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# The Shaping of Latin American Museums of Natural History, 1850–1990

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## ABSTRACT

This essay reflects upon the milieu and the character of Brazilian and Argentinean natural history museums during the second half of the nineteenth century. It argues that the museums were influenced not only by European and North American museums but by each other. Museum directors in the two countries knew each other and interacted. Some of the relationships between these museums were friendly and cooperative, but because they were in young, emerging nations, they also became deeply involved in the invention of nationality in their respective countries and interacted as rivals and competitors. Even through rivalry, however, they contributed to each other's development, as did rivalry among museums within each of the two countries. Later in the century they went well beyond the nationalist perspective, finding, through their research into paleontology and anthropology in their regions, a continental and uniquely South American scientific perspective, defined in reaction to North American and European views.

## INTRODUCTION

**I**N RECENT YEARS, SEVERAL HISTORIANS HAVE STUDIED MUSEUMS of natural history and the ordering of nature in the eighteenth and nineteenth centuries.<sup>1</sup> Most of the history of South American museums has been written within spe-

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<sup>1</sup> Sally G. Kohlstedt, "International Exchange and National Style: A View of Natural History Museums in the United States, 1850–1900," in *Scientific Colonialism: A Cross-Cultural Comparison*, eds. Nathan Reingold and Marc Rothenberg (Washington, D.C.: Smithsonian Institution, 1987), pp. 167–90; Mary P. Winsor, *Reading the Shape of Nature: Comparative Zoology at the Agassiz Museum* (Chicago: Univ. of Chicago Press, 1991); Claude Blanckaert, C. Cohen, P. Corsi *et al.*, eds., *Le Muséum au premier siècle de son histoire* (Paris: Muséum National d'Histoire Naturelle, 1997);

cific national traditions, however, and retains a hagiographic and parochial flavor. In 1988, Susan Sheets-Pyenson discussed two Argentinean museums, the Museum of La Plata and the National Museum of Buenos Aires, within the broader context of the expansion of colonial science.<sup>2</sup> The avenue of discussion that she opened up, however, has neither been followed nor contested. This silence cannot be explained by discontent with a revised framework. It suggests, rather, how highly a national scientific tradition may be valued by those who perceive themselves as its heirs. In this context, local institutions have continued to be seen as if they had emerged as isolated and independent phenomena.

In this essay, we do not attempt to write the history of Latin American museums generally or of Argentinean or Brazilian museums in particular.<sup>3</sup> Rather, we wish to reflect upon the milieu, the rhetorical character of scientific institutionalization and consolidation, from a comparative perspective. A Latin American point of view that aims at going further than the limits imposed by national boundaries quickly reveals that national histories have more in common than it is customary to assume. With regard to Argentinean and Brazilian museums of the second half of the nineteenth century, we want to show that the influence of contemporary European and North American institutions was mediated by South–South links among local naturalists.

### THE LOST WORLD

As a consequence of the “enlightened” policies of Spain and Portugal at the turn of the eighteenth century, museums, cabinets, botanical gardens, and scientific societies arrived in Iberian America on the ships of metropolitan scientific expeditions. In return, the cabinets of America sent collections to the new or reorganized botanical gardens and museums of Madrid, Lisbon, and Coimbra. Within this framework came the first Gabinete de Historia Natural, in Havana, Cuba, the Casa Botánica de Bogotá in Colombia, the Casa de História Natural of Rio de Janeiro, as well as cabinets in Mexico and Guatemala.

The disruptive events that followed—scientific controversies, wars of independence, shortages of funding and staff—led to the dispersal of these early collections. Nevertheless, what remained was the basis on which museums were organized in the context of newly independent South American colonies during the first half of the nineteenth century.<sup>4</sup> Continuities with the scientific and cultural projects inherited from the colonizing powers did not mask the special character of these new institutions. The museums of natural history established in Buenos Aires (1812 / 1823), Rio de Janeiro (1818), Santiago de Chile (1822), Bogotá (1823), Mexico (1825), Lima (1826), and Montevideo (1837) were all framed in the process of building new nation states; national museums were found as former colonies became

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Andreas Grote, ed., *Macrocosmo in Microcosmo: Die Welt in der Stube; zur Geschichte des Sammelns, 1450 bis 1800* (Opladen: Leske & Budrich, 1994).

<sup>2</sup> Susan Sheets-Pyenson, *Cathedrals of Science: The Development of Colonial Natural History Museums During the Late Nineteenth Century* (Montreal: McGill–Queen's Univ. Press, 1988).

<sup>3</sup> For an overview of Brazilian museums, see Maria Margaret Lopes, *O Brasil descobre a pesquisa científica: Os Museus e as ciências naturais no século XIX* (São Paulo: Hucitec, 1997).

<sup>4</sup> Cultural and academic exchanges between Spain and Portugal and their former colonies in America were reestablished at the end of the nineteenth century.

independent.<sup>5</sup> In the New World, museums were the loci of institutionalization of natural history. But as a standard measure by which to test the scientific culture of a country, they also became symbols of national identity.

The governments of the new political entities created in Brazil and in the Andean and River Plate regions had high hopes for the natural sciences and their museums. In particular, the Creole elites of the independent republics sought to overcome the economic, social, and cultural fragmentation resulting from the rupture of the colonial order by discovering and surveying new reserves of natural resources. One of the main roles of the natural history museum, especially in the very first years, was to collect and to display the mineralogical resources of these territories. Mineralogical collections were used for teaching in new university courses, but they were also used to create dazzling exhibitions of the country's mineral wealth. Interest in mineral research was at the core of the first museums of Latin American countries,<sup>6</sup> but in the second half of the nineteenth century other fields such as evolution took their place. This process can be understood partly as a consequence of the growing specialization of the natural sciences, but also in terms of the emergence of specific institutions for different scientific disciplines. In fact, by the second half of the nineteenth century the museums of Latin America had changed their priorities from mineralogical "El Dorado" exhibits to broader scientific purposes.

One common trait of natural history museums in this period—not limited to Latin America, as Sheets-Pyenson observed—tied the "builders" of science to their institutional and scientific settings.<sup>7</sup> On the other hand, alliances and conflicts among museum directors and scientific staff did not necessarily follow national lines. In fact, international scientific networks sometimes brought together local and "foreign" scientists, in defense of local institutional leaders and their museums.

Museums, as symbols of urban civilization, were also specific loci for displaying the histories of local nature and the histories of the extinct—or nearly extinct—indigenous inhabitants of the New World. In Latin America, as elsewhere, museums were also institutions where knowledge was produced, following the patterns of contemporary scientific practice. The nineteenth century witnessed many changes in this practice and new roles for museums in teaching, research, collecting, storage, and exhibitions. The mineralogical collections of the museums—which, by 1800, already included specialized collections in geology, anthropology, botany, zoology, and archaeology—were eventually replaced by paleontological collections illustrating the evolution of species. In this field, the Argentinean museums of La Plata and Buenos Aires became continental points of reference for research on the fossil remains of extinct mammals. Argentinean and Brazilian museum directors shared a common faith in science viewed as the warranty for progress, and they conceived of museums as centers for the nationalization of local nature. Their mission was assumed to have a civilizing aim, and native peoples were included in the naturaliza-

<sup>5</sup> Maria Margaret Lopes, "A construção de Museus Nacionais na América Latina Independente," *Anais Museu Histórico Nacional do Rio de Janeiro*, 1998, 32:121–45.

<sup>6</sup> Silvia F. de M. Figueirôa, *As ciências geológicas no Brasil: Uma história social e institucional, 1875–1934* (São Paulo: Hucitec, 1997); Irina Podgorny, "Un Belga en la corte de Paraná," in *En los deltas de la memoria: Bélgica y Argentina en los siglos XIX y XX*, B. De Groof *et al.*, eds. (Louvain: Univ. of Louvain, Press, 1998), pp. 55–61.

<sup>7</sup> Irina Podgorny, *El Argentino despertar de las faunas y de las gentes prehistóricas* (Buenos Aires: Eudeba, in press).

tion of history. Adapted to cultural and scientific changes, Latin American museums became not only places for systematic research but also monuments. The Museo de La Plata, where glyptodonts became symbols of Argentina's glory, was the most conspicuous example.<sup>8</sup>

### FRIENDLY EXCHANGES AND RIVALRIES

By the 1850s, it was received wisdom that every major European nation should possess—or already possessed—a national museum of natural history, aiming (or professing) to be a more or less complete epitome of the three kingdoms of nature: animals, plants, and minerals. Such was the extent and influence of the great Musée d'Histoire Naturelle in Paris and the Natural History Division of the British Museum in London. Debates took place about the extent to which a public museum of natural history should be supported by the state, on what scale, for what public, and with reference to what commercial and colonizing endeavors.<sup>9</sup>

The role of the state as patron was constantly invoked, along with the need for museums to be located in national capitals. At the core of all these debates arose the problem of storage and exhibition space, which was presented as a “natural” problem resulting from the richness of the country's natural resources and the vastness of its territories. In displaying the extent and variety of the Creative Power—and of the power of the state—exhibits of large animals became a trope in museum rhetoric. To have enough room for the mounted skeletons of a whale and a large extinct South American mammal was taken as the mark of a triumphant state.

During the 1860s and 1870s, in the South American lands that provided European museums with large fossil mammals, national institutions in Argentina, Brazil, Chile, and Uruguay were renewed by government funding. In 1862 Hermann Konrad Burmeister (1807–1892), a Prussian naturalist, was hired as director of the Museo Público de Buenos Aires, where he served until his death thirty years later. In 1868 his contemporary, Ladislau Netto (1838–1894), a Brazilian naturalist trained at the Musée d'Histoire Naturelle in Paris, was hired to lead the Museu Nacional do Rio de Janeiro, which he directed until 1892. Both headed fifty-year-old, federally supported institutions with considerable collections; nevertheless they consistently stressed the poverty of the museums they had to remake and were always seeking more funding.<sup>10</sup>

Netto left botanical studies to begin the classification of the Museu Nacional's anthropological and ethnographical collections. During his tenure he transformed the museum into a scientific institution of international standing. He was active not only in increasing state funding but also in promoting the double role of the museum as a place for both research and teaching. (Since Brazil had no university until the twentieth century—only isolated faculties of engineering, medicine, and law—the

<sup>8</sup> Irina Podgorny, “De razón a facultad: Ideas acerca de las funciones del Museo de La Plata en el período 1890–1918,” *Runa*, 1995, 22:89–104.

<sup>9</sup> Richard Owen, *On the Extent and Aims of a National Museum of Natural History. Including the substance of a discourse on that subject, delivered at the Royal Institution of Great Britain, on the evening of Friday, April 26, 1861* (London: Saunders, Otley and Co., 1862).

<sup>10</sup> Hermann Burmeister, “Sumario sobre la fundación y los progresos del Museo Público de Buenos Aires,” *Anales del Museo Público de Buenos Aires para dar a conocer los objetos de la Historia Natural nuevos o poco conocidos en este establecimiento*. Entrega primera (Buenos Aires: Bernheim & Bonneo, 1864), pp. 1–10. In the 1880s, the museum's name was changed to Museo Nacional.



**Figure 1.** First building of Museu Nacional from 1818 to 1892. Archives Museu Nacional.

teaching of science at the museum served a valuable function.) In 1876 he began the *Archivos do Museu Nacional*, in which scientific staff published research from the institution's different departments. In the 1880s his museum, as well as the Museo Nacional de Santiago de Chile<sup>11</sup> and the Museo Público of Buenos Aires, were proud to exhibit skeletal whales in their halls. Netto wanted to have in Rio de Janeiro, the capital of the Brazilian Empire, a museum that was both metropolitan and universal. Side by side with Chinese porcelain from the Portuguese colonies in Africa and Asia, he displayed artifacts from Pompeii, Egyptian mummies, and Japanese herbaria—all essential parts of the metropolitan and universalistic regime that he imparted to his museum.

In order to stress the uniqueness of his Brazilian museum's natural, archaeological, ethnographical, and anthropological collections, Netto emphasized the museum's contribution to all of science. At a moment when it was important to enhance contacts with the most prestigious museums of the world, the Museu Nacional incorporated local findings and redefined them, presenting them as "national." Thus nationalized, they could compete with other territories equally exotic.

Netto's museum in Rio de Janeiro was the national museum of Brazil. Because Argentina was not yet formally a nation, Burmeister's museum in Buenos Aires was still a provincial museum, sponsored by the province of Buenos Aires. It was associated with the local university, sharing rooms with it in the same building. Burmeister proposed a model of a museum with a local scientific character, focused on local zoology, with particular emphasis on paleontology. (The museum possessed rich paleontological collections.) His main goal was to organize collections and catalogues by describing new genera and species from the fossil remains in the museum's collection. To publicize his discoveries, he started the *Anales del Museo Público de Buenos Aires* in 1864. Despite its name, the museum was seldom open to laymen. The institution was seen and used as the director's private cabinet, and Burmeister did not concern himself much with the public or with exhibits. The *Anales* became the main forum for presenting information about the museum's collections. (Netto's museum, by contrast, emphasized the public display of collections.) In Buenos Aires, teaching was not particularly emphasized, although Burmeister's staff did lecture in the university's medical and engineering faculties.

<sup>11</sup> Rudolph A. Philippi, "História del Museo Nacional de Chile," *Boletín del Museo Nacional*, 1908, 1:3–30.



Despite their differences in theory and practice, Burmeister and Netto were friends and corresponded intensively. They also visited each other's countries. Burmeister, for example, went to Rio de Janeiro in 1886 and helped to mount a *Scelidotherium* skeleton that the Argentinean government was donating to Netto's museum.

The two directors were also rivals, however. Netto established close relations with a leading scientific society in Burmeister's city. In 1876 Netto was elected a corresponding member of the Sociedad Científica Argentina. In 1882, he visited Buenos Aires and gave a lecture on the theory of evolution to the young fellows of the society, who were enthusiastic Darwinists. The lecture was well received, and the society publicly eulogized Netto's museum, thereby sending an indirect message to Burmeister, the director of the museum in their own city. One of the younger Argentinean naturalists challenged the Argentinean Republic to take up seriously its "noble rivalry" with the admirable Brazilian museum, its more numerous personnel, and its scientific school—in short, to imitate Netto's museum.<sup>12</sup> The rhetoric of rivalry between the two South American institutions became a source of competition and support for both.

In 1880 Argentina became a unified nation, and Buenos Aires was made the national capital. (Formerly the city had simply been the capital of the province of Buenos Aires.) After federalization, some of the institutions in Buenos Aires were taken over by the new federal government, but others were still administered by the province. Despite the intrigues of the younger generation of naturalists in the Sociedad Científica, Burmeister's museum received federal sponsorship, and its name was changed from Museo Público de Buenos Aires to Museo Nacional de Buenos Aires.<sup>13</sup>

At this same time, a young member of the Sociedad Científica, Francisco Moreno—son of the *porteno* elite, explorer of Patagonia, and a former protégé of Burmeister—lobbied for the creation of a new museum-monument of natural history for Argentina as impressive as those of Paris and London. Partly because a new provincial capital was being established at La Plata, he was successful. In 1884, the Museo de La Plata was established in a magnificent building, a "Greek temple in the middle of the Pampas," and Francisco Moreno became its first director.<sup>14</sup>

In debating Darwinism, new models for museums, and careers for curators, the new generation employed a rhetoric of rupture with the past. Although they acknowledged their debt to their predecessors, they attacked their ideas, methods, research styles, and "foreignness." In so doing, the new generation followed international standards for professional scientific practices. These new practices involved the reclassification of collections, worldwide exchanges among museums and scientific institutions, and publication of modern-style research.

<sup>12</sup> Estanislau Zeballos, "El Museo Nacional de Rio de Janeiro," *Actas de la Sociedad Científica Argentina*, 1877, 3:269–75. Some of the younger members of the staff of the Museu Nacional do Rio de Janeiro later headed provincial museums or other local scientific institutions. They included Barboza Rodrigues (1842–1909) and Emilio Goeldi (1859–1917), directors of Brazilian museums in the Amazon, as well as João Batista de Lacerda (1846–1915), Netto's successor in Rio de Janeiro, and Hermann von Ihering (1850–1930), in São Paulo.

<sup>13</sup> Their affiliations with the old museums and the new ones that were created in the 1880s and 1890s were as follows: Francisco Pascasio Moreno (1852–1919), at La Plata from 1887 to 1911; Florentino Ameghino (1853–1911), at Buenos Aires from 1902 to 1911; Carlos Berg (1843–1902) at Montevideo from 1890 to 1892 and at Buenos Aires from 1892 to 1902.

<sup>14</sup> Henry Ward, "Los Museos argentinos," *Revista del Museo de La Plata*, 1890, 1:1–8, on p. 3.

Evolutionary theories had their monument in the new Museo de La Plata, which began with no collections but nevertheless aspired to become a center for national exploration and for the exhibition of national nature. In keeping with Darwinian principles, Moreno set out to gather collections and design exhibits that would illustrate the entire course of evolution in Argentina, covering everything from fossil remains in local sediments to contemporary industry and arts.<sup>15</sup> In 1890, the museum began the publication of two series—the *Anales* and the *Revista del Museo de La Plata*. The Museo de La Plata, as monument of natural history, consolidated the model of the public museum in Latin America. Moreno was criticized for using his elaborate exhibits to charm the public and attract the passing gaze of the province's politicians. The row of reconstructed skeletons of extinct glyptodonts and the whale skeletons hanging from the ceiling were described as a mercenary exploitation of science.<sup>16</sup>

Nevertheless, the 1890s witnessed his museum's success as a scientific icon. Its institutional journals and expeditions competed in the search for fossil and archaeological remains. Moreno was attacked but also envied by Burmeister in Buenos Aires: the Museo de La Plata had become a strong competitor for Argentinean resources. Neither the national museum of Argentina nor that of Brazil had enough state support or a proper building, and the contrast made them less attractive than La Plata.<sup>17</sup> Only by their publications could they ensure their status before an international audience that followed with interest debates between the Museo de La Plata and the most famous paleontologist in Argentina, Florentino Ameghino, on the classification of mammalian fossils. (In these years an independent scholar, he later became a museum director himself, heading the Museo Nacional de Buenos Aires from 1902 to 1911.) Ameghino's authority was viewed as greater than that of the state institutions themselves. Even the president of Argentina sent fossils to him for examination, instead of sending them to the museums that his ministries subsidized.<sup>18</sup>

In Brazil, the 1890s witnessed the founding of provincial museums. Hermann von Ihering, a German naturalist, formerly on the staff of the Museo Nacional in Rio de Janeiro, established the Museu Paulista in São Paulo, with the help of Orville A. Derby (1851–1915), an American geologist who had started his career at the museum in Rio de Janeiro. Derby had developed close ties with the wealthy elite of São Paulo province—then, because of coffee, the wealthiest province in Brazil. Through these connections Derby became the director of the Comissão Geográfica e Geológica (Geographical and Geological Commission) in the city of São Paulo.<sup>19</sup> From this position he was able to help Ihering become, in 1894, the director of a new museum there, the Museu Paulista. Its magnificent building, designed as a monument to Brazilian independence, had far more space than was needed to house the collections of the Comissão and the private collections with which it began. Like

<sup>15</sup> Irina Podgorný, "De razón a facultad" (cit. n. 8).

<sup>16</sup> Eduardo L. Holmberg, *El Joven coleccionista de Historia Natural en la República Argentina* (Buenos Aires: Ministerio de Instrucción Pública de la Nación, 1905).

<sup>17</sup> "We have no space for displaying new specimens. . . . Where to arrange the whales' skeletons stored in the attic and in the corridors of the Museum?" Carlos Berg, "Informes sobre el Museo Nacional," in *Obras completas y correspondencia científica*, ed. Florentino Ameghino (La Plata: Taller de Impresiones Oficiales, 1934), vol. 1, pt. 18, pp. 464–7.

<sup>18</sup> Irina Podgorný, *El Argentino despertar* (cit. n. 7).

<sup>19</sup> Silvia F. de M. Figueiróa, *Um Século de pesquisas em Geociências* (São Paulo: Instituto Geológico, 1985).



La Plata, this new provincial museum would also challenge the national museum in the capital.

Ihering's directorship of the Museu Paulista would last almost twenty years. Following principles laid down by George Brown Goode, the famous secretary of the Smithsonian Institution,<sup>20</sup> Ihering asserted that specialization in particular domains of knowledge was the unique solution to the "crisis" that large and complex museums everywhere were experiencing around 1900. Ihering limited his territory to the natural sciences of Brazil and South America. From this perspective he launched an attack against the universalistic museum in Rio de Janeiro, which aspired to represent all of nature. Ihering opposed the uniqueness of his museum in São Paulo to everything that the older Brazilian museum stood for.<sup>21</sup> The national museum, he claimed, was not genuinely scientific. The board of that institution never forgave him for his criticism and ridiculed the Museu Paulista for its majestic but still rather empty building. In their view, Ihering's boasts were made merely to gratify his own ego and to please his wealthy *paulista* patrons.<sup>22</sup>

Despite these rivalries at home, Ihering reached out across national borders and made strong alliances with Ameghino in Argentina and also with his counterparts in Chile at the museums in Valparaíso and Santiago do Chile. He expanded the boundaries of the study of South American natural history at his museum in keeping with the times, encouraging empirical research into the evolution of South American mollusks (both fossil and living).<sup>23</sup>

#### BOUNDARIES AND SOUTH-SOUTH LINKS

Two directors quite literally helped to draw national boundaries in South America. In the mid-1980s, Moreno was selected to head the commission that would determine the border between Argentina and Chile. Emilio Goeldi, from the Museu Paraense de Historia Natural e Etnografia, in the Amazon, headed the commission charged to determine the border between Brazil and French Guiana. The directors' normal work also involved putting the national stamp on new, unexplored territories in their countries. To expunge the label "unknown" or "unexplored" from the maps of Brazil and from Brazilian (and all of South American) nature was a goal that museum directors assigned themselves. Adding to Argentina and Brazil thousands of square kilometers of "unknown" land and nature included collecting the material culture of the indigenous peoples—and the peoples themselves—in La Plata, Buenos Aires, São Paulo, the Amazon, and Rio de Janeiro.

This process tied the building of science to the invention of national identity. The museums participated in this latter process in two ways—explicitly, by exploring the territories to be annexed, and implicitly, by giving value to the objects acquired

<sup>20</sup> George Brown Goode, "The Principles of Museum Administration," *Proceedings of the Sixth Annual General Meeting of the British Association of Museums* (Newcastle-upon-Tyne, July 1895), pp. 69–148.

<sup>21</sup> In the same spirit, Ihering advocated a South American mollusks museum. Maria Margaret Lopes, "Viajando pelo mundo dos museus: Diferentes olhares no processo de institucionalização das ciências naturais nos museus brasileiros," *Imaginário*, 1996, 3:59–78.

<sup>22</sup> João B. de Lacerda, "Ao sr. dr. Von Ihering, director do Museu Paulista," *Archivos do Museu Nacional do Rio de Janeiro*, 1895, 5:ix–xix.

<sup>23</sup> Hermann von Ihering, "Les Mollusques fossiles du tertiaire et du crétacé supérieur de l'Argentine," *Anales del Museo Nacional de Buenos Aires*, 1907, 8:1–68.

for collections and by giving legitimacy to extermination policies. The catalogue of native peoples' skeletons, skulls, and material culture as "exotic" or "unique" became—after their scientific baptism—part of the precious treasure of Brazilian and Argentinean natural history. In this framework, the museums collected the archaeological and physical remains of primitive cultures and—before they vanished—their habits and languages. The more extensive the comparative collection of skulls and languages, the more quickly could the question of the origins of humankind be solved.

Another idea, shared from the River Plate to the Amazon, was that America held the key to the past as well as the future of human life. Ameghino claimed that South America, specifically Argentinean territory, was the birthplace of humankind. This idea was taken up by part of the Argentinean cultural elite, and the Argentinean "nationality of humankind" was defended with the same ardor as was the controversial claim that Ameghino himself had been born in the Pampas rather than in Europe.<sup>24</sup> Ihering asserted that the extermination of "savage Indians" from São Paulo was an inevitable consequence of progress and civilization. João Batista da Lacerda, director of the Museu Nacional do Rio de Janeiro at the turn of the century, took the Brazilian Botocudos Indian nation as the standard of inferiority in the scale of the development of the human races, which also made them closer to the possible origins of humankind. This physician-physiologist and craniometric anthropologist proposed transforming the "Brazilian race" from black to white as the only path to civilization.<sup>25</sup>

Argentinean and Brazilian museums cooperated in the search for the origins of people, animals, and territories. In cases where the origins of humankind could not be linked to a national Argentinean identity, the Argentineans appealed to fossil and geological evidence. Both Burmeister, in the new edition of his *History of Creation*, and Ameghino, in his book *The Antiquity of the Peoples of La Plata*, claimed that from a geological perspective America was no younger than the "Old World," and that human beings who were contemporary with the large mammals that became extinct after the Deluge must have "existed simultaneously and before our times on both the Western and Eastern continents [the Americas and Europe]."<sup>26</sup>

Cooperation bore fruit in other ways. From his study of fossil remains of South American mollusks, for example, Ihering established paleontological links between the present-day continents of South America, Africa, and Australasia.<sup>27</sup> Because of their special friendship, Ihering and Ameghino exchanged mollusk and mammalian fossils, each trying to understand the geological formation of the Southern Hemisphere.<sup>28</sup> At the same time, they worked to emancipate South American geology from

<sup>24</sup> In fact, Ameghino probably was born in Moneglia, Italy, close to Genoa. He emigrated to Argentina with his parents as a child. After his death in 1911 a branch of the Catholic movement accused him of being Italian. See Irina Podgorny, "De la santidad laica del científico: Florentino Ameghino y el espectáculo de la ciencia en la Argentina moderna," *Entrepasados, Revista de Historia*, 1997, 13:37–61.

<sup>25</sup> For a detailed account of this theme, see Thomas Skidmore, *Black into White: Race and Nationality in Brazilian Thought* (Oxford: Oxford Univ. Press, 1974).

<sup>26</sup> Hermann Burmeister, *Historia de la Creación: Exposición Científica de las fases que han presentado la tierra y sus habitantes en sus diferentes periodos de desarrollo*, 9th ed. (Madrid: Gaspar, n.d.), p. 310.

<sup>27</sup> Hermann von Ihering, *Archhelenis und Archinotis* (Leipzig, 1907).

<sup>28</sup> Maria Margaret Lopes and Silvia F. de M. Figueirôa, "Horizontal Interchanges in Geological Sciences," *Nineteenth International Symposium of the International Commission on the History of*

the preconceived theories of North American paleontologists concerning Patagonian fossils.<sup>29</sup> Their work is an example of unparalleled scientific cooperation in the continent.<sup>30</sup> Although removed from the exchange because of his work on the boundary commission, Moreno also appealed, as if it were a boundary problem, to science with regard to questions about Southern Hemisphere geology and paleontology.<sup>31</sup>

Here it is important to underline some aspects of the relationship between Brazil and Argentina with metropolitan centers. The idea of South–South geological links initially appeared in opposition to the ideas of northern institutions, especially in North America; Europe was not a “neutral” authority in these controversies, which were of essential importance in deciding which European institutions and which countries should dominate the field.

### CONCLUSION

Within Latin America there was no doubt that, at the end of the century, the ideal natural history museums were those located south of the River Plate.<sup>32</sup> North of the river, from Montevideo<sup>33</sup> to the Amazon, across the Andes in Santiago,<sup>34</sup> and in Valparaíso, the Argentinean museums of Buenos Aires and La Plata fused into a prevailing model of the museum. In this model, whales of the southern seas were to be seen suspended from the ceiling, and large, extinct South American mammals marched down the halls. These museums were the most envied, because they constituted exemplars. On the other side of the river, Carlos Berg and Ameghino, Burmeis-

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*Geological Sciences [INHIGEO]: Useful and Curious Geological Enquiries beyond the World* (Sydney: INHIGEO, 1994), pp. 1–6.

<sup>29</sup> Concerning his controversy with the North Americans from the Princeton expeditions to Patagonia about the Patagonian collections, for example, Ihering wrote to Ameghino, “Between us, I believe that our position regarding the American gentlemen is, scientifically, the same that unfortunately prevails in politics. I would expect impartial and proficient help only if European geologists, who agree with your point of view, would proceed to examine those samples again.” The manuscript, Carta 1546, São Paulo, 30/08/1902, is reprinted in Florentino Ameghino, *Obras completas y correspondencia científica*, ed. A. J. Torcelli (La Plata: Taller de Impresiones oficiales, 1937), p. 79.

<sup>30</sup> Another example of the close scientific and personal relationship among Latin American museum directors was that sustained by Carlos Berg, a Russian-born naturalist, and his colleagues from the Museo Nacional de Montevideo, in Uruguay, which he also directed between 1890 and 1892.

<sup>31</sup> “Interesting problems, which can only be solved by a systematic examination of the Argentine country by an experienced geologist. In the course of my paper on Patagonia, read before the Royal Geographical Society (May 29), I proposed that this Society, the Royal Society, and the British Museum, with other scientific institutions, should proceed to carry out these necessary investigations. . . . If these expeditions be made, how many changes may be produced in actual and general ideas on the age of South American fossiliferous strata, on the disappearance of the lost southern lands, and on the affinities of extinct faunas so distant in time and space as those of South America and Australia!” Francisco Moreno, “Note on the Discovery of *Miolania* and of *Glossotherium* (*Neomylodon*) in Patagonia,” *Nature*, 1899, 1566, 60:397–8.

<sup>32</sup> José A. Pérez Gollán, “Mr. Ward en Buenos Aires: Los Museos y el proyecto de nación a fines del siglo XIX,” *Ciencia Hoy*, 1995, 28:52–8.

<sup>33</sup> In his vast correspondence with Carlos Berg, José Arechavaleta (1838–1912), a Spanish botanist who directed the Museo Nacional de Montevideo from 1893 until 1912 and made it one of the most distinguished Latin American museums by the turn of the century, expressed his admiration for the collections and library of the Museo Público de Buenos Aires, and also for details of small exhibitions presented there.

<sup>34</sup> The Argentinean museums were also mentioned by Eduardo Moore, director of Chile’s Museo Nacional de Santiago, in his “Report of Activities for the years 1910–1911,” *Boletín del Museo Nacional*, 1912, 3:1–14. He said that the Santiago Museum could attain the level of similar institutions in foreign countries, “especially in the Argentine Republic,” only if it could increase the salaries of staff members so that they could become full-time researchers.

ter's successors at the Argentinean Museo Nacional, spent their days stressing, amidst innumerable problems, the need to store the big bones and to construct a new building to rival the sumptuous palace at La Plata.

What were envied and disputed were not merely the accidents of collections and buildings, but also the principles of museum design and investigation that reached beyond national limits. The social roles that museums would play in the new century turned upon their being conceived not as local, circumscribed to specific regions, but as incorporating continental dimensions. They "musealized" natural environments that political frontiers between countries did not divide; they shared scientific interests that united South America; and they identified a common basis of intellectual culture in the South that could finally be recognized in the North.

The affinities and rivalries among Brazilian and Argentinean museums did not reduce the value that naturalists working in Latin America attached to their North American and European contacts. Indeed, as we have noted, they took great pride in establishing and keeping those relationships.<sup>35</sup> However, in thinking about the "mondialization" of science, besides the relationship between metropolis and colony we must also consider the dynamics of Latin American scientific integration. The case of museums is but one aspect of such integration. More evidence is furnished by the Latin American Scientific Congresses that were held in Buenos Aires in 1898, Montevideo in 1901, Rio de Janeiro in 1905, and Santiago in December 1908 and January 1909, in which directors of museums participated. These congresses were considered the first attempts at building a scientific community within the regional context of Latin America.<sup>36</sup>

Our purpose has been to advance beyond the discussion of acclimatization, reception, and translation of science around the world. Further investigation of the "mondialization" of science focusing on relationships among countries that do not belong to the North Atlantic axis is needed. Within this framework, it is possible to understand how the directors of Brazilian and Argentinean museums, far from permanently assuming a colonial discourse, could instead dispose their institutions to serve as symbols of a new national identity, using science "as a nationalist enterprise."<sup>37</sup> Despite the specific circumstances of each museum, of each country, the praise of the unique, the proper, the peculiar that characterizes the whole, the essence of these new museums was the definition of species from type, a basic principle of taxonomy. This perspective united Brazilian and Argentinean museums. At the turn of the century, museums in London, Paris, and Washington were, no doubt, centers of reference, but ones perceived from a local perspective, stimulated by the carapaces of glyptodonts, and by the hanging bones of whales from the remote southern seas.

<sup>35</sup> Maria Margaret Lopes, "Brazilian Museums of Natural History and International Exchanges in the Transition to the Twentieth Century," in *Science and Empires: Historical Studies about Scientific Development and European Expansion*, eds., Patrick Petitjean, Catherine Jami, and Annie Marie Moulin (Dordrecht: Kluwer, 1992), 193–200.

<sup>36</sup> Francisco R. Sagasti and A. Pavez, "Ciencia y tecnología en América Latina a principios del siglo XX: Primer Congreso Científico Panamericano," *Quipu*, May–Aug. 1989, 6, 2:189–216.

<sup>37</sup> Roy MacLeod, "Reading the Discourse of Colonial Science," in *Les Sciences coloniales: Figures et institutions*, ed. Patrick Petitjean (Paris: Organization pour la Recherche Scientifique des Territoires d'Outre-Mer, 1996,) pp. 87–96, on p. 95.