

Some Brief Reflections on the Centennial of the Second Pan American Scientific Congress of 1915-1916

Algunas reflexiones en el centenario del segundo congreso científico panamericano de 1915-1916

Algunas reflexões no centenário do segundo congresso científico pan-americano de 1915-1916

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The convening of the Second Pan American Scientific Congress one hundred years ago in Washington, D.C. was the defining moment in the creation of “scientific/intellectual Pan Americanism”, a movement which not only recognized equality among scientists in the Americas, but was an important component of inter-American cooperation during World War I. The successes achieved in Washington should be understood as a continuation (albeit interrupted) of intellectual/political interactions among scientists of the Americas dating back to the colonial period.

Key words: **Pan Americanism; World War I; Secretaries of State Root and Lansing; Nationalism.**

La reunión del Segundo Congreso Científico Panamericano realizada hace cien años en Washington D.C. fue el momento decisivo de la creación del movimiento “científico-intelectual panamericano”, un movimiento que no sólo reconoció la igualdad entre los científicos del continente, sino que se convirtió también en un importante componente de cooperación durante la Primera Guerra Mundial. El éxito alcanzado en Washington se debe entender como una continuación, no sin interrupciones, de las interacciones político-intelectuales entre científicos del continente americano que se puede trazar desde el período colonial.

Palabras clave: **Panamericanismo; Primera Guerra Mundial; Secretarios de Estado Root y Lansing; Nacionalismo.**

A reunião do Segundo Congresso Científico Pan-americano, realizada há cem anos em Washington D.C. foi o momento decisivo da criação do movimento “científico-intelectual pan-americano”, um movimento que não só reconheceu a igualdade entre os cientistas do continente, senão que também se transformou em um componente de cooperação importante durante a Primeira Guerra

Mundial. O sucesso alcançado em Washington deve ser entendido como uma continuação, não sem interrupções, das interações político-intelectuais entre cientistas do continente americano que podem ser traçadas desde o período colonial.

Palavras-chave: **Pan-americanismo; Primeira Guerra Mundial; Secretários de Estado Root e Lansing; Nacionalismo.**

Introduction

The Second Pan American Scientific Congress met in Washington, D.C. from December 27th, 1915, until January 8th, 1916. From its title there is nothing to hint at the historical achievement this event represented. Nor is there any suggestion that this “Second” congress, which included hundreds of delegates from every country in Latin America as well as from North America, would have been impossible to convene just ten years earlier. Yet, in that decade’s time, extraordinary changes had occurred: the scientific communities of Latin America abandoned their suspicion of their North American colleagues, they opened their previously closed scientific congresses to U.S. scientists, and they agreed to convene their next meeting in a heretofore unthinkable locale, i.e., Washington, D.C. This paper examines the reasons why that turnabout occurred and discusses how the goals of the congress could simultaneously be both scientific and political, while still representing national interests. As the United States Secretary of State at the time of the 1915 Congress, Robert Lansing proclaimed when writing to future U.S. participants:

This great Congress, although Scientific in name, comprehends many of the principal branches of human activity, including such interesting topics as commerce, finance, transportation, public health and sanitation, mining and metallurgy, international law, engineering, education, conservation, etc.; and indications now point to a greater attendance of representative Latin-Americans than have ever before participated in a Pan-American meeting¹.

It would be imperative to get it right.

Background

The close relationship among science, politics and nationalism in the Americas, so evident at the Second Pan American Scientific Congress of 1915-6, was not a new phenomenon. On the contrary, this nexus had emerged in the colonial period when, from the 1500’s to the 1700’s, the concept of “scientific research” more often than not served as a blind for advancing the geo-political and economic agendas of metropolitan countries in their respective colonies. As

Antonio Barrera-Osorio has recently argued², even before most Latin American nations achieved independence in the early nineteenth century, the pursuit of science in the Americas had been harnessed to political aims. State-sponsored scientific expeditions ostensibly embraced the cause of research and collecting; in truth they masked a more compelling goal of cataloguing valuable colonial resources upon which the metropolitan economies were increasingly dependent. Those intrepid naturalists willing (or stalwart enough) to venture into remote, often dangerous, regions of their respective colonies were eagerly supported by their home governments, resulting in mutually satisfying arrangements which lasted well into the politically-charged atmosphere of the late eighteenth century.

Ironically, such explorations led scientists/naturalists to an enhanced appreciation of the local flora and fauna. These “nativist” tendencies would emerge as full blown nationalist sentiments as the eighteenth century unfolded, in lockstep with growing sympathy for the liberal politics of the European Enlightenment. Scientists in this time period would meet (often clandestinely) within the chambers of learned societies, or academies, to discuss new and inherently subversive, nationalist ideas; among these were the recognition of natural law and its corollary arguments for self-government. In these settings, as Juan José Saldaña has observed, “science took on a leading role in social transformation of the region, and it became one of the cultural and material agents of change”³.

It was also within the confines of these academies that contacts between the scientific communities of Spanish and Portuguese colonies and like-minded brethren in North America were initiated and nurtured. In retrospect, such activities could be interpreted as the first, tentative steps toward the creation of a “scientific” or “intellectual” Pan Americanism. Such academies (exemplified by one of the most famous of the group, the American Philosophical Society in Philadelphia) were not schools in the strict sense of conferring degrees on young students but, rather, gathering places of learned individuals. Within their meetings rooms, inter-hemispheric exchange among some of the best scientific minds of the period was carefully cultivated.

For those interested in historiography, it is worth noting that the academic study of such scientific societies and the intellectual exchanges between them was one of the earliest themes of the emerging discipline of Latin American history in the early twentieth century. In his pioneering essay published in 1942, the distinguished historian of Latin America, Harry Bernstein, observed that “[A] new intellectual link, forged from the effects of the Enlightenment, united scientists in America”⁴. Recognition of their mutual struggles against metropolitan interests encouraged scientists in North America to support the Spanish American bid for independence. Bernstein suggested that Dr. Samuel Latham Mitchill of Columbia University (later named the director of the Lyceum of Natural History in New York, the forerunner to today’s New York Academy of Sciences) was “the first North American to reconcile scientific enlightenment and democracy by endorsing the Latin American struggle for liberation”⁵.

Among the distinguished North Americans whose work was widely discussed in Latin American learned societies was Benjamin Franklin; he not only corresponded directly with members of many of those scientific academies but saw his works on “optics, waves and heat

rays” translated into Spanish. Alexander Garden, a South Carolina botanist, and Dr. Benjamin Smith Barton, a Philadelphia physician interested in early indigenous cultures, were among a host of other North American scientists in direct contact with their Latin American counterparts in the late 1700’s. And the exchange worked in reverse: the Guatemalan scientist and physician, Dr. José Felipe Flores, for example, traveled a considerable distance from his city of Antigua, in Guatemala, to Philadelphia to be able to meet personally with scientific colleagues⁶. These contacts represented a harmonious sharing of knowledge within the Americas.

In the early years of the nineteenth century, the newly independent nations of the Americas continued to sponsor contacts between the scientific communities in the hemisphere, especially among natural scientists. A United States diplomatic mission of 1817, for example, was instructed to encourage direct contact between the New York Lyceum of Natural History and noted Latin American naturalists, including Bartolomé Muñoz, director of the Cabinet of Natural History in Buenos Aires⁷. Such cooperation, forged in an atmosphere of mutual interests, boded well for a peaceful Pan American melding of scientific and political objectives, and resulted in some promising, early hemispheric exchanges.

But sustaining such idealized cooperation between scholars soon proved elusive, especially after political relations between the United States and Latin America soured midway through the nineteenth century. Perhaps rupture was inevitable post-1848, when the United States proclaimed victory in the Mexican-American war and absorbed approximately half of Mexico’s national territory. This catastrophic shift in the balance of power unavoidably impinged on all aspects of hemispheric relations, including the once-heralded partnership between the North American and Latin American scientific communities. Moreover, the increasing role of U.S. investors in exploiting Latin American natural resources and repeated, but unsuccessful, early attempts of the United States government to take over the Spanish colony of Cuba, the Dominican Republic and the Danish Virgin Islands, resulted in a re-evaluation of the United States by Latin American intellectuals, including scientists. The once trusted northern neighbor was now viewed as a threat, earning the famous moniker of the “colossus” of the North⁸.

The irony in this situation was that, notwithstanding the ill feelings toward the United States, the flow of technology continued unabated in a north to south direction (within the hemisphere) and an east to west direction from Europe. Dependent on export-led economies, Latin American nations sought “scientific know-how” and equipment from abroad to improve output⁹. Considered “progressivist” (or positivist), these economic agendas almost universally supported the application of imported technology to a wide range of local industries from sugar production to mining. By the second half of the nineteenth century, therefore, the exchange of scientific ideas between the Americas tended more to the technical, rather than the natural sciences, a phenomenon which, in turn, reflected the interests of investors from more “progressive” nations, including those from the United States.

For thoughtful observers in Latin America this shift in emphasis was ominous: it was obvious that mechanical behemoths, such as imported steam engines, were a double-edged sword. While it was undeniable that such equipment crushed cane more efficiently than older methods,

(or spun sisal into rope more effectively, or helped mine ore more easily), such machines were inherently “anti-nationalist” to the extent that their usage contributed to the destruction of natural resources and native landscapes. No wonder that Latin American scientists, whose forebears had courageously embraced nationalistic rhetoric in the eighteenth century, now found themselves in a conundrum: could they embrace the new technological sciences and “progressive” platforms and ignore what they, themselves, had witnessed in the course of their careers, i.e., the despoiling of forests, the fouling of rivers, and the replacement of small farms by large consolidated estates, or must they react? These issues, which scientists subtly raised in the post-1850 era, became an all-consuming polemic by the turn of the century, coincident with the United States 1898 war with Spain over Cuba. At this critical juncture, Latin America scientists recognized that they must now take the lead in conserving the natural resources of their nations or be forever held responsible for the dire consequences by their fellow citizens.

The growing resentment of Latin American scientists to widespread trafficking in bird plumage illustrates the process of their politicization perfectly. Bird feathers from Latin America were collected and sold world-wide for the frivolous reason of allowing fashionable women to adorn their hats with exotica. Beginning in the early nineteenth century, and still the mode in the first years of the twentieth, the quest for ever more exotic feathers had widened the hunt for more unusual plumage (even the tanned skin of rare birds was said to be universally coveted)¹⁰, resulting in the wholesale slaughter of thousands of Latin American birds. Initially ignored, this issue became a cause célèbre among scientists toward the end of the century; in time, a developing Latin American ornithological consciousness became intrinsically linked to growing nationalism. With the widely-acclaimed publication in 1894 of *Aves do Brasil (Birds of Brazil)* by Emilio Goeldi (which “revolutionized” ornithological knowledge in Brazil), the alarm was sounded about the likely depletion of the hemisphere’s (not only Brazil’s) unique bird population¹¹. It did not take much to proceed from the ornithological example to a recognition that other valuable resources were also facing rapid extinction. The inherent dangers of the plumage trade thus became the tipping point in a high-minded nationalist rhetoric decrying the ever-accelerating loss of natural resources including birds, petroleum, manganese, minerals, and, in its broadest reach, extending even to cultural artifacts¹².

Perhaps it was in this last category that the growing ill-will between scientific communities in the hemisphere reached the breaking point. As Robert Aguirre has observed in his recent study of the importance of Latin America to Victorian culture, the raiding of cultural patrimony by foreign experts (especially, but not entirely, by the British) had been accompanied by a cultural denigration of the peoples of Latin America by Europeans and North Americans, alike. Museum exhibits on Latin America mounted in “advanced” nations not only created “visually seductive panoramic displays that portrayed foreign lands as rich, available and conquerable...” [they also] “represent[ed] indigenous Central Americans and Mexicans as hopelessly backward and unknowable, [and] Creole elites and mestizos as untrustworthy and both as incapable of appreciating or protecting the cultural riches they had inherited from their ancestors”¹³.

These attitudes were clearly intolerable to the Latin American scientists who felt responsible

for protecting national patrimony. But equally frustrating was the ever increasing number of foreign scientists who poured into the region, from the 1890's onward, to ferret out treasures without seeking local cooperation or approval. Regarding this period, one historian has glibly noted that Latin America "was the leading destination for U.S. direct investment and a playground for U.S. explorers and archaeologists"¹⁴. If not kept as personal treasures, the collections of artifacts or specimens made by these adventurers in Latin America were either gifted or sold to institutions in the United States, including the major natural history museums. The American Museum of Natural History, for example, accepted a large donation from the Duke of Loubat (who, despite his title, was actually a U.S. philanthropist), from his collection of Mexican and Central American artifacts¹⁵. U.S. universities also sponsored expeditions to Latin American sites to excavate fossils before their rival institutions had the opportunity to stake their own paleontological claims¹⁶.

Infuriated with this turn of affairs, Latin American scientists once again took up the cudgels of nationalism, in a movement that paralleled the activities of their forebears a century earlier. They now reimagined themselves as a bulwark against foreign intrusion, not to mention foreign scientists, who were depleting their national patrimony. Not even the conciliatory atmosphere of the First Pan American Conference of 1889 (a non-scientific convention which included the United States as a member and was held in Washington) could dissuade them. Moreover, given the limited success of that meeting and the subsequent ones (the second PAC was held in Mexico City, 1901, the third in Rio, 1906, and the fourth in Buenos Aires, 1910)¹⁷, scientists viewed such pan-hemispheric efforts with cynicism. Instead, defiantly, they decided to hold their own scientific meetings, making it a point to conspicuously exclude U.S. participation.

So while science broadly continued to be linked to the politics of the Americas, and still showed the influence of nationalist goals and rhetoric, by the end of the nineteenth century distinct lines had been drawn; the harmonious and brotherly interaction of scientists from North America and Latin America (so rightfully celebrated in the late eighteenth, and early nineteenth centuries), had been replaced by skepticism, suspicion, and often outright hostility at the opening of the twentieth. The result was an almost insurmountable abyss.

It was this breach in relations that formed the background to the convening of the first three regional meetings of Latin American scientists, all of which excluded North American colleagues. The first was held in Buenos Aires, Argentina, in 1898, the next in Montevideo, Uruguay, in 1901, and the third in Rio de Janeiro, Brazil, in 1905. All three of these Latin American Scientific Congresses had exclusively Latin American delegates, in contradistinction to the continuing push of the United States for "Pan-Americanism" in the broader political sphere. According to published accounts, the reasoning behind the exclusion of North American colleagues was that these meetings were to be considered "experimental", implying that the "more advanced" nation of the United States should not be asked to participate until it was determined that such "experiments" had been successful¹⁸.

Such reasoning, however, was not very convincing, perhaps not even to the participants. More likely, the "fear of looking foolish" had less to do with the exclusion of scientists from the United States than the perceived *real politik* which imagined that Washington's hegemonic

tendencies might hijack the meetings and set their very agendas. It would be a full decade before Latin American scientists would relent sufficiently to allow their colleagues from North America to participate in their sessions, and almost a decade further before such a meeting would be held in the United States.

Overcoming the Rift

The “thaw” in relations between scientific communities in the Americas began in 1905 at the Rio Congress. Although no official explanation was given, the decision was announced at the Rio congress to invite U.S. participants to future scientific meetings. To memorialize this difference, the next meeting, which was to be held in Santiago, Chile in 1908, would now be referred to as the First Pan American Scientific Congress, (as opposed to “The Fourth Latin American Scientific Congress”), an euphemism for the inclusion of scientists from the United States. Accordingly, when the meeting convened in Chile in December, 1908, ten hand-chosen, eager U.S. delegates were in attendance, along with a few representatives from major United States universities. Selected by the U.S. Secretary of State, Elihu Root, these representatives included, among others, men from the Smithsonian Institution in Washington, D.C., Prof. Hiram Bingham of Yale University (and, later, Machu Picchu fame) and Dr. Bernard Moses from the University of California; they represented a wide spectrum of social, physical, archaeological and natural sciences.

Perhaps more importantly, these delegates had all been selected for their expertise in Latin American subjects, their knowledge of specifically American issues, and their ability to speak Spanish. Their very attendance would consequently force acknowledgement for the first time of ongoing United States scientific research in the region. It was thus important from Washington’s perspective to get this participation right from the outset, and the task was, understandably, given to the U.S. Department of State.

Secretary of State Elihu Root, a serious advocate of Pan Americanism, did not hesitate to make it clear to the chosen delegates to the Congress that they had the responsibility to achieve some recognition from their Latin America scientific colleagues. “For the first time”, he admonished them,

under the influence of the new Pan-American entente, an all-American congress is to be held, and it is very desirable that we should contribute our fair share and that the work which you do and the associations which you form should contribute toward the establishment of permanently good relations and continue the work of doing away with the misapprehensions, jealousies, and suspicions which have so largely influenced the views entertained for this country in some of the Latin-American countries¹⁹.

It was obvious that Root hoped his men could achieve a rapprochement in these scientific

meetings which had, heretofore, eluded diplomats attending the non-scientific Pan American Congresses. Was he being realistic? After all, United States participation at this First Pan American Scientific Congress would be limited to a handful of delegates. Many of these delegates had even been obliged to read the papers of their scientific colleagues who stayed at home, in an effort to increase the U.S. presence.

Yet, astonishingly, when the delegates at the Santiago congress voted on the venue for their next meeting they chose Washington, D.C. as the host city, instead of Lima, Peru, which had been the leading contender up to this point. Such an outcome was far more than Root could possibly have hoped for; given past animosities and suspicions, the almost unanimous decision to hold the Second Pan American Scientific Congress in Washington, D.C., the very symbol of hostile relations between the northern and southern neighbors, was nothing short of remarkable. Perhaps Latin American scientists were finally willing to concede that “the United States had quite as deep an interest in this group of problems [including law, linguistics, medicine, ethnology] as any of the Latin American countries, [that] there were problems that are distinctly American, and that the interchange of experience between the republics of the continent would be of the greatest possible value”²⁰. They also likely recognized that the only way to guarantee the preservation of cultural and natural patrimonies would be to breach the abyss and unite scientists from the North and the South in a common effort to preserve what mattered to all of them.

In the seven year period²¹ between the meetings in Santiago and Washington, D.C., tensions actually eased somewhat between scientists in Latin America and their counterparts in the United States. When the American Museum of Natural History sent Marshall Saville (and later, Herbert Spinden) to Mitla and Palenque to excavate ruins (in the early 1910's), for example, the well-known archaeologist worked out an amicable agreement with the Mexican government and took casts back with him to New York²². A similar degree of cooperation was evident in the invitation extended to William Hussey, of the University of Michigan Observatory, to take charge of the observatory in La Plata, Argentina, in 1911²³. But perhaps nothing spoke to the renewed degree of camaraderie between scientific communities in the Americas more than the proposal to allow former U.S. President Theodore Roosevelt, reviled for his heavy-handed politics in the Americas, to traverse the interior river networks of South America. Indeed, the Brazilian and Paraguayan governments, as well as local scientists, gave express approval to this adventure in a gesture of solidarity with the U.S.²⁴

The Second Pan American Scientific Congress

These important, but tentative, attempts at reconciliation were the prelude to a 180 degree shift in attitude ushered in with the convening of the Second Pan American Scientific Congress in December, 1915. For the first time, over a thousand observers from institutions across the United States could interact with the several hundreds of official delegates (and their families) from Latin America. The emphasis of the meeting was on cooperation in projects which had an American focus: the Astronomy section, to give one example, proposed the extension

of an international net of primary triangulation from Patagonia to Alaska, “including azimuth, latitude, longitude and gravimetric determination over the entire continent”. As the introduction to this section of the congress noted, the importance of the Washington congress lay in its unprecedented encouragement of collaborative exchange and an increase in the “knowledge of things American”²⁵.

Papers presented at the Washington meeting, therefore, embraced a broad spectrum of American topics, covering nine major sections: Anthropology, Astronomy, Conservation of Natural Resources, Education, Engineering, International Law, Mining, Public Health and Medical Science, and, in the final category, Transportation, Commerce, Finance and Taxation. There was much fanfare for the renewed spirit of scientific cooperation (in the mold of Pan Americanism) that informed the Congress, as well as an unspoken agreement on the necessity of accepting United States scientists as friends by their Latin American colleagues.

Recently, this congress has been criticized for not being sufficiently “scientific”²⁶. Yet, it was clear from the outset that the premise of this meeting went far beyond presenting the “latest” finds in science. The United States government made no secret of its expectation to use the congress to erase mutual suspicions existing between the Latin American and the U.S. scientific communities, and, on a broader level, between their governments. Latin American scientists, in turn, hoped to enlist their North American colleagues in future collaborations and to avoid the raiding of patrimony which had characterized foreign scientific activity in the Americas in the late nineteenth century. This new state of détente between scientific interests was referred to by some as “intellectual Pan Americanism”, a sentiment echoed repeatedly in *The Daily Bulletin*, which circulated at the Congress. At the conclusion of the congress invitations were extended to Latin American delegates to travel to the major scientific institutions of the Northeast, where future joint projects could be solidified²⁷.

Seen in this light, the Pan American achievements of this Congress were brilliant. The open forum of these sessions encouraged sentiments, which had not been voiced before. Particularly noteworthy are the published proceedings of Section III of the Washington meeting, which are devoted to a precocious discussion on the conservation of natural resources, including an insightful discussion of petroleum in the Americas²⁸. Other high-minded goals of the Congress were expressed in the “Final Act” of the meeting, a compilation of shared goals. This highly principled document advocated, among other objectives, the need for educational reform, which would require U.S. students to study Spanish and Latin American history, and, conversely, Latin American educators to instruct their students about the United States. Resolutions concerning the environment (conservation of forests and arid lands) and government protection of patrimony (for example, in archaeology) were universally subscribed to²⁹.

But perhaps the most important moment of the Second Pan American Scientific Congress occurred at its conclusion, when President Wilson was given the opportunity to address the entire assembled body of scientists. His remarks, which had been presented in an earlier form in December before the United States Congress, represented a cataclysmic shift in United States policy toward Latin America, essentially reversing the meaning of the Monroe Doctrine. In this

speech, referring to what would now be known as the “Pan American Pact”, Wilson averred that the land and independence of Latin American nations should be guaranteed by all (providing they followed a republican style of government)³⁰, suggesting a hemisphere-wide security arrangement for the first time. This shift in policy was far-removed from Roosevelt’s heavily resented “Big Stick” policy of the turn of the century, which had seen the United States acting as a police force in the hemisphere. Wilson’s remarks were enthusiastically received by the scientists attending the meeting in Washington (although not so much in other political arenas). The chair of the Argentine delegation, Ernesto Quesada, for one, referred to this reshaping of the Doctrine as the “New Pan Americanism”³¹.

The convening of the Second Pan American Scientific Congress one hundred years ago in Washington, therefore, presaged a turning point in U.S.-Latin American relations, aided by the bringing together of hundreds of the best scientific minds in the hemisphere. For public consumption, the outcome of the Congress was the reversal of suspicion toward the United States, heralding a return to the heady days of the independence period when North and South American scientific communities readily cooperated with each other. Moreover, this *bonhomie* continued with the convening of three additional Pan American Scientific Congresses, in Lima (1924), in Mexico City (1932) and, once again, in Washington (1940).

Less obviously, though, the Congress also proved to be fertile ground for sowing the seeds of wartime collaboration between the United States government and those of Latin America. The ongoing European war, which threatened Atlantic shipping as a result of German U-boat attacks, and the growing encroachment of German companies into the region (especially those that dealt in war materiel such as manganese and nitrates) were particularly worrisome to Washington. Perhaps more frightening was the reality that most Latin American nations had declared themselves neutral in the ongoing conflict. Secretary of State Lansing, therefore, determined to use this meeting as a platform to win the hearts and minds of Latin American delegates, who could then return to their countries to begin convincing their governments to drop their positions of neutrality. The push to achieve this goal intensified in the months following the U.S. entrance into the War in April, 1917, with promising results³². The Second Pan American Scientific Congress, with its acceptance of “intellectual Pan Americanism”, therefore, had paved the way for real inter-hemispheric cooperation at a critical time³³.

In evaluating the importance of the Washington congress of 1915, it is wise to reflect that what had seemed at that meeting to be a wholly original intimacy cultivated between scientists and politicians was, after all, simply a continuation of the past. The intersection of science and politics, so evident at the Second Pan American Scientific Congress, was by no means a new phenomenon. Nor should the ability of scientists to act as ambassadors of good will, to promote cooperation beyond national boundaries, and to promote objectives of mutual benefit be construed as surprising, since the scientific communities of the Americas had assumed these roles from the first stages of national development in Latin America. What the Second Pan American Scientific Congress did, however, was to allow these capacities to re-emerge and encourage scientists, once again, to assume the mantle of agents of change.

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Notes

¹ Secretary Robert Lansing to Henry Fairfield Osborn, Washington, November 23, 1915. Central Archives, [hereafter CA], File 632, American Museum of Natural History [hereafter AMNH]. Lansing was referring to the non-scientific Pan American conferences held in Washington (1889), Mexico City (1901), Rio de Janeiro (1906) and Buenos Aires (1910) which resulted in the creation of the Pan American Union.

² This is one of the major themes of Antonio Barrera-Osorio, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution*, Austin, University of Texas Press, 2006.

³ Juan José Saldaña, "Science and Public Happiness during the Latin American Enlightenment", in Juan José Saldaña (ed.), *Science in Latin America: A History*, Austin, University of Texas Press, 2006, p. 87.

⁴ See Harry Bernstein, "Some Inter-American Aspects of the Enlightenment", in Arthur P. Whitaker (ed.), *Latin America and the Enlightenment*, 2^o ed., Ithaca, Cornell University Press, 1961, p. 57.

⁵ Bernstein, *op cit.*, p. 59.

⁶ *Ibid.*, pp. 57-58.

⁷ *Ibid.*, p. 65.

⁸ This phrase is associated with the Nicaraguan poet Rubén Darío and especially his poem "Á Roosevelt" ("Ode to Roosevelt"), in *Helios*, February, 1904.

⁹ Such transfer of technology from metropolitan center to the peripheries was a global phenomenon, leading one researcher to coin the phrase "plantation science". See Prakash Kumar, "Plantation Science: Improving Natural Indigo in Colonial India, 1860-1913", *British Journal of the History of Science*, Vol. 40, N° 4, December, 2007, pp. 537-565.

¹⁰ On this point see Regina Horta Duarte, "Pássaros e Cientistas no Brasil: Em busca de proteção, 1894-1938", *Latin American Research Review*, Vol. 41, N° 1, February, 2006, p. 7. According to Duarte, in Rio de Janeiro, a single ranch exported annually 20,000 hummingbirds (*beija-flor*) skins to France. See also her "Birds and Scientists in Brazil: In Search of Protection, 1894-1938", in Martha Few & Zeb Tortorici (eds.), *Centering Animals in Latin American History*, Durham, Duke University Press, 2013, pp. 270-301, in which she expands the theme of nationalism and the study of birds. Another study which considers the feather trade is Scott Weidensaul, *Of a Feather: A Brief History of American Birding*, New York, Harcourt Inc., 2007.

¹¹ Duarte, *op. cit.*, p. 4.

¹² A society for the protection of Animals and Plants had been formed in Cuba in 1882, while in Argentina the Ornithological Association of La Plata was begun in 1916. Duarte, *op. cit.*, p. 8.

¹³ See Robert D. Aguirre, *Informal Empire: Mexico and Central America in Victorian Culture*, Minneapolis, University of Minnesota Press, 2005, p. xvi.

¹⁴ Neil Smith, *American Empire: Roosevelt's Geographer and the Prelude to Globalization*, Berkeley, University of California Press, 2003, p. 54.

¹⁵ For a discussion of the relationship between the Duke of Loubat and other outside collectors and the AMNH see Stanley Freed, *Anthropology Unmasked: Museums, Science, and Politics in New York City*, 2 vols., Wilmington, Orange Frazer Press, 2012, Vol. II, pp. 793-802.

¹⁶ The three Hatcher-Princeton Expeditions to Patagonia, c. 1896-1898 which searched for Miocene fossils are discussed in Lowell Dingus and Mark Norell, *Barnum Brown: The Man Who Discovered Tyrannosaurus rex*, Berkeley, University of California Press, 2010, pp. 63-70.

¹⁷ Frederico G. Gil considers Pan Americanism to have been "generally thwarted" in the Pan American Conferences held between 1889-1928. See his *Latin American-United States Relations*, New York, Harcourt, Brace, Jovanovich Inc., 1971, p. 153. The one exception was the creation of the Pan American Union in Washington, in 1910.

¹⁸ On this point see James Brown Scott, *Second Pan American Scientific Congress: Final Act and Interpretive Commentary Thereon*, Washington, Government Printing Office, 1916, p. 43. Interestingly, doctors in Latin America adopted a somewhat different attitude toward their North American colleagues from other scientists. Indeed, while the first of several Latin American Medical Congresses was convened in Chile in 1901, it had been preceded by a Pan American Medical Congress held in Washington, D.C. in 1893. Both associations continued to meet separately until 1913 when the congresses met in joint session for the first time in Lima, Peru. See Marta de Almeida, "Círculo aberto: idéias e intercâmbios médico-científicos na América Latina nos primórdios do século XX", *História, Ciências, Saúde-Manguinhos*, Vol 13, N° 3, Jul-Sept, 2006, pp. 773-757.

¹⁹ These remarks are contained in Report of the Delegates of the United States to the Pan-American Scientific Congress held at Santiago, Chile, December 25, 1908, to January 5, 1909, Washington, Government Printing Office, 1909, pp. 7-8. Secretary of State Root was an important proponent of the Pan American Union. On this point see Quetzil E. Castañeda, "The Carnegie Mission and the Vision of Science: Institutional Contexts of Maya Archaeology and Espionage", in Regna Darnell & Frederic W. Gleach (eds.), *Histories of Anthropology Annual*, Vol. 1, Lincoln, University of Nebraska Press, 2005, p. 41.

²⁰ This was the opinion of the U.S. delegates expressed in *Report of the Delegates...*, held at Santiago, Chile..., p. 6. On the practically unanimous vote see W.H. Holmes, "The First Pan-American Scientific Congress held in Santiago, Chile", *Science*, N.S. Vol XXIX, N° 742, March, 1909, p. 446.

²¹ The Second Pan American Scientific Congress was delayed from 1912 to 1915 because of a lag in congressional

approval for funding. See Rodrigo Fernos, *Science Still Born: The Rise and Impact of the Pan American Scientific Congresses, 1898-1916*, New York, IUniverse Inc., 2003, p. 23.

²² See *Annual Report of the American Museum of Natural History for the year 1916*, New York, The De Vinne Press, May 1, 1917, pp. 29-30 for a discussion of Saville's and Spinden's research. Freed, *op. cit.*, pp. 422-425 discusses the Hall of Mexico for which this collection was intended.

²³ William J. Hussey, "Work of Observatory at La Plata, Argentina", in *Proceedings of The Second Pan American Scientific Congress, Section II Astronomy, Meteorology and Seismology, Vol. II*, Washington, Government Printing Office, 1917, pp. 17-20 discusses his work at the observatory.

²⁴ Leo E. Miller and George K. Cherrie (both from the American Museum of Natural History) did the advance work for Roosevelt, arriving in Asunción, Paraguay in November, 1913, where they visited the noted Professor Fibrin, director of the natural history museum and faculty member (catedrático) at the University of Paraguay. The latter helped plan this historic expedition. This connection is mentioned in "Exploración Científica en Sud América", *Boletín de la Unión Panamericana*, Vol. 40, N° 5, Washington, Pan American Union, May, 1915, pp. 567-575. See also Candice Millard, *The River of Doubt: Theodore Roosevelt's Darkest Journey*, New York, Doubleday, 2005.

²⁵ *Proceedings of The Second Pan American Scientific Congress*, Section II, Vol II..., Washington, Government Printing Office, 1917, p. 5.

²⁶ This is essentially the criticism of Fernos, *op. cit.* He opines that the congresses became increasingly "less scientific". See pages 10-11, *et passim*.

²⁷ As early as July 1915, Henry Fairfield Osborn (president of the American Museum of Natural History) determined that he would invite the Latin American delegates to New York so that "we should establish most friendly relations with the South American Republics". Osborn to AMNH Director Lucas, July 7, 1915, C.A. File 632, AMNH. References to "intellectual Pan Americanism" are present in all the published proceedings; cf. Scott, *op. cit.*, p. 26.

²⁸ See *Proceedings of the Second Pan American Scientific Congress*, Washington, U.S.A., Section III, Conservation of Natural Resources, Washington. Government Printing Office, 1917, pp. 188-245, *et passim*.

²⁹ See Scott, *op. cit.* Article 16 and 17, p. 31 reference educational schemes, while article 47 suggests the establishment of a "Pan American Intellectual Union", p. 39. On land conservation see articles 9 (on forests) and 10 (on arid lands), pp. 28-29.

³⁰ Gil, *op. cit.*, p. 74. This new interpretation of the Monroe Doctrine would be known as the Pan American Pact.

³¹ As cited in William Spence Robertson, *Hispanic-American Relations with the United States*, New York, Oxford University Press, 1923, p. 410.

³² Several scientists from the United States were directly involved in convincing Latin American governments to drop their neutrality. One was Charles R. Eastman, an ichthyologist from the American Museum of Natural History who during his stay in Brazil from 1917-mid 1918 not only tracked the shipments of manganese from that country to Germany, but was instrumental in influencing the Brazilian government to declare war on the Kaiser. See Roberta M. Delson, "Called Upon for Important and Hazardous Service": *Scientists, Politicians and the American Museum of Natural History in World War I Latin America*, in preparation.

³³ On the political front, "achievements of the Pan American movement by the First World War broke out in Western Europe were far from impressive". Gil, *op. cit.*, p. 150. Indeed, the next Pan American meeting was not held until 1923.