacho Universal de Marina. Año de 1798" (Spherical map of the coasts of South America from parallel 36° southern latitude to Cape Horn, drawn by order of the King in 1789, 90, 94 and 95 by various officials of his Royal Navy, presented to H.M. by hand of his Exc. Don Juan de Lángara, Secretary of State and of the Universal Bureau of the Navy. Year 1798).
- 17 The presentation by Claudio Gay and the approval by the government are reproduced in the posthumous book by Carlos Stuardo Ortiz, *Vida de Claudio Gay 1800-1875. Escritos y*

*documentos*. Fondo Histórico y Bibliográfico José Toribio Medina. Editorial Nascimento, Santiago, 1973. book II, 87-90. [Links]

- 18 El Araucano, Santiago, October 2, 1830, 2-4.
- 19 Correcting the possible errors in the measurements by the Malaspina Expedition of the American coasts was a latent preoccupation even among the members of the committee. Felipe Bauzá, who headed the astronomical observations, concentrated himself thirty years later during his exile in London to the task of determining the exactitude of the data obtained in the Chilean coast in comparison with the results obtained with new technological advances and the data obtained by later expeditions. To this end, he maintained a frequent correspondence with the Director of the Hydrographic Deposit in Madrid, Martín Fernández de Navarrete, with the German astronomer Jabbo Oltmanns and with Alexander von Humboldt. To his satisfaction, the measurements had a high level of exactitude. About this, see the work by Carlos Bauzá, "La Expedición Malaspina y el levantamiento cartográfico de las costas de Chile según la correspondencia de Felipe Bauzá". In *Actas II Simposio de Historia Marítima Naval de Iberoamérica*, [Links] quoted by José Ignacio González, "La Expedición Malaspina y la cartografía sobre Chile", in *Revista de Geografía Norte Grande*, Instituto de Geografía, Pontificia Universidad Católica de Chile, N° 31, July 2004, 14-15 y 27. [Links]
- 20 Guillermo Feliú Cruz. "Claudio Gay, historiador de Chile. Ensayo crítico", in C. Stuardo, *op. cit.*, book I, 166-167. According to the study of Feliú Cruz, these three characters were part of the circle of closest friends the French scholar had during his first residence in the country. They were precisely the ones that told the government of the talent of Gay as a man of science and suggested the possibility to entrust him with the study of the territory.
- 21 "Viaje científico. San Fernando, abril 17 de 1831". *El Araucano*, Santiago, May 14 1831, 3-4. [Links] Copied in C. Stuardo, *op. cit.*, book II, 99-105.
- 22 "Viaje científico. Valparaíso, febrero 23 de 1832". *El Araucano*, Santiago, March 3 1832,
  3-4. [Links] Copied in C. Stuardo, *op. cit.*, book II, 124-130.
- 23 El Mercurio, Valparaíso, March 10 1832, 1-2.
- 24 Claudio Gay. "Reseña acerca de las investigaciones sobre Historia Natural realizadas en

América del sur, y principalmente en Chile, durante los años 1830 y 1831". In C. Stuardo, *op. cit.*, book II, 154-168. Félix Savary was the one entrusted with the task of revising and commenting, before the other member of the Academy, the works of Claudio Gay in geographical matters. It is profoundly noticeable that he repeated the argument we have followed to state the survival of the information produced by the Malaspina Expedition in the first half of the 19th century: "M. Gay in the course of his trip, whose final purpose was the study of Natural History, did not neglect the geographical investigations. About this matter we do not posses other exact determinations of Chile than those of a certain number of points of the coast, which we owe to two able observers, Malaspina and Bauzá (...)"."Informe sobre la parte geográfica presentada a la Academia de Ciencias en sesión de 1 de julio de 1833, por Félix Savary, relator de la parte geográfica". *Ibid.*, 368.

- 25 Alejandro Malaspina. *Tablas de latitudes y longitudes de los principales puntos del Río de la Plata, nuevamente arregladas al meridiano que pasa por lo más occidental de la isla de Ferro.* Imprenta del Estado, Buenos Aires, 1837, IV-V. There is an identical version on the internet: www.cervantesvirtual.com.
- 26 The last investigations by José Ignacio González about the contributions of the Malaspina Expedition to the national cartography have proved the exactitude of the observations and the trustworthiness of the maps drawn with those data. No doubt, their precision meant an important progress for the graphical representation of the territory and its influence was undeniable in the cartographic history of the first years of the republic. J. I. González, *op. cit*.
- 27 The timeframe we have established to analyze this second moment in the 19th century in which the historical-geographical value of the Malaspina Expedition is redeemed, can be considered arbitrary if we analyze its' context in detail. In any case, we think it is justified when considering the nature of the problem. Though the territorial controversy we will revise occurs in the decade of 1840, its most tense moment would be twenty years later, specifically in 1863, when the arguments presented by the ministries of Foreign Affaires of Chile and Bolivia were amply known through the national press.
- 28 Óscar Espinoza Moraga. *Bolivia y el mar (1810-1964)*. Editorial Nascimento, Santiago, 1965, 36.[Links]
- 29 El Ferrocarril, Santiago, May 20 1863. This edition reproduces the reports by both civil servants between January and May 1843.
- 30 O. Espinoza, op. cit., 44.
- 31 Manuel Montt. "Memoria que el Ministro de Estado en el Departamento de Relaciones Exteriores presenta al Congreso Nacional. Año de 1845". In *Memorias del Ministerio de*

Relaciones Exteriores. 1834-1861. Imprenta Nacional, Santiago, 1861, 375. [Links] 32 This interesting and well documented memoir was published in the pages of El Ferrocarril between 21 and 25 May 1863. 33 El Ferrocarril, Santiago, May 25 1863. Cursive in the original. 34 Miguel Hurtado Guerrero. Memoria sobre el límite septentrional de la República de Chile. Instituto de Investigaciones del Patrimonio Territorial de Chile, Universidad de Santiago, Santiago, 1987. [Links] This memoir became very well known and used as a reference in later texts with which the Chilean ministry of Foreign Affaires confronted the territorial demands of Bolivia; it remained unedited until 1949, when it was published by Ricardo Donoso. 35 Ibid., 78-80.

- 36 O. Espinoza, op. cit., 44.
- As an example, one can check the extensive analysis in *El Mercurio* about the formula presented by *La Voz de Chile* to solve the territorial controversy with Bolivia: "La cuestión de Mejillones", *El Mercurio*, Valparaíso, 29 and 31 July and 1, 5 and 10 August 1863. [Links] 38 See the editions appeared between 20 and 29 May 1863. In these days, Miguel Hurtado had sent his memoir to the Chilean authorities to convince them of its utility and pertinence: "Memoir about the northern limit of Chile.- The captain of frigate don Miguel Hurtado, has given the Minister of War a memoir about the northern limit of Chile', recompilation of data and documents from old and credited geographers that have described the political and natural division of the territory of the Republic; a work that in these circumstances is of great merit and which would be advisable to publish so the public would learn about this matter that preoccupies him so much. We know that the minister has presented this work to the President of the Republic so he can examine its merits and determine if its content can throw light on the current issue of the limits with Bolivia". *El Ferrocarril*, Santiago, 28 May 1863.
- <u>39</u> *El Ferrocarril*, Santiago, 29 May 1863. Strictly speaking, this was the second time a national newspaper referred explicitly to the journey of Malaspina and Bustamante, because *El Mercurio*, in its edition of May 14th the same year mentioned it to confirm the territorial rights of Chile. In any case, that mention did not surpass the detailed report by Urmeneta.
- 40 Barros Arana, while studying the passing of the Malaspina Expedition through Chile, offers an extensive note where he mentions all works related to the journey published by some of its members since the beginning of the 19th century. Though we do not know exactly how well known they were in our country, the total ignorance over the trip makes us think that the news presented in the memoir of Miguel Hurtado were there first information known about this episode. See D. Barros Arana, *Historia...*, Vol. VII, 106-115.
- 41 Though this colony was established in 1843, the Argentinean government only protested four years later, after the Chilean authorities resolved to move the settlement a few miles to the north. In reply to this protests, the Chilean government declared it possessed undisputable titles that confirmed its right to the Strait of Magallanes and the territories next to it, and offered to present them to be discussed immediately. The other part sent to Santiago a Plenipotentiary Minister to treat these and other matters, but the deep political crisis and the war the Argentinean Confederation went through that led to the fall of Juan Manuel de Rosas-, close the possibility of a definite arrangement. The treaty of 1856 marked a pause to restart the negotiations more calmly. Carlos Morla Vicuña. *Estudio histórico sobre el descubrimiento y conquista de la Patagonia y Tierra del Fuego.* F. A. Brockhaus, Leipzig, 1903, 1-4. [Links]

- 42 Ibidem.
- 43 Alejandro Soto Cárdenas. *Misiones Chilenas en los Archivos Europeos*. Instituto Panamericano de Geografía e Historia. Comisión de Historia. México D. F., 1953, 143. [Links]
- 44 Óscar Pinochet de la Barra. "Homenaje a don Carlos Morla Vicuña". In *Revista Chilena de Historia y Geografía*. Nº 149, 1981, 205. [Links] Roberto Huneeus Gana published interesting biographical notes in his book *Homenaje a Don Carlos Morla Vicuña*. Imprenta Moderna, Santiago, 1901.
- 45 A. Soto Cárdenas, op. cit., 143.
- 46 For reasons we ignore, and despite the fact that it constitutes an undeniable contribution to the issue of limits because it presents solid information, largely unknown, this interesting memoir was archived in the Ministry of Foreign Affaires, and only saw public light in 1903, when it was included as an appendix in the posthumous book of the same author, *Estudio histórico sobre el descubrimiento y conquista de la Patagonia y Tierra del Fuego.* F. A. Brockhaus, Leipzig, 1903, 193-223. [Links] In fact, Morla Vicuña tried to publish this last study including the memoir- in 1879, but the Pacific War made it impossible for him to filter the edition because of the absorbing work he had during the first two years of the war. After the most intense moment of the war, and more relieved of his occupations, he decided to send the manuscript to Leipzig for publication. However, the signing of the Treaty of Limits between Chile and Argentina in 1881, with which the controversy was thought to be finished, made it advisable to stop the printing. The order to finish the book came in 1902, one year after the death of Morla Vicuña, and because of the judgement of the king of England, Edward VII. Finally it was put on shelves in 1903, and became a footnote in history. This is the version we use for the following note.
- 47 *Ibid.*, 208-209. The complete text of the synthesis by Morla of the "Reflexiones políticas..." is in *La Expedición Malaspina 1789-1794*. Book VII. *Descripciones y reflexiones políticas*. Museo Naval-Lunwerg Editores, Barcelona, 1987, 62-63. [Links]
- 48 C. Morla Vicuña, op. cit., 214.
- 49 After the discredit Malaspina had fallen in, father Manuel Gil was commissioned by order of the King for the writing of the historical and political part of the expedition.
- 50 Ibid., 216.
- 51 Ibid., 216-217.
- 52 La Expedición Malaspina 1789-1794. Book IX. Diario general del viaje por José Bustamante y Guerra. Museo Naval-Lunwerg Editores, Barcelona, 1999, 48-51. [Links]
- 53 Note from the Ministry of Foreign Affaires to the Secretary of the Legacy of Chile in France, Santiago, March 6 1874. In C. Morla, *op. cit.*, 25-26.
- 54 Carlos Morla Vicuña. La cuestión de límites entre Chile y la República Argentina. Imprenta de La Patria, Valparaíso, 1879. [Links] Francisco Hurtado Barros praised the book of Morla for the strength of its arguments and the enormous investigation done in the Spanish archives. As most of the documents used were still unknown in America, he decided to mention this fact in the title chosen for publication: La cuestión de límites entre Chile y la República Argentina. Títulos y pruebas de Chile a todos los territorios disputados que el gobierno mantenía hasta hoy reservados. Imprenta a vapor de La Nación, Montevideo, 1879. [Links]

- 55 C. Morla Vicuña. *La cuestión de límites...*, 57-58. We have indicated between brackets the date in which Juan de Lángara effectively presented the King with the "Carta esférica de las costas de América Meridional".
- 56 C. Morla Vicuña, *Estudio histórico...*, 33-34. In 1876, Diego Barros Arana wrote to Morla Vicuña asking him for copies of the booklet published in French in response to the articles of Emile Diareaux. Besides sending him these, Morla commented with enthusiasm on his experience in this second stay in Spain and the documents he had managed to copy. To instruct Barros of the new findings, he sent him an extract that is of great utility to measure the volume of the investigation. See Carlos Morla Vicuña: Letter of 23 September 1876, in Paris, to Diego Barros Arana (Buenos Aires). Biblioteca Nacional de Chile, Manuscritos Barros Arana, Tomo 98, ff. 152-170.
- 57 Letter from Juan Eyzaguirre to Carlos Morla Vicuña, Madrid, 7 December 1880. Archivo Nacional de Chile, Fondo Claudio Gay, Vol. 59, ff. 536-538v.
- 58 Letter from Juan Eyzaguirre to Carlos Morla Vicuña, Madrid, 14 December 1880. Archivo Nacional, Fondo Claudio Gay, Vol. 59, ff. 533v-534.
- 59 The detained revision of some of the volumen of the Morla Vicuña Collection of the Archivo Nacional de Chile, clearly shows the interest of the Chilean secretary in the Spanish commission. Volume 61, piece 1, contains a "Catálogo de lo existente en la Biblioteca de Palacio de Madrid referente a las Indias". From folio 8 onwards there is a list of documents titled "Manuscritos de América Meridional", that registers different pieces that correspond to the expedition, among them, for instance, "Observaciones de la velocidad del sonido, de latitud, longitud y variación hechas en Santiago de Chile por Espinoza y Bauzá...", "Noticias de Chile, por Don Juan José de Santa Cruz" and the "Informe de Don Fernando Quintano acerca de la mina de azogue de Punitaqui". In volume 63, from folio 138 onwards, there are reproductions of descriptions related to travelers of the 18th century, among them Malaspina. These documents weren't necessarily related to their investigations about borders, which is why they should be understood as an expression of their interests and their particular preoccupation for everything related with the imperial committee.
- 60 In 1863, when he was only 26 years old, his name circulated in the press as one of the young officers called to explore the regions that were still unknown to the republic. That year he made a long expedition to the island of Chiloé, the coast and the interior of the country, that was praised by national newspapers. *El Mercurio*, Valparaíso, 6 March 1863.
- 61 Francisco Vidal Gormaz. "Alejandro Malaspina", in *Revista Chilena*, Santiago, Book XII, 1878. [Links] This text is part of the recompilation by L. Ignacio Silva, *Estudios geográficos e históricos de Francisco Vidal Gormaz*. Imprenta Cervantes, Santiago, 1905, 35-59. [Links] This article is followed up by a biographical review that had remained unedited, dedicated to Felipe Bauzá, another member of the Malaspina Expedition.
- 62 Francisco Vidal Gormaz. *Misión de Francisco Vidal Gormaz a Estados Unidos y Europa*. Establecimiento Tipográfico of "La Época". Santiago, 1885, 19. [Links]
- 63 A. Soto Cárdenas, op. cit., 242.
- 64 Pedro Novo y Colson (ed.) Viaje político-científico alrededor del mundo por las corbetas "Descubierta" y "Atrevida", al mando de los Capitanes de Navío D. Alejandro Malaspina y D. José Bustamante y Guerra desde 1789 a 1794, Ed. Viuda e Hijos de Abienzo, Madrid, 1885, VII.

- [Links] This was the second edition published of the journey of Malaspina, because in the decade of 1820 an officer of the russian navy had given part of the diary to the press. See the work by Darío Manfredi, "Adam J. Krusenstern y la primera edición del viaje de Malaspina". In *Derroteros de la Mar del Sur.* Nº 8, 2000. [Links] Quoted by Rafael Sagredo. "Fuentes e historiografía de la Expedición Malaspina en Chile", in *Estudios Coloniales II*. Julio Retamal A. (coordinator), Universidad Nacional Andrés Bello, Biblioteca Americana, Santiago, 2002, 339.
- 65 Memoria que el Ministro de Estado en el Departamento de Marina presenta al Congreso Nacional de 1874. Imprenta de la Patria, Valparaíso, 1874, XXIV-XXV.
- 66 Memoria de Guerra y Marina presentada al Congreso Nacional por el ministro del ramo en 1875. Imprenta Nacional, Santiago, 1875, L.
- 67 Memoria del Ministerio de Marina presentada al Congreso Nacional en 1884. Imprenta Gutenberg, Santiago, 1884, XXXV.
- The memoir of the minister of War and Navy of 1885, Carlos Antúnez, who ordered the search and transcription of documents related to national hydrography in Spanish archives, confirms the pitiful state of the knowledge of national geography: "The hydrographic studies are not only a useful exercise for the officers and crew of the ships, they also allow us to know the geography of the country and they contribute to the progress of universal geography. Despite the interest the national navy has always had in this subject, we have many places, I do not say remote ones, but in the central part of the Republic that are completely unknown to us, and no advance has been made about them since the first explorations done at the beginning of the century. We frequently have to consult the results of explorations done by foreign sailors, to clarify points of our own geography, which without being dishonorable, at least harms the love of our own country". Memoria del Ministro de Marina presentada al Congreso Nacional de 1885. Imprenta Nacional, Santiago, 1885, LIX-LX.
- 69 Letter by Francisco Vidal Gormaz, Director of the Hydrographic Office of Chile, to Cornelio Saavedra, Political Head in Lima during the occupation. Santiago, 2 February 1881. Archivo General del Ejército de Chile, Vol 680, ff. 89-89v.

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