
The Scientist and the Patrician: Reformism in Cuba

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The first sights of Havana allured the arriving explorer Alexander von Humboldt, aboard a small sail ship, at the dawn of the nineteenth century. Cultivated gentle hills, besprinkled by majestic palm trees, and pleasant tropical smells, heralded the full presence of the bay and its fortified city. Two stone fortresses, facing each other across the bay's inlet, and an imposing fortified castle on the rocky eastern shore, guarded the spacious harbor. The "Havannah," one of America's busiest ports, was crowded with tall ships that formed a forest of masts and sails at the shallow anchorage zone.¹ A rowing boat took the visitor from the moored ship to the customs landing point. From there he would be driven in one of the city's typical two-wheel horse carriage through several intersections of narrow streets, and onto the most important public square, the Plaza de Armas.

Protected by the venerable waterfront garrison of La Real Fuerza, the Plaza de Armas was the center of the Spanish official dominion in the island of Cuba. The Captain General, supreme military and political authority, governed from an arched stone palace of a solid late baroque style on the square's southern side. On the western side of the square stood the Post Office (*Casa de Correos*) a model of balanced late baroque, almost neoclassi-

1. *Alexander von Humboldt, Personal Narrative of Travels to the Equinoctial Regions of the New Continent During the Years 1799-1804*, by Alexander von Humboldt and Aimé Bonpland, trans. from the French by Helen Maria Williams (London: Longman, Rees, Brown & Green, 1826; reprint New York: AMS Press, 1966), vol. 6, part 2, 817, and vol. 7 (*Political Essay on the Island of Cuba*), 7-8. See also other subsequent editions, in English and Spanish: *Ensayo político sobre la Isla de Cuba*, trans. by J. B. de V. y M. [José López de Bustamante] (Paris: Jules Renouard, 1827); *The Island of Cuba*, trans. and ed. by John S. Trasher (New York: Derby & Jackson, 1856); *Ensayo político sobre la Isla de Cuba* (Havana: Cultural S.A., Colección de Libros Cubanos, 1930); *Ensayo político sobre la Isla de Cuba* (Havana: Oficina del Historiador de la Ciudad de La Habana, 1959), 38-39; *Ensayo político sobre la Isla de Cuba*, ed. by Miguel Angel Puig-Samper, Consuelo Naranjo Orovio, and Armando García González (Madrid: Ediciones Doce Calles, 1998), 107.

cal architecture and later also the site of the royal treasury accounting office (*Intendencia de Hacienda*). The building of the merchants' and landowners' guild and tribunal (*Consulado*) was situated on the square's eastern side.²

After his safe landing in Havana on December 19, 1800, Humboldt's impressions of the port and city moderated. Since he had left Coruña, Spain, in June 1799, toward Venezuela on an adventurous voyage that braved storms and war at sea, the specter of deadly tropical disease haunted Humboldt and his traveling companion, Aimé Bonpland.³ In Havana, Humboldt noticed the unhealthy, foul smelling, and often-unpaved and muddy conditions of the city's streets. The spontaneous sprout of populous suburbs, the *arrabales*, outside the city walls compounded the effects of recurring epidemics of yellow fever (*vómito negro*), an often-fatal disease for Europeans and natives inhabiting crowded coastal areas. Humboldt also described the most important buildings in Havana's main squares as "less remarkable for their beauty than the solidity of their construction."⁴

An important military presence was noticeable in Havana at the time. Out of a total population of forty thousand people living within the walls of the city, and an additional thirty or forty thousand housed in the suburbs, there were approximately five or six thousand regular soldiers and militia volunteers sporting a motley collection of uniforms.⁵ The erection of the Plaza de Armas's main official buildings, under construction between 1773 and 1793, was part of a larger military strategic design. The older garrisons and walls of stone encircling Havana had been reinforced with new fortresses, at a considerable expense, during the reign of the enlightened Bourbon Charles III (1759-1788). The Spanish monarch was determined to protect the strategic and valuable Spanish island colony against foreign invaders. The ten-month long British occupation of Havana in 1762 had triggered a reaction by the Spanish colonial masters who endeavored to improve the city's defenses, trade, port facilities, and overall appearance. Under the administration of Governor Felipe de Fondesviela, marqués de la Torre (1771-1776), the mili-

2. Néstor Carbonell y Emeterio S. Santovenia, *El Ayuntamiento de la Habana*. Noviembre 16 de 1519, Noviembre 15 de 1919. *Reseña histórica* (Habana: Imp. Seoane y Fernández, 1919), 105-106. María Sánchez Agustí, *Edificios públicos de La Habana en el siglo XVIII* (Valladolid: Universidad de Valladolid, 1984), 43-52; 61; Juliet Barclay, *Havana: Portrait of a City* (London: Cassell, 1993), 43-45.

3. Humboldt and Bonpland fell ill with high fever at the end of their exploration of the Orinoco basin in Venezuela and before heading for Cuba on November 24, 1800: L. Kellner, *Alexander von Humboldt* (London: Oxford University Press, 1963), 50.

4. Humboldt, *Personal Narrative*, vol. 7, 9.

5. Allan J. Kuethe, *Cuba, 1753-1815: Crown, Military, and Society* (Knoxville: University of Tennessee Press, 1986), 141-146. Humboldt estimated 44,000 people living within Havana's walls and 44,000 more living in *arrabales* of Jesús María and La Salud. According to the 1792 census there were 51,307 inhabitants in "Habana y *arrabales*"; Ramón de la Sagra, *Historia económico-política y estadística de la isla de Cuba o sea sus progresos* (Habana: Imp. Viudas de Arazoza y Soler, 1831), 4. But the census of 1774 informed a total of 75,618 inhabitants, *ibid.*, 3]

tary public works gained momentum. Military engineers were commissioned to erect the most important buildings including those that graced Havana's main square of power.

The Prussian scientist of French Huguenot ancestry—one of the most original and enlightened minds of his generation—was very well received in Cuba by the colonial authorities, including the Captain General, and the Creole intellectual and social elite. Scientific expeditions were admired and awaited with expectation and thirst for knowledge in the Spanish colonies. Major Spanish scientific expeditions had achieved practical botanical, medical, and policy objectives—despite customary secrecy—since the 1730s.⁶

Humboldt's scientific travel to several Spanish American colonies between 1799 and 1804 took place, fortuitously, at the tail end of an era of extensive colonial reforms, and a few years prior to the catastrophic loss of most of the Spanish possessions in the Americas. French and Portuguese authorities, suspecting covert spying motives, had hindered Humboldt's previous projects to explore other parts of the colonized world. Spanish highest authorities, on the contrary, facilitated Humboldt's improvised expeditionary plans to Spanish America. During a visit to Madrid in 1799, before launching his private Spanish American expedition, Humboldt obtained official and private references and permissions thanks to an active exchange with enlightened court bureaucrats, diplomats, and scientists. These included the minister of state Mariano Luis de Urquijo, and the Cuban-born aristocrat Gonzalo de O'Farrill y Herrera, both renowned for their liberal views. Urquijo assisted Humboldt in obtaining a personal interview with king Carlos IV (1788-1808).⁷ The king granted Humboldt a vast royal endorsement that opened many doors for Humboldt in Spanish America. Previous collaboration of the

6. Such were the cases of the expeditions of Jorge Juan and Antonio de Ulloa (1735-1746), Spanish companions of the French scientific explorer Charles Marie La Condamine; Hipólito Ruiz and José Antonio Pavón (1777-1788); José Celestino Mutis (1783); Martín Sessé and José Mariano Mociño (1785-1803); Alejandro Malaspina (1789-1794); conde de Mopox y Jaruco (1797), among others; as well as the 1803-1810 massive vaccinating expeditionary campaigns that, under the direction of Francisco Javier Balmis and José Salvany Lleopart, brought from Europe to Spanish America and the Philippines the first smallpox vaccine serums (discovered by English physician Edward Jenner in 1798) in the blood system of young orphans for arm to arm vaccination. In all there were approximately 44 scientific-technological expeditions financed by the Spanish crown between 1735 and 1805. See Iris H.W. Engstrand, *Spanish Scientists in the New World: The Eighteenth-Century Expeditions* (Seattle: University of Washington Press, 1981), 3-6, 161-162; Rafael E. Tarragó, "Sources About the Vaccination Expedition of Charles IV in the Andes: A Gesture of Enlightened Despotism," 45th SALALM Conference (2000), and *The Scientific Expeditions of the Spanish Bourbons and the Beginnings of Modern Science in Spanish America*; Arthur P. Whitaker, ed., *Latin America and the Enlightenment* (New York: Appleton-Century, 1961), 12-17.

7. "Estudio introductorio," in Humboldt, *Ensayo político*, ed. by Puig-Samper et al., 31-32. See also Karl Bruhns, ed., *Life of Alexander von Humboldt compiled in commemoration of the centenary of his death, translated from the German by Jane and Caroline Lassell* (London: Longmans, Green, and Co., 1873), 245-246.

Spanish crown and Madrid's scientific establishment with foreign European scientists eased the granting of official support to Humboldt in Madrid and the Spanish colonies. An overall liberal and enlightened climate in Madrid, and among certain Creole circles in the colonies, contributed to the initial success of Humboldt's expedition.⁸

With characteristic energy and enthusiasm Humboldt engaged in diverse scientific endeavors in Havana. His measuring instruments were housed at the residence of the conde de O'Reilly. There he proceeded to establish the exact longitude of Havana with the aid of Spanish Navy officers and other local astronomers and scientists.⁹ Humboldt also made geographical measurements in the nearby towns of Guanabacoa, Regla, and Bejucal. The busy and militarized Havana contrasted with its beautiful agricultural and natural hinterland much admired by Humboldt during his initial three-month stay in Cuba.

Among the many prominent acquaintances he made in Havana, Humboldt met landowner, statesman, and civilian patrician Francisco Arango y Parreño (1765-1837). A mutual bond of respect and deference was soon established between the two intellectuals. Both were in their early thirties when they first met. Portraits show Arango as a grave, slender figure dressed in rigid dark colors and official decorations, his short black hair carefully groomed forward, exuding a stately confidence and pride. Whereas Arango's gaze is oblique but profound, the painted portraits of the handsome Humboldt depict a playful and direct stare, an easy smile, carefree blond hair, a relaxed yet assured pose, and a stylishly informal, light colored dressing.

Arango traveled with Humboldt to the valley of Güines, south east of Havana, in a geological and botanical excursion. Arango hosted the scientist in his modernized estate *La Ninfa*, a sugar mill complex with several hundred slaves, in the irrigated lands of Güines.¹⁰ Together with Matanzas and Trinidad, east and southeast of Havana, Güines was the frontier of the growing sugar economy. Other innovative landowners in the valley, the conde de

8. See cases of Tadeo Hänke in the 1790s, Baron von Nordenflicht some years later, and others: Arthur P. Whitaker, ed. *Latin America and the Enlightenment* (Ithaca: Cornell University Press, 1961), 15-16, 31; Engstrand, *Spanish Scientists in the New World*, 47-48; on Humboldt's and other German scientific connections with the Real Gabinete de Historia Natural and Jardín Botánico of Madrid, see "Estudio introductorio," in Humboldt, *Ensayo político*, ed. by Puig-Samper et al., 29-30; Bruhns, ed., *Life of Humboldt*, 246.

9. Fernando Ortiz, "Introducción bibliográfica al libro 'Ensayo político sobre la isla de Cuba' de Alejandro de Humboldt," *Serie Histórica* 7 (1969), 19 (based on the reliable information of bibliographer Vidal Morales published in the magazine *El Figaro* in June 1897); Bruhns, ed. *Life of Humboldt*, 290.

10. Francisco Ponte Domínguez, *Arango y Parreño, el estadista colonial* (Havana: Ed. Trópico), 154; José López Sánchez, *Humboldt y su época. En homenaje al Bicentenario de Alejandro de Humboldt* (La Habana: Academia de Ciencias de Cuba, Museo Histórico de las Ciencias "Carlos J. Finlay", 1969), 17-19.

Mopox y Jaruco (owner of *Río Blanco*), Nicolás Calvo de la Puerta (*La Holanda*), and the marqués del Real Socorro, also hosted and informed Humboldt and Bonpland.¹¹ The expanding economic activities and sugar wealth in Cuba stirred Humboldt to collect statistical information on Cuba's population, production, technology, and trade.

Humboldt, praised Arango for the reliable data he provided and qualified him as the "wisest of statesmen" and "pure and judicious."¹² Humboldt also commented that even though hospitality dwindles when civilization advances, some of the modern landowners in Cuba still retained their hospitable largesse.¹³ The encounter between Humboldt, Arango and other sugar mill owners, and their learned exchange concerning the agricultural and commercial potential of Cuba, enhanced Humboldt's confidence on the island's cosmopolitan leadership and future. Also, the dialog between the European scientist and Cuban thinkers of the stature of Francisco Arango y Parreño unveiled to the world, through Humboldt's own accounts of his travels and studies, an original enlightened, liberal, and practical tradition in an island better known for its strategic military importance. The level of education and enlightenment in Havana around 1800 compared very favorably to other intellectual centers in Spanish America. In general, Humboldt's accounts of the intellectual environment he encountered during his voyages refuted earlier biases of French philosophes against Americans.¹⁴

On March 6, 1801, Humboldt and Bonpland left Havana, traveled for a second time to Güines, embarked in the local port of Batabanó to explore the sparsely inhabited southern coast of the island and its keys, and arrived to Trinidad's port. From Trinidad they left Cuba on March 15, 1801, to continue their exploration of South American and Mexican lands. Humboldt returned to Havana only in April 1804. This time he stayed in the island for six weeks. He retrieved his botanical collection and obtained additional statistical data gathered for him by Arango and other officials. He also visited Güines for a

11. Joaquín de Santa Cruz y Cárdenas, conde de Santa Cruz de Mopox y Jaruco y San Juan de Jaruco (1769-1807) led a scientific botanical expedition, organized in Madrid, to Cuba in 1797: Engstrand, *Spanish Scientists in the New World*, 161. Nicolás Calvo de la Puerta y O'Farrill was the most scientifically learned, innovative, and experimental Creole owner at the time, Miguel Angel Puig-Samper que María Dolores González-Ripoll, "Criollismo y ciencia ilustrada en Cuba," in *Científicos criollos e Ilustración*, ed. by Diana Soto Arango et al., 13-28 (Madrid: Ediciones Doce Calles, 1999), 20-21.

12. Humboldt, *The Island of Cuba*, 197, 214, quoted by William Whatley Pierson, "Francisco Arango y Parreño," *Hispanic American Historical Review* 16 (1936): 431-478; 452.

13. José López Sanchez, *Humboldt y su época. En homenaje al Bicentenario de Alejandro de Humboldt (La Habana: Academia de Ciencias de Cuba-Museo Historico de Ciencias "Carlos J. Finlay", 1969)*, 14-20.

14. 2. See Cornelius de Pauw's article "Amérique" in *Supplement à l'Encyclopedie* (Paris, 1776) and *Récherches philosophiques sur les Americains* (Berlin, 1768 and London, 1770) [Reprint: Upple Saddle River, NJ: Gregg Press, 1968]. See also Antonello Gerbi, *The Dispute of the New World* (Pittsburgh: University of Pittsburgh Press, 1973).

third time and was invited to present a short mineralogical study of Guanabacoa's highlands to Havana's learned society Sociedad Económica de Amigos del País in which Arango occupied a distinguished leading position.¹⁵ After Humboldt left Cuba for the last time, he did not lose contact with Arango and Cuban matters and issues.

Overshadowed by the stately Plaza de Armas, the less conspicuous Plaza San Francisco was a busy space of trading activities. The sober early eighteenth-century church of San Francisco commanded over the square's open space often used as deposit area for merchandise. In an unpretentious two-story building known as the house of Armona, overseeing the square and the harbor, the city council had its official meetings until the council moved its headquarters, in the 1790s, to the new Palacio de Gobierno.¹⁶ It is from this council of native Creole power that early efforts at autonomous decision-making pioneered the Cubans' secular task of finding effective ways, and appropriate social bases, to govern themselves.

In 1788 the Havana city council had chosen a young legal expert, born in Havana and member of a distinguished Creole family, don Francisco Arango y Parreño, as its official legal representative (*apoderado*) in Madrid. With this responsibility on his shoulders, Arango pursued a relentless civilian quest for modernizing the economic and institutional foundations of Cuba. Through remarkable individual efforts, driven by confidence in progress and his commitment to defend the interests of Creole producers, he gained important legal and economic policy victories. Arango y Parreño was a third generation descendant of elite immigrants from the regions of Navarre and Asturias in Spain. The youngest and brightest of nine children in his family, Francisco obtained the best education available in Havana at the time: secondary studies at the Seminary College of San Carlos and a degree of Bachelor in Civil Law from the University of Havana. To complete his professional

15. Alexander von Humboldt, "Noticia mineralógica del cerro de Guanabacoa," Havana, 7 April 1804, manuscript copy in Sociedad Económica de Amigos del País (31 April 1804), published in *Patriota Americano*, vol. 2 (1812), 29, in Humboldt, *Ensayo político*, ed. by Puig-Samper et al., 399-402. During his second visit to Cuba, Humboldt was invited by Captain General Someruelos to carry out a discreet mineralogical study of the Cerro de Guanabacoa dated 7 April 1804. Although Humboldt was not present, his paper was read at the Sociedad Patriótica and its text copied to the minutes of the session of 13 April 1804, *Actas SEH*, libro 3, pp. 122-125. Humboldt continued to have correspondence with the Sociedad thereafter. When his book was sold in Havana, members present in the session of 14 February 1828 discussed "la venta pública que se hace en esta ciudad de la obra titulada *Ensayo político sobre la isla de Cuba por el barón de Humbolt [sic]*, considerándose una y otra cosa como muy perjudiciales a la Isla," *Actas Educación*, Libro 2 (1827-1840), f. 19.

16. Manuel Pérez-Beato, *Habana antigua. Apuntes históricos*. Tomo I: Toponimia (Habana: Seoane, Fernández y Cia., 1936), 335-336; José María de la Torre, *Lo que fuimos y lo que somos o la Habana antigua y moderna* (Habana: Imprenta de Spencer y Cia., 1857), 170.

studies he went to Madrid where he graduated as a lawyer from the Real Academia de Santa Bárbara in 1789.

Even before obtaining his highest credentials in law, Arango acquired useful experience in litigation. He developed a deft negotiating strategy coated with learned politeness. A peculiar personal trait—his resolute modern convictions—often positioned him at odds with the societal and family customs and traditions of his time. In 1786 his influential uncle, the grave Dr. Manuel Felipe Arango, designated Francisco, his favorite and youngest nephew, as ultimate inheritor of the honorary distinction of Havana's council standard-bearer (*alferez*) but only if he married señorita Dionisia de Palacios. Francisco, lacking amorous feelings for Dionisia, never fulfilled his uncle's wish.¹⁷ Instead he married, later in life (1817), young Rita Quesada y Vial, the Chilean-born daughter of general Francisco Quesada y Silva, conde de Donadio, and had five children with her.¹⁸ Having failed to comply with his uncle's will, the municipal honorary distinction—held officially by Francisco from 1803 until his death in 1837—was transferred to his eldest brothers and their successors in accordance to a fair and generous family agreement forged by Francisco.¹⁹ Paradoxically, Arango believed that honors should be acquired by merit rather than privilege.²⁰

Although Francisco's father, Miguel Ciriaco Arango, brothers and relatives, and the most conspicuous fellow elite members of his time, served in the regular veteran and militia armed forces and obtained prestigious military honors and posts, Francisco, like a growing number of young men of his generation, did not follow a military career. Moreover, in 1835 he politely declined a royal invitation to complete the requirements to fund a nobility title, *marqués de la Gracitud*, proposed by Havana's city council on behalf of

17. Further information on Dionisia Palacios is scant. In 1834 Dionisia was still single and living in Havana, according to a legal request filed against a landowner who owed Dionisia and her sister interest payments on a lien of 2,600 pesos charging his property in Güines, "Da. Dionicia y Da. Ma. Dolores Palacios [de Millet] contra D. Santiago Satre sobre pesos," Habana, 23 Aug. 1834, ANC, Escribanías (Escribanía de Guerra), año 1834, leg. 89, exp. 1446.

18. Soon after marrying Rita, Arango described her as "mi pacosica y excelente compañerita. He encontrado hasta ahora más de lo que en ella busqué, que no fue carne por cierto sino virtudes y discreción," Arango to José Ignacio Echegoyen, Madrid, 22 enero 1817, copy in "Dn Francisco de Arango y Parreño con Dn. Ignacio Echegoyen sobre un compromiso celebrado para calificar ciertas cuentas," ANC, Escribanías, Escribanía de Gobierno, año 1818-1822, leg. 195, exp. 11.

19. "Partida de entierro [de españoles] de Francisco Arango y Parreño," (copy) 22 March 1837, Ultramar-Cuba-Gracia y Justicia, leg. 1626(2), exp. 15, ff. 1-1v, AHN; "Convenio entre hermanos (Antonio, Ignacio, Ciriaco y Francisco Arango y Parreño)," (copy) 1 Aug. 1803, *ibid.*, ff. 9-10; Ponte, Arango, 19, 170-171.

20. Anastasio Carrillo y Arango, "Elogio histórico de excelentísimo Sr. D. Francisco de Arango y Parreño ... por encargo de la Sociedad Patriótica de la Habana," (1837) in *Francisco Arango y Parreño, Obras de don Francisco Arango y Parreño*, 2 vols. (Havana: Ministerio de Educación, 1952), vol. 1, 34.

his life-long services. In thus refusing the royal favor he argued, among other excuses, lack of personal properties.²¹

Arango was a man of the Spanish Enlightenment. He strove for rational civilian progress, inspired by the novel ideas of free trade developed by the Scottish economist Adam Smith.²² As a precursor of liberal economic policy in the Spanish American colonies, Arango criticized the mercantilist and bullionist foundations of the Spanish Empire that privileged the extraction of silver from the colonies. Colonial agricultural and industrial production needed promotion. For Cuba, the production and commercialization of sugar, tobacco, cattle byproducts, and brandies claimed encouragement and freedom from monopolies, excessive taxation, and monetary and labor constraints. Trade with different markets, especially that of the United States, and not only with the Spanish metropolis, had to be pursued.²³ This modernizing project took form quite early in Arango's public career and was systematized in his essays and official petitions between 1789 and 1792.²⁴ Humboldt, true to his liberal economic views, agreed with the economic principles that inspired Arango and, like other foreign observers of the time, praised the effects of economic reform in Cuba.

Arango envisioned the historical opportunity opened to Cuba in the latter part of the eighteenth century. Before the costly wars with England in 1796 and 1805, the Spanish Crown had sought to centralize and improve the collection of colonial revenues with certain success. This financial Bourbon reform was the most effective compared to other attempts at rationalizing and updating the imperial system in Spanish America.

21. "Exposición a la Reina sobre las diligencias que se mandaron practicar para la concesión de un título de Castilla," Havana, 9 July 1835, Arango, *Obras*, vol. 2, 655-657. Adverse personal financial circumstances had almost forced the sale of Arango's beloved estate *La Ninfa* in the 1820s. Forty four years after Arango's refusal his widow, Rita Quesada, recovered the pending title for her grandson, Domingo Arango y Herrera, citing the grandson's improved fortune, "Expediente promovido por Da. Rita de Quesada en reclamación de título de marqués de la Gracitud," 20 Aug. 1879, *Ultramar-Cuba-Gracia y Justicia*, leg. 5851, exp. 28, docs. 1, 2.

22. Ramiro Guerra, prologue to Arango, *Obras*, vol. 1, 11-23; Anastasio Carrillo y Arango, *Elogio histórico del excelentísimo Sr. D. Francisco de Arango y Parreño ... por encargo de la Sociedad Patriótica de La Habana*, *ibid.*, 25-73 (first published, Madrid: Imp. de Manuel Galiano, 1862); Pierson, "Arango y Parreño," 451-478, mentions also the early influence of Antonio Genovesi (1712-1769) on Arango's economic thought; Ponte Arango Parreño; a Spanish translation of Adam Smith's *Wealth of Nations* (1776) was published in Madrid in the 1780s (?), see Whitaker, ed., *Latin America and the Enlightenment*, 17.

23. "Instrucción que se formó D. Francisco de Arango cuando se entregó de los poderes de la Habana y papeles del asunto;" and "Primer papel sobre el comercio de negros," in *Francisco Arango y Parreño, Obras del Excmo. Señor D. Francisco de Arango y Parreño* (Havana: Imprenta de Howson y Heinen, 1888), vol. 1, 3-13.

24. "Primer papel sobre el comercio de negros" (Madrid, 1789); "Discurso sobre la agricultura de la Habana y medios de fomentarla" (Madrid, 1792), in Arango, *Obras* (1930), vol. 1, 79-84, 114-162.

Arango's strategy to obtain royal concessions incorporated the argument that promoting Cuban trade was convenient for the Spanish treasury's income. Concurrently Arango made special donations, services, and favors to the metropolitan government.²⁵ The destruction brought about by revolution in the French colony of Saint Domingue (Haiti) also prompted Arango to push for a technological overhaul of Cuba's sugar industry under the spur of favorable sugar prices. He also pressed for incentives that could attract the capital and technical know-how fleeing from the French colony.²⁶ Humboldt noted the benefits of technology and French immigration by 1800.

Through his official dealings Arango obtained important official concessions for the Cuban elite during his official representation in Madrid between 1788 and 1794. These concessions included a 1794 royal decree authorizing the establishment of a merchant and agricultural guild and tribunal—Havana's *Consulado de Agricultura y Comercio*—of which he was named perpetual syndic (*síndico perpetuo*). Arango also planned and was granted permission to carry out an elaborate trip of pragmatic investigation, accompanied by the Cuban count of Casa Montalvo, that led them to Cádiz, Portugal, England, Barbados, and Jamaica on his way back to Cuba in 1794.

The exploratory trip in search of leading-edge technology and productive techniques lasted nearly 11 months. Arango's itinerary and activities during the trip showed his eagerness to get acquainted with the most advanced ideas on political economy, colonial administration, and technology of the time with special emphasis on the sugar industry. In London and Jamaica, posing relevant questions, he learned first hand the working of English commercial, economic, technical, and legal innovations, and slave trading interests. Reaching the southern coasts of Cuba the ship carrying Arango and Montalvo foundered and almost caused the drowning of the inquisitive travelers. Important samples, instruments, and experimental machines collected during the trip were lost. However, Arango's technical and organizational advice, resulting from his research in the British and French Caribbean colonies, contributed to seminal technical experimentation and the reorganization of the Cuban sugar economy. Humboldt witnessed and praised such improvements and added some technical contributions of his own for a more efficient use of fuel.

Arango's personal business and legal practice in Cuba advanced considerably since the 1790s. He represented local landowners and his family in legal disputes over land boundaries, debts, and honorary distinctions before

25. 5. Regencia del Reino to don Francisco de Arango, Cádiz 29 April 1813: "sobre la oferta que hizo de 400 barriles de aguardiente de caña para socorrer a los valientes defensores de la libertad e independencia nacional ... rasgo generosos de patriotismo," ANC, *Asuntos Políticos*, leg. 14, year 1813, no. 24.

26. Describe technical changes.

Havana's notaries and the court of Santo Domingo.²⁷ His own landed property increased through family inheritance, professional income, and business profits. He inherited the sugar mill (*ingenio*) *El Retiro*, near Regla and Havana, and its slaves, owned by his father Miguel Ciriaco since at least 1769.²⁸ Arango's major investment was, however, in the state-of-the-art sugar mill complex *La Ninfa* in the province of Güines. After purchasing this property in 1795, Arango intended it to be a showcase of technical improvement. Irrigation works were upgraded and more slaves bought. This property had approximately 30 *caballerías* of land producing around 40,000 *arrobas* of sugar *mascavado* and 500 barrels (*pipas*) of brandy (*aguardiente refino*) per year, a network of irrigation channels, a sugar mill with steam engines, a coffee grove, 300 slaves, and plots to produce food crops for the slaves. It was valued at 450,000 pesos.²⁹ Humboldt visited this and other innovative estates and based part of his study of sugar production in Cuba upon this field experience in Güines.

Arango's economic and official activities have overshadowed his civic efforts at expanding and enriching Cuba's social organization and civilization. In collaboration with reformist colonial authorities Arango contributed to the formation of the first significant associations, publications, and organized currents of opinion in Havana. Before 1790 the levels of culture and civility in Cuba were low. Customs were "relaxed," card games, the passion of common citizens as dominant, officials were customarily corrupt and rent-seekers, and the clergy lazy. There were no newspapers except the official government gazette, no libraries, and basic educational institutions were very scarce.³⁰ An embryo of Cuban civil society was encompassing wider sectors of the urban population. A growing public space for cultural and political negotiation and bargaining in this Caribbean hub of international exchanges, contributed decisively to preserve the island from the social and political instability rampant in the rest of Spanish America throughout the first half of the nineteenth century.³¹

27. In 1786 Arango defended his family's right over the post of *alférez* real of the Havana's city council before the Audiencia of Santo Domingo. See also "Dn. Carlos del Rey y Dn. Francisco de Arango y Parreño sobre medida y deslinde de la Hacienda Guanacaje," ANC, Escribanías, Escribanía de Gobierno, año 1801, leg. 127, exp. 10.

28. "Dn. Juan Bosmeniel con Dn. Miguel Ciriaco Arango sobre deslinde," ANC, Escribanías, Escribanía de Antonio Daumy, año 1769, leg. 855, exp. 12. Miguel Ciriaco had legal disputes over the property and boundaries of this estate.

29. José Ignacio Echegoyen to Captain General, Havana 21 Sept. 1819, in "Dn Francisco de Arango y Parreño con Dn Ignacio Echegoyen sobre un compromiso celebrado para calificar ciertas cuentas," ANC, Escribanías, Escribanía de Gobierno, año 1818-1822, leg. 195, exp. 11, ff. 128-133. Investment in "La Ninfa" was possible by earlier profits in a business partnership with count Mopox y Jaruco for the importation of wheat from the U.S.A.; Ponte, Arango, 131.

30. Antonio Bachiller Morales, *Apuntes para la historia de las letras y de la instrucción pública en la isla de Cuba* (Havana, 1861), vol. 3, 5, cited by Ponte, Arango, 37-38.

To accomplish his modernizing and stability-searching goals and personal objectives Arango got deeply involved in the murky waters of colonial politics during a crucial historical period. At his return to Cuba in 1795, after serving efficaciously in Madrid as Havana's council legal representative, he joined the efforts by the enlightened and singular Captain General Luis de las Casas (1790-1796)—kin of one of the richest Creole families and owner of a sugar mill in Güines presented to him by the grateful Creole elite—towards essential changes in the Cuban economy and society.³² As syndic of the Consulado, Arango distinguished himself as a guide of the fledgling merchant-planter guild that was opposed by entrenched merchant interests of the monopolistic *consulados* of Cádiz, Barcelona, Mexico City, and Veracruz.

Arango clearly led the new enterprising faction of the Havana elite increasingly involved in the production and exportation of sugar. Soon, however, Arango encountered local opposition in Cuba from high ranking corrupt bureaucrats, judges, and the militaristic older elite. Arango's official inspection of the official tobacco manufacturing monopoly and the resulting liberal report recommending its extinction (1804-1806) and, later, his reformist and moralizing policies toward the accounting office (Hacienda, 1824-1825), caused alarm among corrupt peninsular bureaucrats.³³ In 1806 authorities in Madrid received nasty reports against Arango from the official head of the tobacco monopoly, Rafael Gómez Roubaud.³⁴ Also, Spain's dominant minister, Manuel Godoy, Príncipe de la Paz, disliked Arango's reformist proposals due to his personal interests in receiving a percentage of the taxes on Cuban trade.³⁵

In 1808 the capture of Ferdinand VII and his deposed father Charles IV by Napoleon unleashed a calamitous political confusion that led to the formation of local self-government assemblies (*juntas*) in Spanish America and Spain. Arango, with the knowledge and approval of Captain General marqués de Someruelos, had a leading role in one such type of movement toward

31. Consider argument by Jorge I. Domínguez, *Insurrection or Loyalty: The Breakdown of the Spanish American Empire* (Cambridge, Mass.: Harvard University Press, 1980), 254-255. Examples of associative advances in this period: Sociedad Economica, masonry, other cultural and educational associations; cultural contests; Papel Periodico, currents of opinion; Beneficencia Publica, charity, philanthropists. Academia Cubana de Literatura. Junta de Fomento, education.

32. Hugh Thomas, *Cuba or the Pursuit of Freedom* (New York: Da Capo Press, 1998), 72-75; Manuel Moreno Fragnals, *El Ingenio*, 12-13.

33. "Informe ... al Sr. D. Rafael Gómez Roubaud, Superintendente Director General de Tabacos en la isla de Cuba, sobre los males y remedios que en ella tiene este ramo," Arango, *Obras*, vol. 1, 388-492. On rivalry between Gómez Roubaud and Arango y Parreño in 1810-1811, see BNJM, C.M. Morales, vol. 79, nos. 109-142, including Suplemento al Diario de La Habana, no. 700.

34. Pierson, "Arango y Parreño," 473-474, based on AGI, Ultramar, leg. 175, no. 738 (Gómez Roubaud to Soler).

35. *Ibid.*, 473, note 34; Carrillo y Arango, "Elogio Histórico," 44, note 7; Ponte, Arango y Parreño, 168-169, 178, 188.

founding a Junta Superior de Gobierno in Havana, on 22-27 July, 1808, to govern locally until the legitimate monarch was restored in Spain. This action caused him some official trouble. The Junta movement failed because Arango, acting as the city council's standard-bearer (*alferez*) prior to a council's meeting, considered that not enough neighbors of Havana had signed the petition for a Junta presented to the city council. Arango opined that without at least 200 signatures no further step toward the formation of the junta should be taken. Only 72 notable Havana neighbors had signed the petition.³⁶ After this incident Arango was stood against the radical independence from Spain. Arango's participation in this affair was considered illegal by his opponents who conspired, in 1812, against Arango's selection to represent Cuba in the Cortes of Cadiz.³⁷

Modernization with stability, two often-contradictory objectives, occupied the attention of moderate enlightened thinkers such as Arango. As long as there were liberties for individuals, Arango believed, formal independence was of little importance.³⁸ In a time when radical options often meant extremely costly wars and destruction, reformers preferred a constitutional monarchy as an alternative to brutal civil war and absolute military power. Arango struggled all his life for the improvement of Cuba's rights but within a Spanish monarchy that could have developed into a modern constitutional monarchy. These were political objectives not too far removed from those of European enlightened moderates.³⁹

Once the charges of Arango were dismissed he traveled, despite a digestive illness, to Spain in 1813. Pressing Cuban interests against the abolition of slavery and for freer trade demanded his presence in Cadiz. Arango opposed a proposal aimed at the emancipation of slaves in Spain and all its colonies led by the Spanish delegates Canga Argüelles and Guiridi Alcocer. However, the Cortes's constitution of 1812, projects, and measures were undone by the restoration of Ferdinand VII in 1815. Arango with new tasks to lobby before the court in Madrid remained in Spain until January 1818.

During his absence from Cuba between 1813 and 1818, Arango left the administration of his properties in Güines to his friend Juan Ignacio Echegoyen. Echegoyen had the difficult task of dealing with *La Ninfa's* production

36. "Certificación de testimonio del acuerdo del Ayuntamiento celebrado en [22] de julio de [1808] y asistentes al del [27]"; "La petición original de los 73 [sic] vecinos sobre Junta su fecha 26 de julio 1808," BNJM, C.M. Morales, vol. 78, nos. 1-3.

37. In 1812 the conde Casa Barreto, in probable concert with deposed superintendente Gómez Roubaud, accused the junta movement and especially Arango y Parreño and former mayor Andrés de Jáuregui, for the movement's "ilegalidad por trastornar la forma de gobierno y las fatales consecuencias que podía producir, ya por el riesgo de una separación de la Metrópoli, y ya por una resolución del pueblo quien trnauquilo entonces iba a despertar," *ibid.* no. 9.

38. Ponte, Arango, 274.

39. See for example David Hume, *History of England*.

and its creditors, as well as handling the delivery and sale of its products. Arango paid for his expenses in Spain from the product of shipments of brandy to La Coruña and Santander arranged by Echegoyen. Arango criticized and distrusted the merchants of Cadiz who he described as “unos moros con peluca que solo con la muleta del monopolio saben andar o moverse.”⁴⁰ Arango’s family in Havana also received income from his properties. Moreover, Arango entrusted Echegoyen the construction of a schoolhouse he intended to donate to the town of Güines.⁴¹ Arango’s commercial creditors and consignors (Drake, slave traders Hernández & Chaviteau, Inglada & Echendia, Ferrer, Lombillo) in Cuba took advantage of Arango’s absence to alter customary exchange commissions and conditions in the sale of Arango’s sugar and coffee in the U.S.A. and Europe. Increasing debts and problems with the U.S. market (embargo) in 1814, placed Arango in increasing financial difficulties. By 1819 *La Ninfa* had accumulated such sizable commercial and internal administrative debts that almost forced its sale.

During his long sojourn in Spain Arango continued lobbying for more liberal trade conditions for goods and slaves, tobacco production, property rights of land, and public education, among many other issues.⁴² Arango influenced in the decision to establish the Junta de Fomento, a local government institution planned to foster productive industries and education in Cuba.⁴³ In 1818, Arango’s greatest victory, the introduction of free trade with any nation, was implemented. In 1819, after years of dispute concerning land titles and property rights over traditional land concessions (*mercedes*), a royal decree officially recognized thousands of Cuban subjects as small and medium landowners. Arango, the Junta de Fomento, the merchant guild, and the new elite of sugar planters played an important role in the legal struggle for modernized property rights against official restrictions to the cutting of trees and transformation of rural properties.

40. Arango to Echegoyen, Chiclana 11 Feb. 1814, ANC, Escribanías, Escribanía de Gobierno, año 1818-1822, leg. 195, exp. 11, ff. 63-67v.

41. Arango to Echegoyen, Chiclana 20 Feb. 1814, *ibid.*, ff. 67v-68. The total cost of the school house in Güines was 15,000 pesos. Arango instructed that a marble stone should be placed on top of the school entrance with the inscription “Escuela gratuita de primeras letras/ Establecida en 1814/ Por Dn. Franco. Arango y Parreño.” The school was finished in 1817.

42. Arango to Echegoyen, Madrid 14 July 1815, *ibid.* ff. 85-87v: “Permanezco aquí por que no debo abandonar en este momento el negocio de negros en todas sus relaciones, el de comercio extranjero, el de tierras, el de educación, y otros no menos graves e interesantes a nuestro país a quien debo hacer este último sacrificio: sin descuidar entre tanto los medios de proveerle de negros y otros auxilios.”

43. The Lancasterian educational project Arango pressed for Cuba stalled because of preference in Madrid and Havana for religious education: “El plan de estudios de que me ocupaba y te hablé no puede tener efecto por el deceso que aquí hay de restablecer los Jesuitas, y la pretensión que ha hecho ese Ayuntamiento [de La Habana] para que se les remitan allá,” Arango a Echegoyen, Madrid 5 Jan. 1816, ff. 87v-91.

The leverage obtained by the Cuban-born in matters of land property in the island was counterbalanced, however, by their credit dependence on mostly peninsular and foreign merchants, agents, and moneylenders.⁴⁴ In time landowners felt the credit pinch. Arango's own business dreams suffered a rude awakening in 1818. After bad harvests and sugar market problems his agent, José Ignacio Echegoyen, presented him with a hefty bill for administrative fees (70,000 pesos) and debts outstanding (62,000 pesos) that led to a long judicial process.⁴⁵ To repay debts Arango considered in 1821-1823 putting his properties up for sale but could not find buyers.⁴⁶

Enhanced trade, encouraged by official liberal concessions, and its counterpart, intensified slavery, promoted by Arango and the sugar landowners to solve a serious labor scarcity in Cuba, had contradictory effects on the Cuban economy and society. Since the 1790s new business opportunities had attracted Spanish and other European and North American merchants, shippers, slave traders, capitalists, moneylenders, speculators and adventurers to the island. Steam engines, tools and inputs, and qualified operators from abroad contributed to the technological transformation of sugar plantations. Imported jerked beef, rice and beans, and cheap clothes improved somewhat the meager living conditions of slaves. Imported wheat and finer food and spirits, quality clothes, and other luxury imports changed the outer appearance and consuming habits of urban colored freedmen, artisans, middle classes, and elite men and women. Liberal and enlightened ideas spread among educated Cubans.

Slavery and the slave trade, however, stood as a thorn at the side of Arango's modernizing project and quest. As a sugar producer and landowner Arango had considered mainly the economic advantage of slavery for Cuba. He despised the slave trade but struggled to maintain it long enough to supply Cuba with badly needed slaves.⁴⁷ He favored humane treatment of slaves, exaggerated the Spanish customs of treating slaves more kindly than in the

44. Duvon C. Cornbitt, "Mercedes and Realengos: A Survey of the Public Land System in Cuba," *Hispanic American Historical Review* 19 (1939): 263-285; *Francisco Pérez de la Riva, Origen y régimen de la propiedad territorial en Cuba* (Habana: Imp. "El Siglo XX"-Academia de la Historia, 1946), 7-8, 139-153.

45. "Dn Francisco de Arango y Parreño con Dn [José] Ignacio Echegoyen sobre un compromiso celebrado para califica ciertas cuentas," ANC, Escribanías, Escribanía de Gobierno, año 1818-1822, leg. 195, exp. 11.

46. Ponte, Arango, 269-270. Arango tried to sale most of his properties in 1821-1823 but did not find purchasers. He was able to sell his cafetal Valiente to several small owners, including a free black (Matías Campos) by installments that were not paid on time prompting Arango to sue his debtors: "El Exmo. Sr. D. Francisco de Arango y Parreño contra Da. Maria de Regla de la Calle sobre cobro de 1,044 ps." Havana, 16 July 1826, ANC, Escribanías, año 1826, leg. 849, exp. 15696.

47. "Por pura curiosidad te pregunté las resultas de esa expeculación; pero ni quería ni quiero ser comerciante de carne humana," Arango to Echegoyen, 22 Jan. 1817, ANC, Escribanías, año 1818-1822, leg. 195, exp. 11, f. 94v. See also Arango, *Obras*, vol. 1; vol. 2.

French or British colonies, and pressed for legislation protecting slaves against abuses. He treated his own slaves with concern and paternalism.⁴⁸ Only later in his life he began to reconsider the social and cultural consequences of slavery. Eventually he proposed the gradual abolition of slavery and promoted white immigration from Spain to address the problem of labor scarcity in Cuba. He also urged for the education of the black population, much neglected in the island, despite a prevalent mean-spirited attitude—even among Arango’s conspicuous relatives such as Anastasio Carrillo Arango—against free people of color in the 1820s. The slave trade had been officially abolished in Cuba in 1820 by effect of an 1817 treaty between the government of Spain and England. However, illegally introduced slaves continued to arrive in larger and larger quantities as a result of an increasing demand by sugar growers in Cuba.

Humboldt’s *Essai politique sur l’Ile de Cuba* can be read, in parts, as a debate between the Prussian scientist and Arango over the issue of slavery. An early and brief version of this essay was first published in French in 1807.⁴⁹ An updated and expanded edition of the essay was printed in the 1820s and soon translated to Spanish and English.⁵⁰ In this political economic study Humboldt condemned the institution of slavery in Cuba and the rest of the Caribbean. Humboldt’s objective data and his detached liberal stance allowed him to write, in Arango’s spirit, optimistically about the future of Cuba. But progress in Cuba, according to Humboldt, was contingent to the introduction of necessary reforms he believed prominent Cuban leaders like Arango were contemplating. Among these reforms—Humboldt firmly averred—the most urgent was the extinction of slavery, a serious obstacle to the peaceful evolution of Cuban civil society.

When the Spanish translation of Humboldt’s work arrived to Cuba for the first time in 1827, distinguished members of Havana’s city council took measures to limit its circulation. The alleged reason for this action was its negative perspective on slavery.⁵¹ The rounding-up of approximately two hundred brand new copies of the essay did not impede Arango to carefully read Humboldt’s work and respond to it with written comments that revealed the basic difference between the two thinkers with regards to slavery at a mature stage of Arango’s stance on the issue. Humboldt emphasized a peaceful solution to

48. “Aquí tengo ya trescientos sombreros para los negros y allá fueron sesenta docena de platos para que unos y otros se los haga repartir en mi nombre. Que sepan que acá también los tengo presentes,” Arango to Echevoyen, Cadiz 8 October 1813, ANC, leg. 195, exp. 11, f. 63.

49. 6. Alexander von Humboldt and Aimé Bonpland, *Voyage aux régions équinoxiales du Nouveau Continent, fait en 1799, 1801, 1803 et 1804* (Paris: Schell, Dufour, Maze et Gide, 1807).

50. An expanded and updated French edition was published in 1826; its Spanish and English versions appeared, respectively, in 1827 and 1829.

51. 8. Puig et al, “Estudio introductorio” in Humboldt, *Ensayo político* (1998), 91-92.

the problem of slavery through gradual but effective legislation that would increase the number of slaves obtaining their freedom. He agreed in part with Arango that slaves probably had some minor legal rights in Cuba (such as more possibilities for purchasing their liberty and to request a new owner if mistreated) inexistent in other parts of the Caribbean. But Humboldt pointed out that comparisons between more or less “humane” attitudes in different so-called civilized societies missed the fundamental point of the human right to freedom. Arango felt personally addressed by Humboldt’s latter argument and found it necessary to rectify that he never intended to justify slavery in Cuba through such interested comparisons. Arango felt frustrated in his long struggle to enact a code of law regulating more precisely the rights of slaves against abuses that were very difficult to police.

Moreover, Humboldt tried to prove through statistical estimates that Cuba could afford the abolition of slavery—through an effective ban of the slave trade that would reduce considerable financial costs due to the inflationary effects of the illegal slave trade—without losing economic momentum. Arango shared Humboldt’s condemnation of the shameless illegal slave trade, the “abominable trade,” and accepted the fact of increasing profitability of technologically modernized sugar estates and mills in the 1820s with smaller number of slaves, and the advantages of cheap free labor. Arango, however, did not disagree with Humboldt’s assertion that the problem of slavery in Cuba and the Caribbean:

no podrá conseguirse por medios pacíficos, si[n] la participación de las autoridades locales, sean congresos coloniales, sean reuniones de propietarios designados con nombres menos temidos por las antiguas metropolis ... En los países de esclavos donde el hábito de mucho tiempo inclina a legitimar las instituciones más contrarias a la justicia, no se puede contar con la influencia de los conocimientos, del cultivo de la razón, de la dulcificación de las costumbres, sino en cuanto todos estos bienes aceleran el impulso dado por los gobiernos, y facilitan la ejecución de las medidas que una vez se adoptan. Sin esta acción directora de los gobiernos y de las legislaturas no se debe esperar una mudanza pacífica.⁵²

A final parallel between Humboldt and Arango and their legacy is fitting. Both were enlightened, moderate liberals, and interested in economic and political economic matters. Both had traveled to explore (Humboldt scientifically; Arango seeking technological and economic methods of modern agricultural production). They crossed each other’s paths in Havana and Güines. They were both optimistic about reform, progress, and the economic potential of Cuba. However there was a fundamental difference with regards to their particular views on slavery. Humboldt thought it necessary to directly

52. 9. Humboldt, *Ensayo político* (1998), 310-311.

abolish slavery through peaceful and legal means. Arango was eclectic about this matter: initially he sought to improve the condition of slaves while seeking to extend slavery in Cuba. Arango had extended family connections and sugar planting interests to take care of. Both Humboldt and Arango faced toward the end of their lives the regression of liberal conditions and militarization in their own lands. Both, however, contributed to the foundation of a reformist liberal tradition, unique in Spanish America, which through successive reformist intellectuals and leaders addressed thereafter in the most rational ways, despite irrational opposition, the fundamental problems of colonial Cuba. This was an enlightened collaboration between a scientist and a civilian patrician of great significance for Cuba in the threshold of its modern economic and social transformation.

