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Confronting the Crisis of the Slave-Based Plantation System in Puerto Rico: Bureaucratic Proposals for Agricultural Modernisation, Diversification and Free Labour, c. 1846–1852*

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Abstract. By the late 1820s, Puerto Rico and Cuba had become Spain's only remaining colonies in the Americas and its major source of colonial returns. A decade later, however, the slave-based plantation system in Puerto Rico was beginning to show signs of stagnation due to the convergence of a number of domestic and international forces. In the late 1840s the Iberian colonial bureaucracy initiated a series of proposals to stimulate Puerto Rico's transformation into an agriculturally modern, diversified, free-labour economy. This initiative failed due to an adverse economic environment, administrative confusion and rivalries, and the failure of officials on the island to enlist the support either of local planters or those at the lower levels of society. This paper explores the reasons for this failure in detail.

Keywords: plantations, sugar, commercial agriculture, tropical exports, Spanish Antilles, Spain's Second Empire, Puerto Rico

After nearly 200 years on the margins of the Spanish American empire, by 1840 Puerto Rico had become one of the largest producers of cane sugar worldwide.[1] By mid-century it was the Caribbean's second major exporter of the sweetener.[2] At first glance it seemed that a prosperous future was at hand for the island's presiding plantocracy and mercantile elite. Taking into

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[1] Guillermo A. Baralt ranked it tenth among world sugar producers in 1840: see Baralt, *Esclavos rebeldes: conspiraciones y sublevaciones de esclavos en Puerto Rico, 1795–1873* (Río Piedras, 1981), p. 163.

[2] Francisco A. Scarano, *Sugar and Slavery in Puerto Rico: The Plantation Economy of Ponce, 1800–1850* (Madison, 1984), p. 6.

account the late eighteenth-century Bourbon imperial overhaul, which helped to pave the road for the unprecedented agrarian boom, Iberian officials expected no less. Cuba and Puerto Rico, with the slave-based plantation system at their centre, became the metropolis's newest cash cows in the aftermath of the wars of independence on the mainland. The revenue derived from the tropical exports of both islands, together with associated remittances and investments generated in banking, transportation, mercantile and manufacturing activities, proved crucial to the emergence of what Christopher Schmidt-Nowara calls 'Spain's reconstituted Second Empire'.[3]

The sugar industry in the smaller colony, however, was built on a fragile foundation, the weaknesses of which became progressively more noticeable after the 1830s. The third Anglo-Spanish treaty banning slave shipments to the Hispanic Caribbean (1845), the establishment of a British consulate and Spain's adoption of stringent measures against *negreros* proved disastrous for the undercapitalised Puerto Rican sugar estates, many of which could not afford the inflated prices of fresh bonded labour.[4] In response, colonial officials tried desperately to use anti-vagrancy regulations to mobilise peasants and urban workers.[5] Other factors that began to coalesce at the end of the 1830s – including metropolitan protectionist barriers and tariff hikes, rising land prices, environmental pressures, technological constraints and global competition among producers of sugarcane, beet and maple sugar – placed the Puerto Rican sugar industry in an even greater predicament.[6]

Referring to the early 1840s, Francisco Scarano has observed that the downward trend in the price of Puerto Rican sugar sold in the United States, the island's principal export market, sent 'shock waves through the plantation sector'.[7] The decline did not cripple the industry permanently, he added, but it 'imposed some adjustments on the plantations and forced many planters into debt'.[8] Rising to the challenge in 1847, Spanish economist Darío de

[3] Christopher Schmidt-Nowara, *Empire and Antislavery: Spain, Cuba, and Puerto Rico, 1833–1874* (Pittsburgh, 1999), pp. 3–5.

[4] The average price for a field slave in Ponce tripled between 1845 and 1860: see José Curet, 'About Slavery and the Order of Things: Puerto Rico, 1845–1873', in Manuel Moreno Fraginals et al. (eds.), *Between Slavery and Free Labor: The Spanish-Speaking Caribbean in the Nineteenth Century* (Baltimore, 1985), pp. 124–6. The well-established, better-financed Cuban plantations embraced technical improvements in milling and railway construction to overcome the price increase: see Antonio Santamaría García, 'Reformas coloniales, economía y especialización productiva en Puerto Rico y Cuba, 1760–1850', *Revista de Indias*, vol. 65, no. 235 (2005), pp. 713–22.

[5] Sidney Mintz, 'Labor and Sugar in Puerto Rico and in Jamaica, 1800–1850', *Comparative Studies in Society and History*, vol. 1, no. 3 (1959), pp. 273–81; Fernando Picó, *Libertad y servidumbre en el Puerto Rico del siglo XIX* (2nd edition, Río Piedras, 1982).

[6] Antonio Santamaría García and Alejandro García Álvarez, 'Historia de la industria azucarera en Puerto Rico: un balance', in *O açúcar e o cuotidiano* (Funchal, Madeira, 2005), pp. 1–13; R. H. M. Langer and G. D. Hill, *Agricultural Plants* (2nd edition, Cambridge, 1991), p. 198.

[7] Scarano, *Sugar and Slavery*, p. 14.

[8] *Ibid.*

Ormaechea suggested a strict division of labour between producers and manufacturers, one that would have allowed the former to cultivate sugarcane and the latter to transform it into a marketable export staple. In this way the available technical know-how, financial resources and manpower would have been concentrated on each group's own areas of expertise, rather than split unevenly and inefficiently across the entire business.[9] No one took him up on the suggestion, or other measures intended to prop up the sugar industry, until the last third of the nineteenth century.

Renewed interest in the various propositions and interventions aimed at reinvigorating commercial agriculture in Puerto Rico suggests the need for further research on the intertwined problems of agro-industrial modernisation and workforce development in the Spanish colony after the 1840s.[10] This paper contributes to the debate by tracing the attempt by the local Spanish imperial bureaucracy to jump-start the island's stagnant economy and re-establish it on a competitive course. Specifically, the administrators sought to create an agrarian institute or model hacienda to lay the groundwork for replacing the existing slave-based, single-crop plantation mode of production with an agriculturally diversified economy based on free labour. A series of proposals and related documentation found in archives in Spain and Puerto Rico, dating roughly between 1846 and 1852, comprise the bulk of the sources for this study. The site chosen for the projected new venture was Hacienda Los Frailes, a large tract of land formerly owned by the Dominican friary within the Loíza *barrio* of Piñones.

Steeped in an enlightenment-based *fomento* prescription that emphasised socio-economic improvement as a model of national (and imperial) development, this project pursued three interrelated objectives: retooling the economy, promoting agro-industrial education, and modifying the social and working behaviour of the rural population to create a reliable labour force.[11]

[9] 'Memoria acerca de la agricultura, el comercio y las rentas internas de la isla de Puerto Rico por Darío de Ormaechea, año 1847', in Eugenio Fernández Méndez (ed.), *Crónicas de Puerto Rico: desde la conquista hasta nuestros días, 1493–1955* (2nd edition, Río Piedras, 1973), pp. 389–442.

[10] Silvia Álvarez Curbelo, *El afán de la modernidad en Puerto Rico, siglo XIX* (San Juan, 2001), especially chap. 4; María T. Cortés Zavala, 'Enseñanza agrícola y nación en Puerto Rico: el caso de la Escuela Agrícola e Industrial, 1854–1871', in Josef Opatrný (ed.), *El Caribe hispano: sujeto y objeto en política internacional* (Prague, 2001), pp. 255–65, and 'Las estaciones agronómicas, un modelo de desarrollo agrícola para Puerto Rico, 1880–1898', in María T. Cortés Zavala (ed.), *Sociedades locales y culturas en tránsito en el Caribe español* (Morelia, 2005), pp. 67–82; and María M. Flores Padilla, 'Manuel Zeno Gandía: diversificación agrícola e industria en Puerto Rico durante la segunda mitad del siglo XIX', in Leticia Bobadilla González and Yolanda Juárez Hernández (eds.), *Cambio social y cultura caribeña, siglos XIX y XX* (Mexico City, 2009), pp. 45–60.

[11] My use of the term *fomento* follows Paula De Vos, 'Natural History and the Pursuit of Empire in Eighteenth-Century Spain', *Eighteenth-Century Studies*, vol. 40, no. 2 (2007), pp. 227–30.

Formulated by *Intendente* Manuel José Cerero, amplified and contextualised by educator-administrator Ramón Carpegna and shepherded through the imperial establishment by Cerero's successor Pedro de Prat, the proposal sought to ward off the imminent collapse of the plantation system as seen by the imperial representatives on the ground. It urged the peninsular administration to lead the way to economic revitalisation by piloting the effort to modernise production and work regimes through the systematic application of agricultural science and education.

The Political Economy of Bourbon Reformism

The model plantation/agricultural institute project was an attempt to apply an old solution to a new problem in a different setting. Its framework stemmed from a late eighteenth-century reformist thrust that sought to overcome the retarded material development of Spain when compared to some of its European competitors.[12] Inspired by the Enlightenment, the call for renewal took on the politico-economic barriers that prevented Spain from reclaiming its global competitiveness. Science and secular education were at the core of the political economic analyses gaining momentum during this period.[13] Agricultural academies paved the way for the establishment of *sociedades económicas*, which set out to promote agro-industrial development.[14] Botanical gardens, model farming schools, technical institutes, public lectures, periodicals, primers, competitions and fairs disseminated information on seed and plant selection, preparation, preservation and cultivation, as well as soil management through crop diversification, rotation, irrigation and fertilisation.[15] In essence, these initiatives sought to maximise agro-industrial productivity by incorporating the newest and most efficient processing and manufacturing methods available.[16]

Working alongside a fiscally responsible, revenue-generating, centralised Bourbon monarchy, the sociedades declared that all able-bodied individuals should contribute their fair share to stimulate the Spanish economy. Public debates, fora and literary contests focused on ways to increase productivity and reduce poverty – thus they also targeted the poor, idle, homeless,

[12] Gabriel B. Paquette, *Enlightenment, Governance, and Reform in Spain and its Empire, 1759–1808* (Basingstoke and New York, 2008). [13] De Vos, 'Natural History', pp. 209–39.

[14] Jordi Cartañà i Pinén, 'La agronomía en la España del setecientos', in Manuel Silva Suárez (ed.), *Técnica e ingeniería en España III. El siglo de las luces: de la industria al ámbito agroforestal* (Zaragoza, 2007), p. 415.

[15] Juan Piqueras Haba, *Sociedades económicas y fomento de la agricultura en España, 1765–1850* (Valencia, 1992), pp. 12, 21.

[16] Cartañà i Pinén, 'La agronomía', pp. 409–52; see also Robert J. Shafer, *The Economic Societies in the Spanish World, 1763–1821* (New York, 1958).

orphans, lawbreakers and the interned for moral uplifting and economic inclusion.[17] Through a combination of education, work and social regeneration, welfare institutions, such as hospices, frequently operated as workhouses. Farming and vocational schools often blended instructional, utilitarian and rehabilitative objectives by integrating the jobless and wards of the state into the economy through supervised training designed to ease their transition to gainful employment.[18]

Reformers next turned their attention to the Spanish Antilles, whose strategic vulnerability and marginal contribution to the Hispanic American economy had been a perennial source of concern in imperial circles. As in much of the colonial periphery, Iberian authority had been generally frail in this region. Enduring a rudimentary, impoverished lifestyle, most of its inhabitants had few options to improve their lot. Keenly aware that their infractions might be overlooked or go unpunished, officials and townsfolk alike tended to pay lip service to metropolitan bans. Largely cut off from peninsular immigration and trade, smuggling and piracy thrived. These conditions eventually forced the crown to put into place a series of measures to regain royal control and re-channel colonial production to trading networks linked with the metropolis.

The overhaul, which peaked during the reign of Charles III, targeted just about every major feature of Spanish American colonial life for improvement and royal accountability, from navigation to urban construction, and from cultivation to tax collection. Some operations were streamlined, deficiencies were fixed, and updates were introduced. The modifications and policy recommendations instituted by Alexandro O'Reilly, a high-ranking military officer whom the crown sent to Cuba and Puerto Rico in response to the 1762 English occupation of Havana, set the tone for the reformist trend. O'Reilly learned that Spain had no blueprint in place for tapping the island's vast natural wealth, which he described as a veritable treasure trove of underexploited, marketable tropical products. After carefully diagnosing the 'obstacles' that held back Puerto Rico, he prescribed a series of enlightened 'remedies' to cure the disorders, such as granting land ownership titles only to commercial farmers, importing technical experts to advise those farmers, funding a state-owned sugar mill to serve as a model, and encouraging

[17] Rosa M. Pérez Esteves, *El problema de los vagos en la España del siglo XVIII* (Madrid, 1976), pp. 165–95; William J. Callahan, 'The Problem of Confinement: An Aspect of Poor Relief in Eighteenth-Century Spain', *Hispanic American Historical Review*, vol. 51, no. 1 (1971), pp. 1–24; Ruth Pike, *Penal Servitude in Early Modern Spain* (Madison, 1983).

[18] Shafer, *The Economic Societies*, pp. 77, 83 and 88–93; see also Jurjo Torres Santomé, *La educación en la Sociedad Económica de Amigos del País de Santiago, s. XVIII–XIX* (Salamanca, 1979), pp. 20 and 32–3.

peninsular merchants and capitalists to invest in Puerto Rico.[19] In 1788 a clergyman-historian, Fray Íñigo Abbad y Lasierra, echoed O'Reilly's recommendations for agrarian change and economic liberalisation.[20]

Taking the cue from both observers, the subsequent colonial regimes began to strengthen the island's military and naval capacity; round up, congregate and regulate the dispersed rural population; supervise, retrain and incorporate artisans into professionally organised skilled trade guilds; encourage free and coerced immigration under controlled conditions; expand the cultivation of cash crops; and strengthen and institutionalise mercantile links to the peninsula.[21] Two iconic works of this period, Abbad y Lasierra's 1788 *Historia geográfica, civil y natural de la isla de San Juan Bautista de Puerto Rico* and the French naturalist André Pierre Ledru's 1797 *Viaje a la isla de Puerto Rico*, signalled, as Jorge Cañizares-Esguerra has observed, 'the realisation that colonial empires were lost or won by those who controlled the description of lands and people'.[22] This scholarship was infused by a patriotic fervour that 'moved authors to place urgent calls for the renewal of Spanish historiography, cartography, and botanical studies … [to] produce new histories of colonisation and discovery, as well as … to control the naming of plants and places if the empire of Spain in America was to survive'.[23]

Slavery, Agriculture and Colonialism in Spain's Second Empire

Puerto Rico would not feel the full reformist thrust until the first three decades of the nineteenth century.[24] The Puerto Rican creole Ramón Power y Giralt, who served as the island's representative to the first Spanish Cortes and later became its president, cleared the way. He secured the appointment of an Iberian political economist, Alejandro Ramírez, as the island's first intendente, reporting directly to the Ministry of the Treasury. Elsewhere in

[19] 'Memoria de D. Alexandro O'Reylly sobre la isla de Puerto Rico', in Aída R. Caro Costas (ed.), *Antología de lecturas de historia de Puerto Rico, siglos XV–XVIII* (Puerto Rico, 1972), pp. 385–416.

[20] Gervasio L. García, 'Luces y sombras en la primera historia de Puerto Rico (1788)', in Juan A. Piqueras (ed.), *Las antillas en la era de las luces y la revolución* (Madrid, 2005), p. 153.

[21] Bibiano Torres Ramírez, *La isla de Puerto Rico, 1765–1800* (San Juan, 1968); Jesús Cambre Mariño, 'Puerto Rico bajo el reformismo ilustrado', *Revista de Historia de América*, vol. 73–4 (1972), pp. 53–73; Aída R. Caro Costas, *El cabildo o régimen municipal puertorriqueño en el siglo XVIII* (San Juan, 1974), vol. 11, pp. 62–4; Altagracia Ortíz, *Eighteenth-Century Reforms in the Caribbean: Miguel de Muesas, Governor of Puerto Rico, 1769–76* (Rutherford, 1983).

[22] Jorge Cañizares-Esguerra, *How to Write the History of the New World: Historiographies, Epistemologies, and Identities in the Eighteenth-Century Atlantic World* (Stanford, 2001), p. 134.

[23] *Ibid.*; see also Fray Íñigo Abbad y Lasierra, *Historia geográfica, civil y natural de la Isla de San Juan Bautista de Puerto Rico* (San Juan, 1866); and André P. Ledru, *Viaje a la isla de Puerto Rico* (Río Piedras, 1957).

[24] Isabel Gutiérrez del Arroyo, *El reformismo ilustrado en Puerto Rico* (Mexico City, 1953), p. 18.

Spanish America, intendentes clashed with viceroys, *corregidores* and captains-general on many key administrative decisions.[25] With the glaring exception of the Pezuela-Núñez dispute, discussed towards the end of this paper, such tensions appear to have been less evident or intense in the case under study. Enjoying broad administrative powers, especially over financial and military matters, Ramírez opened all ports in the island to trade freely, restructured the customs receiverships, introduced a uniform monetary system, founded an insular Sociedad Económica and published a semi-weekly *Diario Económico de Puerto Rico*.[26] His crowning achievement was to oversee the implementation of the 1815 Cédula de Gracias, a liberal decree that facilitated the immigration of foreigners with skills and/or resources and the importation of slaves free of duty for the next 15 years.[27] The dispensation capitalised on the agrarian boom resulting from the destruction of the plantations in nearby Saint-Domingue and the growing commercial interests of the United States in the Spanish Caribbean. It also rewarded the Puerto Rican creoles, who remained loyal to the metropolis during the insurrections on the mainland.[28]

The vigorous initiatives undertaken by Francisco Arango y Parreño to enmesh the incipient Cuban plantation system within the revived Spanish empire exemplified the growing economic aspirations of Antillean agricultural interests at the end of the eighteenth century. Arango argued powerfully and successfully for the compatibility of African slavery with the liberal principles of modern economic theory. As Dale Tomich writes, 'Under the stimulus of the market, Arango conceive[d] of Cuba as an engine of imperial economic development. Free trade and the development of [slave-based] colonial production, [he] argued, would benefit not only Cuba, but Spain as well'.[29]

In 1817 Spain signed its first treaty with England pledging to stop importing African captives to the Hispanic Caribbean. With its mainland colonists in armed rebellion, however, Spain could not afford to turn its back on that sector of the Antillean elite that was longing to join the lucrative field of slave-based plantation agriculture. More importantly, revenues collected from the colonies in the Caribbean helped to keep the metropolis afloat

[25] James Lockhart and Stuart B. Schwartz, *Early Latin America: A History of Colonial Spanish America and Brazil* (Cambridge, 1983), pp. 352–7.

[26] Miguel A. Puig-Samper and José L. Maldonado, 'Ciencia y cultura en la época de Alejandro Ramírez en Guatemala, Cuba y Puerto Rico', in Piqueras (ed.), *Las antillas*, pp. 172–3.

[27] Luis E. González Vales, *Alejandro Ramírez y su tiempo: ensayos de historia económica e institucional* (Río Piedras, 1978).

[28] Scarano, *Sugar and Slavery*, pp. 10 and 18.

[29] Dale Tomich, 'The Wealth of Empire: Francisco Arango y Parreño, Political Economy, and Second Slavery in Cuba', in Christopher Schmidt-Nowara and John M. Nieto-Phillips (eds.), *Interpreting Spanish Colonialism: Empires, Nations, and Legends* (Albuquerque, 2005), p. 73.

during the wartime years. Thus, nothing came of the Anglo–Spanish agreement, or two subsequent agreements, until both parties renegotiated terms in 1845.[30]

The independence struggles further strengthened Iberian military and economic ties to the Hispanic Caribbean. The 1815 Cédula helped to channel foreign capital, plantation equipment and labour, both free and enslaved, to Puerto Rico. In 1836 Spain authorised the importation of more slaves from the nearby French, Danish and Dutch islands, so long as the captives were 'hard-working, disciplined, healthy, from the countryside, and in no way African natives that could even remotely be included in the clauses of the treaty signed in 1835 with Great Britain'.[31] Some 70,000 were ferried to the island between 1815 and 1847, 10,000 of whom were purchased in slave markets in the non-Hispanic Caribbean in 1824–5.[32] An assortment of subterfuges was used to disguise their African provenance in order to foil British surveillance; these included bribing port officials, camouflaging slavers as merchant vessels, substituting sailing flags, altering navigational logs, transhipping the human cargoes and passing off *bozales* as *ladinos*.[33] In some cases, West Indian free blacks were also enslaved and carried off to Cuba and Puerto Rico.[34] Puerto Rico's slave population climbed from 21,730 in 1820 to 51,265 in 1846, even while the Anglo–Spanish treaties were legally in force.[35]

The concessions granted under the 1815 Cédula benefited the sugar industry greatly as *ingeniomanía* (the 'sugarmill rush') spread across the island.[36] By 1828 Puerto Rico had 1,555 sugar-growing units with processing capacity at various stages of industrial development.[37] The most technologically advanced, about one-fifth of the total, were equipped with steel or steel-wrapped milling presses powered by steam engines, controlled large numbers of slaves and turned out the largest quantity of sugar. The approximate

[30] Joseph C. Dorsey, *Slave Traffic in the Age of Abolition: Puerto Rico, West Africa, and the Non-Hispanic Caribbean, 1815–1859* (Gainesville, 2003), p. 26.

[31] Conde de Mirasol to Spanish Crown, 22 March 1847, Archivo Histórico Nacional, Madrid, Sección de Ultramar (hereafter AHN-Ultramar), leg. 1071, exp. 11.

[32] Capitanía General to Secretario de Estado y del Despacho de la Gobernación del Reyno, 14 July 1847, Archivo General de Indias, Sección de Santo Domingo (hereafter AGI-SD), leg. 2337.

[33] Dorsey, *Slave Traffic.*

[34] Jonathan Curry-Machado, 'Catalysts in the Crucible: Kidnapped Caribbeans, Free Black British Subjects and Migrant British Machinists in the Failed Cuba Revolution of 1843', in Nancy P. Naro (ed.), *Blacks, Coloureds and National Identity in Nineteenth-Century Latin America* (London, 2003), pp. 123–42; Jorge L. Chinea, *Race and Labor in the Hispanic Caribbean: The West Indian Worker Experience in Puerto Rico, 1800–1850* (Gainesville, 2005), pp. 81–5.

[35] Luis M. Díaz Soler, *Historia de la esclavitud negra en Puerto Rico* (Río Piedras, 2000), p. 111.

[36] Report of agricultural conditions penned by Nicolás Vizcarrondo, Andrés Vizcarrondo, Ramón Carpegna and Buenaventura Quiñones, 22 March 1826, AGI-SD, leg. 2345.

[37] Pedro T. de Córdova, *Memorias geográficas, históricas, económicas y estadísticas de la isla de Puerto Rico* (2 vols., San Juan, 1968), *passim.*

annual volume of sugar exports nearly quintupled from 9,400 to 46,400 tons between 1828 and 1845.[38] Sugar and molasses together represented over 75 per cent of total agricultural exports by mid-century.[39] Coffee, another important commercial crop, yielded 13 tons in 1828, but stiff global competition and damage from tropical storms contributed to its steep decline thereafter.[40] In 1846, coffee haciendas were present in only 13 of the existing 66 towns.[41]

Some of the domestic and international conditions that caused the downturn of the coffee industry were not new. Planters dealt with natural hazards of various kinds throughout the Caribbean. They also faced trade wars, which fluctuated in accordance with the mercantile flows of the expanding capitalist world. By striking at the heart of the plantation system, the substantial fall in new slave purchases in the late 1830s, culminating in their legal cessation in 1845, magnified these setbacks. Writing in the early 1830s, an Irish mercenary, George D. Flinter, argued that slavery played an insignificant economic role in Puerto Rico. As the former chief accountant of the Royal Treasury, Intendente Cerero knew that a significant portion of colonial revenues came from transactions involving captives. By the 1840s he reluctantly conceded that the heyday of bountiful slave cargoes was long gone. Puerto Rico, he wrote in 1846, used to collect 'considerable revenues, but not during my tenure, nor can this be possible at all today, owing to the utmost punctuality with which *all the laws* are observed, obeyed, and respected'.[42]

This comment referred to the loss of colonial duties collected from the legal importation of slaves. In reality, 'duplicity' rather than 'punctuality' characterised the colonial administration's approach to illegal slave trading, which continued at a much-reduced scale thereafter. Since planters repeatedly breached the Anglo-Spanish pacts, from the mid-1820s onwards colonial functionaries quietly allowed lawbreakers to retain the secreted slaves as long as they paid the corresponding import taxes. This underhanded practice remained in place until the early 1840s, when Governor Santiago Méndez de Vigo and Intendente Antonio María del Valle tried to formalise it to raise revenues. The Treasury Ministry and Ministry of Maritime Affairs both

[38] Abbad y Lasierra, *Historia geográfica*, p. 324.

[39] Scarano, *Sugar and Slavery*, p. 8.

[40] Laird W. Bergad, *Coffee and the Growth of Agrarian Capitalism in Nineteenth-Century Puerto Rico* (Princeton, 1983), esp. pp. 9–16 and 69–147; Miguel López de Acevedo to Secretario de Estado y del Despacho de Hacienda, 22 Dec. 1851, AHN-Ultramar, leg. 296, exp. 36.

[41] 'Estado que manifiesta el número de dueños de establecimientos agrícolas que existen en la Ysla, sus valores y números de esclavos que tienen para su cultivo', 14 Feb. 1846, AHN-Ultramar, leg. 1067, exp. 54.

[42] Emphasis in original. Cerero to Ministerio de Hacienda, 8 March 1846, AHN-Ultramar, leg. 1075, exp. 39.

endorsed it, as long as stolen slaves were excluded and abolitionists were kept in the dark about the practice. The *Junta Consultiva de Ultramar* dissented, however, arguing that the extra revenues would increase frictions with England. It directed local officials to stash away or burn all files that concerned illegally introduced slaves, and urged the adoption of the indentured African labour system used in Jamaica.[43]

As well as smuggled captives, African apprentices and free blacks from the nearby British Caribbean were also being kidnapped, sold and enslaved in the Spanish colonies during the 1830s and 1840s.[44] The exact numbers are not known, but Cerero dealt with a group of 73 that the British tried to rescue. Of these, 46 remained in Puerto Rico when the English refused to compensate their new 'owners'. At Cerero's request, in 1845 the Spanish crown agreed to reimburse Puerto Rico's *Contaduría del Ejército* for the cost of housing and feeding them while in custody. At the same time, Cerero asked that the repayment be resolved quickly, 'so as to erase from the royal ledgers a supplement that would [negatively] affect our responsibilities' under the existing Anglo–Spanish agreements to end the slave trade.[45] Ultimately, the British Caribbean also failed to satisfy the demand for servile labour in the plantations.

Planters filled part of their technical labour needs with West Indian free black immigrants, especially those proficient in any of an extensive array of construction and industrial trades. Although many entered the island furtively and impoverished, they refused to be treated as slaves and were known to walk off the plantations during labour disputes. From the perspective of the local authorities, who repeatedly tried to shield Puerto Rico from the mounting spread of anti-slavery and anti-colonial activity, this influx amounted to an infiltration of escaped slaves and free blacks 'contaminated' with subversive ideas.[46] Both Cerero and Governor Méndez de Vigo had previously frowned upon these workers, contending that their alleged emancipationist ideas and bad customs 'do not conform to the peace and order that happily reigns in this Island'.[47] In any event, the abolition of slavery in the Danish, British and French Caribbean between 1838 and 1848 significantly diminished this migratory current.

[43] Various communications between Intendente Del Valle, the Ministerio de Hacienda and Ministerio de Marina, de Comercio y Gobernación de Ultramar, and the Junta Consultiva de Ultramar, 10 June 1841 to 12 May 1843, AHN-Ultramar, leg. 1071, exp. 4.

[44] Chinea, *Race and Labor*, pp. 81–5; Curry-Machado, 'Catalysts in the Crucible'.

[45] Cerero to Secretario de Estado y del Despacho de Hacienda, 27 May 1845, AHN-Ultramar, leg. 1071, exp. 5.

[46] Chinea, *Race and Labor*, chaps. 2, 3 and 4.

[47] Fondo Capitanía General, Pasaportes, San Juan, 30 April 1842, Archivo General de Puerto Rico, San Juan, Puerto Rico (hereafter AGPR), caja 157.

By the 1840s, therefore, the plantocracy found itself weighed down by a host of interrelated problems, including the perennial shortage of labour and capital, outmoded technology, spiralling land prices and excessive taxation. Deforestation, soil erosion and droughts now appeared like a plague sweeping across the land. Mounting global competition further shook the colonial economy, lowering prices for the leading tropical exports, cutting into the profits of merchants and diminishing revenues from colonial taxes. Spanish officials in the island quickly raised the alarm. In early 1843, Cerero wrote that a recent prolonged dry spell would be likely to slash sugar production in the southern districts. He was also concerned about the likelihood that planters, who were struggling with depressed prices and/or high tariffs for Puerto Rican sugar and coffee in the United States, France and England, might not survive the bout of dry weather.[48]

This environment also exposed the growing economic dependence of Puerto Rico on the United States.[49] Governor Rafael de Arístegui acknowledged it when he reported that 56,000 tons of maple sugar had been harvested in New York and Vermont in 1844.[50] In addition, Louisiana's sugar production skyrocketed from 21,000 tons in 1835 to 140,000 in 1844.[51] A simultaneous reduction in customs duties for Cuban sugar in the United States further undercut the sale of the Puerto Rican product in the North American market, the island's largest outlet. In response, the governor urged the Spanish Treasury to adjust export duties and support efforts to expand the production of cochineal, rubber, cotton and tobacco. Believing that competitors aimed to drive Spain's last remaining American colonies out of the sugar trade, Treasury officials praised the governor's efforts 'to stave off this fatal predicament by paving another possible road for the agriculture of the [Spanish Antilles]'.[52] Sensing that the 'total ruin of this [sugar] industry can be seen because it has all the ominous symptoms', they urged him to look into the commercial cultivation of mulberry trees and silkworms as well.[53] As predicted, the price of Puerto Rican coffee, tobacco and cotton

[48] Cerero to Secretario de Estado y del Despacho de Hacienda, 14 March 1843, AHN-Ultramar, leg. 1065, exp. 40.

[49] Luis Martínez-Fernández, *Torn between Empires: Economy, Society, and Patterns of Political Thought in the Hispanic Caribbean, 1840–1878* (Athens and London, 1994), pp. 68–81.

[50] Arístegui to Francisco Armero, Secretario de Estado y del Despacho de Marina, Comercio y Navegación de Ultramar, 15 Feb. 1845, AHN-Ultramar, leg. 296, exp. 30.

[51] Richard Follett, *The Sugar Masters: Planters and Slaves in Louisiana's Cane World, 1820–1860* (Baton Rouge, 2005), p. 23.

[52] Ministerio de Hacienda to Ministerio de Marina, Comercio y Gobernación de Ultramar, AHN-Ultramar, leg. 1077, exp. 42, 30 Sep. 1846.

[53] Dirección General de Aduanas y Aranceles to Ministerio de Hacienda, AHN-Ultramar, leg. 1077, exp. 42, 26 Aug. 1846.

continued to dip between 1837 and 1848.[54] While the opening of the British market to Puerto Rican sugar in 1846 lessened dependence on the US market, it did not eliminate all the other adverse factors.[55]

Modelling Plantations, Enlightening Agriculture

In August 1846, barely a year after Spain announced new, punitive measures against *negreros*, Cerero reduced the problems facing Puerto Rican agriculture to its technological backwardness and the poor work ethic of the *jornaleros*. In his estimation these factors increased production costs above those in Cuba and the nearby non-Hispanic Caribbean, where the workload was supposedly much more simplified, preventing Puerto Rican growers from competing globally. He suggested that a 'model plantation', reminiscent of the *granja agrícola* established on the irrigated plains of the Toa river in the sixteenth century and its subsequent Cuban and Spanish variants, would correct these problems by teaching the latest farming methods to jornaleros.[56]

He conceived this as the start of a 'new agronomic model … in accordance with the [recent] advances of [the nineteenth] century'.[57] To this end he offered to work closely with the island's governor and to keep both the *Junta de Comercio* and the Sociedad Económica in the loop. 'At the same time', he assured metropolitan overseers, 'they would try to promote the immigration of European workers to replace the loss of the slave hands'.[58] The intervention was also expected to help to defray the administrative and defence needs incurred on the island and in Spain to fight the Carlist wars.[59] Cognisant of Spain's financial troubles, Cerero declared that the project would be developed at no public expense, and he identified a state property in the north-eastern coastal jurisdiction of Loíza in which to set it up.

[54] The price of cotton dropped from 16 to 7 pesos per quintal (hundredweight), tobacco from 9 to 1.5, and coffee from 12 to 5.5: AHN-Ultramar, leg. 1128, exp. 6. See also Emilio de Diego García, 'Puerto Rico: el fracaso de un modelo esclavista atípico', *Quinto Centenario*, vol. 10 (1996), p. 172.

[55] Emma A. Dávila Cox, *Este inmenso comercio: las relaciones mercantiles entre Puerto Rico y Gran Bretaña, 1844–1898* (San Juan, 1996), pp. 38–71.

[56] Edmundo D. Colón, 'Las estaciones experimentales de agricultura', in Eugenio Fernández García (ed.), *El libro de Puerto Rico* (San Juan, 1923), p. 466; Eloy Fernández Clemente, 'La enseñanza de la agricultura en la España del siglo XIX', *Agricultura y Sociedad*, no. 56 (1990), pp. 116–18.

[57] Matilde Revilla Rojas, 'Agricultura y esclavitud en Puerto Rico en el siglo XIX: una revisión historiográfica', *Quinto Centenario*, vol. 1 (1981), p. 204.

[58] Cerero to Secretario de Estado y del Despacho de Hacienda, 8 Aug. 1846, AHN-Ultramar, leg. 1067, exp. 30.

[59] Intendente Manuel Núñez, 'Ligeras observaciones sobre la administración de la isla de Puerto Rico', AHN-Ultramar, leg. 1115, exp. 6, part 3, 1 Jan. to 2 May 1852; María C. Saiz Pastor, 'La reestructuración del dominio español en Cuba: poder político y hacienda colonial (1833–1838)', *Estudios de Historia Social*, nos. 44–7 (1988), pp. 161–73.

Formerly occupied by the Dominican religious order, the intended area was situated in the modern-day region of Piñones, on the west bank of the Río Grande de Loíza.[60]

The state had taken possession of Los Frailes in 1838, two years after the liberal Treasury minister Juan Álvarez de Mendizábal had privatised Church property across Spain against the objections of the monastic orders. He believed that transferring the largely unprofitable lands from the 'dead hands' of the religious communities to active secular proprietors would stimulate agricultural and commercial production in Spain.[61] Faced with a large national deficit and a costly civil war, between 1836 and 1849 the government nationalised and sold 85 per cent of the rural estates in the metropolis that belonged to the regular clergy.[62] The proceeds did not flow into the imperial chests as quickly as anticipated, however, and in the end proved insufficient. The central government therefore decided to extend the disentailment measure to Cuba and Puerto Rico, with effect from 30 January 1838, as part of a wartime tax that sought to raise 60 million *reales de vellón* from both islands.[63]

Hacienda Los Frailes was the largest of several church properties nationalised in Puerto Rico. Smaller holdings were located in the nearby village of Cangrejos and in the south-western *villa* of San Germán. Excluding buildings, island-wide they were officially appraised at 32,263 pesos, an amount that turned out to be grossly underreported. Like their peninsular counterparts, the Dominicans and Franciscans of Puerto Rico also resented the confiscation. Their actual worth (from *capellanías*, mortgages, *hatos* and urban real estate) has recently been estimated at over 173,000 pesos.[64] It is unclear whether the local authorities were aware of the discrepancy. In any event, shoddy record keeping and untrained personnel at the insular exchequer during the following decade hampered the government's attempts to take possession of the properties and collect from the debtors.[65]

A dozen or so slaves working on the estate were sold, and the land was put up for auction. Flyers and newspaper announcements advertised the sale in

[60] Juan A. Giusti-Cordero, 'Labor, Ecology and History in a Caribbean Sugar Plantation Region: Piñones (Loíza), Puerto Rico, 1770–1950', unpubl. PhD diss., Suny-Binghamton, 1994, map 12 (p. LI).

[61] Peter Janke, *Mendizábal y la instauración de la monarquía constitucional en España, 1790–1853* (Madrid, 1974), pp. 238–9.

[62] Josefina Bello, *Frailes, intendentes y políticos: los bienes nacionales, 1835–1850* (Madrid, 1997), p. 43.

[63] Almudena Hernández Ruigómez, *La desamortización en Puerto Rico* (Madrid, 1987), esp. pp. 97–108.

[64] *Ibid.*, p. 119.

[65] 'Contra Nicolás Cruz censualista de los bienes de los regulares residente en Loíza', 1840, AGPR, Obras Públicas (hereafter OP), Asuntos Varios, caja 37.

Puerto Rico and the nearby islands.[66] None of the bids came close to the fair market value of the land, computed at just over 33,000 pesos in 1846, and it remained unsold. To clinch his case, Cerero pointed out that Los Frailes' feral condition rendered it of no particular economic worth to the administration. Like O'Reilly, Abbad y Lasierra, Arango and Ramírez, Cerero looked selectively towards the West Indies for agricultural leads. He claimed that agrarian institutes had already proven lucrative in the neighbouring British Caribbean, citing one unsubstantiated example of a model plantation in Antigua that reportedly produced as much sugar as Barbados even though it employed 10,000 fewer workers![67]

Gearing up for the Post Slave-based Plantation System

A brief outline of Cerero's main ideas went before the Treasury Ministry, which asked for a full proposal with input from the island's Sociedad Económica and *Cámara de Comercio*, together with an itemised budget and a set of by-laws. Although the intendente acknowledged the order, he became ill, resigned his position and departed to Cádiz shortly thereafter, ending a career in Puerto Rico that had begun in 1834. His appointed successor, Pedro Prat, took over. Unlike Cerero, who had merely outlined the need to modernise agriculture and integrate free workers into the labour force, Prat wanted a fundamental restructuring of the agro-exporting sector, one that was inimical to the island's planter elite. He reiterated that Puerto Rico's wealth derived principally from tropical staples, especially sugar and coffee, due largely to favourable topographical and climatic conditions. In some regions, such as the west coast, agricultural and processing techniques had reached a certain level of perfection, but planters still damaged the environment irreparably by abusing natural resources. Few understood the association between tilling and animal husbandry, and many quickly wore out their soils. Others had been unable to contain the urge to fell trees, triggering erosion and depriving plants such as coffee of beneficial shade. Soil exhaustion and deforestation affected all of the Caribbean islands, Prat argued, but those belonging to Spain's European rivals had been incorporating the newest European innovations in agriculture, 'adopting with gratifying results the maxim … that there are no rich and bountiful harvests without fertilisers,

[66] 'Administración del B. Obispo D. Gil Esteve. Creación de una sociedad catequista para la enseñanza de la Doctrina Cristiana y plan de estudios del Seminario Conciliar. Extracto de todas las piezas de autos … para la enagenación o arrendamiento de los terrenos que en la jurisdición de Loíza pertenecieron a los P.P.D.D. de esta Cuidad …', c. 1849–1860, AHN-Ultramar, leg. 2032, exp. 6.

[67] Cerero to Secretario de Estado y del Despacho de Hacienda, 6 Aug. 1846, AHN-Ultramar, leg. 1067, exp. 30.

no fertilisers without animals, no animals without pastures'.[68] Conversely, farmers that failed to act on this basic rule inevitably produced less each year.

But the bigger problem, as understood by Prat, was monocropping. He felt that limiting farming to one or two main crops was inexcusable given the vast diversity of agricultural products that could have been grown for profit. By his reckoning, the technological shortcomings and poor land utilisation of sugar cultivation far outweighed its benefits. The average yield of crystallised sugar did not exceed 5 per cent despite a juice content of between 16 and 18 per cent. This compared poorly with a 12 per cent yield extracted from a supposedly overripe product in the Andalucian province of Spain. This alone, Prat reasoned, should have motivated sugar growers to make the necessary scientific leap forward. The colonial administration had a duty to make this plainly known, since 'the outmoded and usual routine would not be sustainable over the long haul, and this could bring about great transcendental harms to the island, unless it tried to avoid a violent transition by adopting the measures most conducive to a deliberate, calculated, and articulated one'.[69] Prat therefore considered it imperative to set agriculture on a sound foundation, reorganise rural property on the basis of land values rather than the number of field hands, extend cultivation, substitute waged labour for slaves and adopt the system utilised in Java whereby all processing was allegedly undertaken by a handful of large mills.[70]

Prat insisted that creating a government-run practical school to test the more promising agricultural techniques and provide hands-on training to island farmers was one readily available way to move the island's economy in the right direction. This idealised learning institution amounted to a large scientifically and efficiently managed model hacienda and sugar mill, together with its cultivated fields, assorted animals, and processing plants and shops. As for the land on which to establish it, the intendente reiterated the suitability of the Hacienda Los Frailes, as the Loíza property was popularly known. He reminded the Treasury that the crown had set a precedent when it issued a *real orden* in April 1829 authorising the establishment of a model hacienda in Cuba. The Treasury sent a warm response, but expressed reservations about the extent to which the government should sponsor a private venture. It also pointed out that the hacienda in Cuba had consumed large amounts of money and was scrapped five years later after failing to produce the desired results.[71] Prat was directed to conduct a feasibility study

[68] Prat to Ministro de Hacienda, 7 Aug. 1847, AHN-Ultramar, leg. 1067, exp. 30.
[69] *Ibid.* [70] *Ibid.*
[71] Consuelo Naranjo Orovio and Mercedes Valero González, 'Trabajo libre y diversificación agrícola en Cuba: una alternativa a la plantación (1815–1840)', *Anuario de Estudios Americanos*, vol. 51, no. 2 (1994), pp. 123–8.

that might offer conclusive assurances of the project's benefits, but only after he had become better acquainted with Puerto Rico.[72]

The Slavocratic Social Order under Fire

By the end of 1847, Prat, now fully vested in his role, returned to the subject ready to substantiate further his earlier assertions about the impending crisis of Puerto Rican agriculture and labour. Working through the turmoil would be a joint endeavour, he argued, in which the 'pliable' but 'clear-minded' islanders would seek to advance their own interests alongside those of the metropolis. He was likely referring to commercial growers who had recently been forced out of production or owners of small and medium-sized farms, all of whom stood to gain the most from his plan. To this end he enlisted a career colonial official, liberal educator and two-time former government secretary, Ramón Carpegna, to draft and personally deliver to the Treasury a 'Memoria sobre la instalación en el Ysla de Puerto-Rico de una hacienda modelo, o ynstituto agrónomo'. Captain-General Juan Prim, Count of Reus, whose administration had witnessed first-hand the vulnerability of the plantation system after slave unrest intensified throughout the French, Danish and Spanish Caribbean during the 1840s, was also brought on board.[73] For the time being, at least, the odds were beginning to stack up high against 'the world that sugar had created'.[74]

Carpegna stressed that the model plantation/agrarian institute project was 'the only road' to follow. He described it as the 'most opportune, adequate and beneficial that may be put into place in a country so rich in the productive elements, yet so behind in the means of attaining' its rightful place among world agricultural producers.[75] In his estimation, the prevailing monocultural system of producing sugar and coffee had not lived up to its promise. A new scientific approach that would enable Puerto Rico to extract the most from its agricultural wealth at the lowest production cost was therefore necessary in order to compete with rivals that outpaced it despite having far fewer assets at their disposal. Carpegna reminded the crown that the island was not running out of farmland. Echoing the conclusions reached by O'Reilly and Abbad y Lasierra about 70 years earlier, he suggested that a

[72] Ministerio de Hacienda, Sección 8va, Ultramar, 11 Aug. 1847, AHN-Ultramar, leg. 1067, exp. 30.

[73] Prat to Secretario de Estado y del Despacho de Hacienda, 26 Dec. 1847, AHN-Ultramar, leg. 1067, exp. 30.

[74] The phrase is from Pedro San Miguel, *El mundo que creó el azúcar: las haciendas en Vega Baja, 1800–1873* (Río Piedras, 1989).

[75] 'Memoria sobre la instalación en el Ysla de Puerto-Rico de una hacienda modelo, o ynstituto agrónomo', 20 Dec. 1847, AHN-Ultramar, leg. 1067, exp. 30.

skewed and poorly maintained land tenure system was a major factor preventing Puerto Rico from reaching its fullest economic potential.

According to Carpegna, the key to disentangling the problems faced by Puerto Rican agriculture and labour was to be found in the systematic application of enlightened scientific and educational principles. Borrowed almost verbatim from the sociedades económicas, his approach called for instructing the islanders in those arts and sciences that fed directly into agro-industrial growth, promoting sound savings and investment strategies, improving the communications infrastructure and encouraging people to work. He pointedly criticised the dominant sugar plantation system by declaring that the changes being sought:

> must rest on solid foundations so as to prevent expectations conceived and founded only on fleeting, vanishing, and transitory conditions that promised the island a hopeful future in the past … [since] the influx of colonists and capital from Santo Domingo and Costa Firme, together with other circumstances and the high prices of export staples relative to the cost of producing them … did not engender the solid prosperity that would have been attained because the prices slumped concurrently with other factors that called for making improvements in production. The industry that developed as a result of immigration, and the beneficial effect of the imported capital, has been annulled on account of the barriers that have continuously obstructed growing prosperity, which include ignorance of agricultural best practices … lack of cooperation from the artisanry … because of its outdated or deficient trade skills, wretched morality, poor work habits, and [finally] a difficult or impossible circulation … [By] blocking both development and consumption, [these factors] have retarded or failed to expand production.[76]

Phrased another way, by failing to modernise or otherwise make the necessary adjustments consonant with sound political economic principles and changing global conditions, the plantation system had stalled the process of modernisation and capital accumulation, and this threatened to relegate the island to an inferior position among the agro-exporting countries.[77] Moreover, it had flooded the market with one or two major products that could not always overcome the fluctuations of global demand for tropical staples. Carpegna believed that a diversified, technologically progressive economy that made ample use of all the agricultural riches of Puerto Rico was the only practical solution at hand.

The agrarian institute would function as a 'watchtower that observes, collects, and studies, for the local utility, all advances related to it … or as a laboratory to test out every type of plant, cultivation methods, and techniques

[76] *Ibid.*

[77] The Caribbean sugar industry after 1840 is examined in Christian Schnakenbourg, 'From Sugar Estate to Central Factory: The Industrial Revolution in the Caribbean (1840–1905)', in Bill Albert and Adrian Graves (eds.), *Crisis and Change in the International Sugar Economy, 1860–1914* (Norwich and Edinburgh, 1984), p. 84.

for raising animals.'[78] Alluding to its discarded Cuban counterpart, Carpegna claimed that previous unsuccessful attempts had not been properly adapted to suit local surroundings. The problem, he suggested, was one of flawed planning and execution, not of inherent deficiencies in the integrity of the project itself. To prevent a repeat of the Cuban outcome in Puerto Rico he offered to start modestly by establishing a medium-sized *casa de labor*, or farmhouse, to serve as a model for small cultivators who aspired to expand their operations and to help those further along to increase the productivity of their estates. Its main objective, he added, would be to educate both groups on the proper selection, preparation and utilisation of the lands and seeds on the one hand, and the collection, conservation and marketing of the crops on the other.

Calling the project a 'work of regeneration and progress', Carpegna declared that reason and public usefulness prescribed this course of action.[79] 'When it comes down to it', he pointed out, 'the sum of all provision crops undoubtedly surpasses by a long stretch the remainder that is being produced with more complicated [meaning, inefficient] methods'.[80] Tapping these neglected or under-cultivated crops would generate wealth, but also steer the islanders, long deprived of opportunities for advancement, away from their reputedly antisocial behaviour:

> It would stimulate domestic changes … for profitable commerce … feeding the international market with a surplus of products that … would lend themselves to the accumulation of capital … [This would] elevate [the country] to the peak of its wellbeing … propping up industry, production, and the morality of individuals who, when distressed, broke, or pitiful follow the most antisocial paths … immersing themselves in the deep mud of ignorance … that breeds crimes, restlessness, and disturbances … driven by hunger and nakedness, defiant in their feelings and wishes precisely because of their situation with respect to those [planters?] enjoying rational, well-off lives, who are the only ones that by legitimate means aspire to increase their properties.[81]

Carpegna was certain that the islanders would go the extra mile to secure their livelihood, amass worldly possessions and even embrace intellectual endeavours once their efforts were fairly rewarded. In an attempt to dispel the long-standing belief that the tropical environment inhibited work and encouraged idleness, he pointed to the growing interest many had lately shown in pursuing a formal education at great financial sacrifice to themselves, as well as advances in house construction, as evidence that the desire for self-improvement was alive and well in Puerto Rico. Unfortunately, he went on, meagre economic inducements and a backward state of agro-industrial development continued to halt progress in these and other areas. Carpegna insisted that stimulating the economy and boosting production

[78] 'Memoria sobre la instalación'. [79] *Ibid.* [80] *Ibid.* [81] *Ibid.*

was in the best interests of the government, which would otherwise have to face the financial consequences, especially around tax collection time.

Plantains, rice, corn and several unspecified tubers would be scientifically studied for their market value at the agrarian institute. Carpegna was convinced that Puerto Rico would be able to ship out vast quantities at good prices to avoid the over-specialisation typical of plantation monoculture. Some products, like the plantain, grew undomesticated and produced enough food per plant to feed five to six people. The islanders consumed plantain mostly boiled or roasted, however, and supposedly ignored other commercial uses, such as desiccating it for long-term storage, grinding it into flour or starch, and as cattle feed. Carpegna noted the potential economic value of rice, highlighting its adaptability and high yields in diverse environments, but lamented the underutilisation of irrigation ditches, drainage channels, brooks, transplantation and dehusking machines. During harvesting, threshing the grains with pestle and mortar often fragmented them; additional waste occurred in the course of winnowing. Mixed with fine wood particles produced by the milling effect, the finished product reputedly looked and tasted unpleasant. Carpegna highlighted the islanders' preference for imported rice as further evidence that Puerto Rico was simply not capitalising on its agro-industrial capacity.[82] Likewise, he felt that corn farmers relied almost exclusively on the forces of nature rather than on proven scientific agricultural methods, convinced that good weather conditions would continue to yield bountiful harvests. They rarely took meaningful steps to mitigate the damaging effects of heat, humidity and insects, or invested in the equipment needed to develop a domestic flour industry.

The agricultural institute would help to make efficient use of natural resources, disseminate the application of modern agricultural methods tailored to the specific topographical and climatic conditions of Puerto Rico, and advance the commercial production of food crops. It would focus on all food crops, livestock, fowl and husbandry known in the island, as well as those not grown or bred locally but deemed worthy of acclimatising in Puerto Rico. The more promising crops would be introduced successively according to their adaptability and profitability, starting with tobacco, then cotton, and finally coffee. Once fully operational and self-sufficient, the institute would invest the revenues raised from the rotated crops to found a competently structured and financed model plantation, although Carpegna provided no additional details as to what that might look like.

[82] In 1844, the Sociedad Económica of Valencia protested against the importation of rice from the United States in Cuba and Puerto Rico: see Piqueras Haba, *Sociedades económicas*, p. 65.

According to Carpegna, large sums of capital were being lost in sugar plantations that were poorly established, financed and run. Most of it went towards the slave labour force, which he regarded as troublesome, dangerous and a waste of money. He bemoaned 'the ruin of so many families due to the loss of considerable capital, badly employed in establishing plantations that have failed due to the insufficiency of the founding capital, and ignorance of what it took to make [the estates] profitable'.[83] Since the institute would have no use for slaves, it would save the large costs of acquiring and maintaining them. Instead, it would invest in free labourers by seeking to alter their behaviour, encouraging them to develop a positive attitude toward work, sharpening their job skills, and steering them away from wasteful or antiquated agricultural implements and techniques. Its target population included wards of the state and the degenerate, who would sign short-term contracts aimed at restraining their erratic work habits and nomadic lifestyle. Certificates attesting to their good manners, commitment to work, course of study and any additional information to enhance their prospects of securing higher paying-jobs would be awarded upon completion of training. Upon 'graduation', the alumni would be swiftly reintegrated into the local agricultural labour force to propagate their newly honed agro-industrial best practices. These gains, Carpegna stressed, would benefit the rest of the labouring population, which would have to improve in order to compete in the job market with institute-certified workers.[84]

Rehearsal for Abolition: Moving from Bonded Labour to Compulsory Work

Until now the major objection to the project raised in Spain concerned the likely costs of its maintenance, management and staffing. In a classic example of 'we obey, but do not comply', however, in May 1848 Intendente Prat and Governor Prim stunned everyone by going ahead with their plan anyway! Prim's involvement was not necessarily surprising – his attraction to political intrigue at home and contempt for the political-institutional framework of colonial government were well known.[85] Nonetheless, the pair's joint correspondence justified the move by pointing to the pressures of economic stagnation, a decline in agricultural productivity, and mounting poverty in the rural areas. Although the records consulted for this paper make no specific reference to escalating slave insurgency, it is not hard to imagine that this too may have added to the overall climate of socio-economic instability. Governor Prim claimed that he had been struck by the wretched state of the proletarian classes while on a recent tour of the island; worried about the

[83] 'Memoria sobre la instalación'. [84] *Ibid.*
[85] Josep M. Fradera, *Colonias para después de un imperio* (Barcelona, 2005), pp. 292–3.

proliferation of immorality and 'vagrancy', he combined with Prat to tackle the problem, 'persuaded from personal experience that remedies can be beneficial only when they are fitting and timely'.[86] Prat and Prim therefore decided to shoulder the responsibility for breaking with protocol.

While they cloaked their actions in the language of the agrarian institute, Carpegna's plea for agricultural diversification and the scientific utilisation of natural resources is conspicuously absent in Prat and Prim's hastily orchestrated version of the project. By then Carpegna had retired to Spain, where he successfully negotiated a new appointment as an intendente, provided a suitable vacancy appeared in the near future.[87] In his absence, Prat and Prim concluded that the island's labour problems had become so acute that they required immediate attention. The projected modernisation of agriculture had not been abandoned, but it is clear that turning the island's peasants and urban proletariat into an efficient agricultural labour force became their top priority. The vision articulated by both men presents a sanitised, idyllic image of agricultural life in the tropics, where a well-fed, industrious, contented, grateful, free-labouring population works in a forward-looking, prosperous agricultural sector presided over by a popular, fiscally robust colonial government:

> The first tasks would be … to secure all the small crops [and] to feed the *labradores*, which should bring down the cost of the project. [The introduction] of the larger crops [and] the acquisition of the model mill [would follow], result[ing] in production of far-reaching consequences. By then, the improvements in the agrarian system would have become generalised in the island. By then, there would be no need for African hands to farm the land; by then, the self-confidence, training, and industriousness of farmers and jornaleros would have positioned them to fashion their own happiness, of their families, and of their country. By then, the supreme government would have reaped the blessings and its royal coffers quite a few gains. In the end, the authorities would have been credited with having accomplished a public good.[88]

In stark contrast, the statutes of the 'model plantation' which the two men threw together rashly emphasised the use of educational and coercive techniques to transform drifters, abandoned children and jornaleros into a reliable labour force capable of replacing the shrinking pool of slaves. 'The main goal of the model plantation', Article II stated, 'would be to round up the children of jornaleros under 14 years of age to impart to them good

[86] Prat to Secretario de Estado y del Despacho de Hacienda, 14 May 1848, AHN-Ultramar, leg. 1067, exp. 30.

[87] Queen of Spain to Intendente of Puerto Rico, 3 July 1848, AHN-Ultramar, leg. 1066B, exp. 112.

[88] Prat to Secretario de Estado y del Despacho de Hacienda, 14 May 1848, AHN-Ultramar, leg. 1067, exp. 30.

behaviour and the education corresponding to their class'.[89] Each town was to send two such youths, with preference given to orphans. Article III established a vagrants' holding centre. Under Article V the intendancy pledged to consult with the appropriate colonial offices to compose by-laws and formalise a budget. The final clause stipulated that funds to run the enterprise would be drawn from surplus revenues collected by the Casa de Beneficencia, and any shortfall made up from municipal taxes. 'No one interested in [Puerto Rico's] prosperity', Prat argued, 'can view the decline of agriculture due to the lack of African hands with indifference when there are numerous jornaleros capable of sustaining it and even augmenting it had they possessed other habits'.[90]

Although both functionaries hinted at a disinterested desire to alleviate the desperate social and economic conditions of jornaleros and *agregados*, and to help the struggling sugar-growing sector, as their motivation for taking the unusual step, the influence of other powerful factors cannot be ignored. Once again, African slavery took centre stage. Slavery was good for planters but saddled the local officials, especially the intendentes and captains-general, with additional obligations for defence and public safety. No fewer than 22 slave conspiracies and rebellions were registered in Puerto Rico between 1795 and 1848.[91] Additionally, there were over 700 reported cases of slave flight between 1770 and 1870.[92] In late April 1848, a few weeks before the Prim–Prat 'model plantation' scheme went into effect, the enslaved population in Guadeloupe and Martinique rebelled. So did captives in Saint Croix slightly later, inducing Prim to dispatch men and weapons to the Danish colony to keep the uprising from extending to Puerto Rico.[93] He also welcomed Martinican planters who sought refuge in Puerto Rico, hoping to persuade them to relocate permanently. Relief efforts, including an island-wide fund-raising campaign, were put into motion at once. For his part, Prat drew up a hasty proposal to allow the Martinicans to bring their capital, household furniture and equipment duty-free. His plan also offered free land, lots on which to build their homes and loans to get them back on their feet. Prim took the unprecedented step of recommending naturalisation for Martinican refugees who had established residence in Puerto Rico for just one year, a fifth of the time stipulated by the Laws of the Indies.[94]

Spain was not eager or able to concede sweeping, generous immigration incentives to foreigners at this time, but it did leave the door open for those

[89] *Ibid.*, agreement reached between Prat and Prim, 2 May 1848.
[90] *Ibid.*, Prat to Secretario de Estado y del Despacho de Hacienda, 14 May 1848.
[91] Baralt, *Esclavos rebeldes*, pp. 156–7.
[92] Benjamín Nistal Moret, *Esclavos prófugos y cimarrones: Puerto Rico, 1770–1870* (Río Piedras, 1984), p. 5.
[93] Baralt, *Esclavos rebeldes*, pp. 128–9.
[94] Circular no. 31, 12 May 1848, cited in Dávila Cox, *Este inmenso comercio*, p. 163.

with skills or capital. The Overseas Bureau at the *Consejo Real* commented that Prim's efforts to attract foreign capital and 'safe' labour 'could inaugurate a new period of growth in our colonial history'.[95] An attractive offer extended by a Martinican government official, one Sideville Huc, was sympathetically received. Since 1843 Huc had been in touch with Governor Méndez de Vigo and his successor, Arístegui, regarding the deteriorating fortunes of the sugar industry in the French Caribbean. Confronted with rising competition from beet growers and stifling taxation, they had discussed the prospect of the Martinican planters transferring their operations to Puerto Rico. In 1847 Huc had invented a new technique for processing sugar that 'in less time and with fewer hands and expenditures … produces twice as much, better quality sugar with the same amount of cane'.[96] Prat even offered him 100 *cuerdas* at Los Frailes, but left the island before making it official.[97] Huc's mechanical contraption dovetailed nicely with the Spanish Antillean planters' desperate desire to find a way out of the technological and labour paralysis that threatened to put them out of business; a mass relocation of planters, however, was something else. Eventually the plan fell through, and governors Juan de la Pezuela and Fernando de Norzagaray took turns in repatriating the refugees.[98] What triggered the backlash is not clear, but those planters in Puerto Rico who were barely able to meet their own needs for land and servile labour would have certainly done their best to block the Martinicans' resettlement.

This is not to say that foreigners were not allowed in Puerto Rico at this time – on the contrary, Spain had historically welcomed Catholics from friendly nations under certain conditions and safeguards.[99] For instance, the Treasury Ministry and Ministry of Overseas Territories recommended allowing the French colonists the right to erect their own temple as a way to strengthen Roman Catholicism and to 'moralise' the population: 'In none other than our overseas colonies is [such a measure] necessary, where it restrains the numerous African race, and guarantees Spanish domination'.[100] Some planters, however, wanted all restrictions against foreign, non-Catholic white immigrants lifted. One of their spokespersons from the leading

[95] Ministerio de Hacienda's report, 10 July 1848, AHN-Ultramar, leg. 1080, exp. 22.
[96] *Ibid.*
[97] Huc to Superintendente, 16 Sep. 1848, AGPR, OP, Propiedad Pública, caja 120.
[98] Luis M. Díaz Soler, *Puerto Rico: desde sus orígenes hasta el cese de la dominación española* (Río Piedras, 1995), p. 451.
[99] Richard Konetzke, 'Legislación sobre inmigración de extranjeros en América durante la época colonial', *Revista Internacional de Sociología*, vol. 3, nos. 11–12 (1945), pp. 269–99; Luis Martínez-Fernández, *Protestantism and Political Conflict in the Nineteenth-Century Hispanic Caribbean* (New Brunswick, 2002).
[100] Joint resolution, Hacienda and Ultramar sections of the Consejo Real, 27 Jan. 1847, AHN-Ultramar, leg. 1080, exp. 22.

sugar-growing district of Ponce argued that the number of slaves would continue to decline regardless of better housing arrangements, nutritional supplements or any other assistance rendered to make their lives more comfortable and longer-lasting. He alleged that since the captives were 'naturally apathetic and indolent, their masters would aid their pregnant women and help educate their children in vain'.[101] Therefore, 'the adoption of timely, preventative measures to avoid the fatal consequences of that reduction [in farm hands] and the removal of all obstacles that block the progress of agriculture, arts, and commerce are reasonable and prudent'.[102] Of course, his foremost interest was enticing agricultural workers, not the Francophone planters.

Such pleas to liberalise foreign immigration fell on deaf ears in the Spanish government, which enforced religious bans until about 1868.[103] The racist quest for *blanqueamiento* that creoles advocated during this period failed to convince the government to lift restrictions against non-Catholics. As long as slavery existed, Cuban and Puerto Rican planters found it difficult, if not impossible, to lure migrant workers from the peninsula and the Canary Islands.[104] Although Cuban *hacendados* turned to Amerindians and Asians, efforts in Puerto Rico to move from slaves to foreign non-white labourers failed. The smaller island possessed a large, dispersed rural population that supplemented bonded workers in the sugar plantations. Creole reformers supported this population's further integration into the Puerto Rican economy – more so after the closing of the African slave trade – but they also desired a harmonious society to preserve their best long-term interests as white Antilleans.[105] Thus, they were opposed to the immigration of racially incompatible and unruly *braceros*. For their part, planters opposed the influx of *colonos*, who were likely to take up farming and compete with them for agricultural labour.[106]

An unsuccessful attempt of the Junta de Comercio to contract Chinese labourers in Puerto Rico illustrates the situation.[107] Nothing came from the request forwarded to the central administration in Spain in 1846 until the head of the *Consejo de Ministros* asked for Governor Norzagaray's input six years later. His substitute, José Lemery, convened a committee of top colonial officials in the island that endorsed a plan to import 3,000 coolies.

[101] José de Jesús Fernández to Governor of Puerto Rico, 17 March 1848, AGI-SD, leg. 2337.
[102] *Ibid.*
[103] Martínez-Fernández, *Protestantism*, pp. 9–23.
[104] Antonio Santamaría and Consuelo Naranjo, 'Las últimas colonias: Puerto Rico y Cuba', in Bernard Lavallé, Consuelo Naranjo and Antonio Santamaría (eds.), *La América española, 1763–1898: economía* (Madrid, 2002), pp. 175–206; Chinea, *Race and Labor*, pp. 129–39.
[105] Schmidt-Nowara, *Empire and Antislavery*, p. 49.
[106] Chinea, *Race and Labor*, pp. 129–39.
[107] Lidio Cruz Monclova, *Historia de Puerto Rico* (*siglo XIX*), vol. 1 (Río Piedras, 1952), p. 449.

Before final approval could be obtained, recruiters pulled out due to the objections raised by England and France, which cited the existence of slavery in Puerto Rico in order to block the enlistment.[108] Public hearings held in Puerto Rico in 1858 revealed strong local hostility to the plan.[109] One of its most outspoken critics was a liberal reformer, José Julián Acosta, who argued that the servile Asian workers were a 'depraved' and 'degraded' people.[110] The labour agents switched to free Africans instead, but the Sociedad Económica cautioned against the 'grave dangers' posed by the immigration of a 'savage race'.[111] Anticipating a British response, the Spanish secretary of state also rejected the option on the grounds that they would be vectors of disruptive emancipationist ideas.[112]

The message was clear: if Spanish immigrants could not be persuaded to work on the haciendas, planters would have to turn to peasants and the urban proletariat for their labour needs.[113] Although such barriers to attracting foreign capital, technology and a tractable labour force enhanced the model plantation's appeal as a workable solution, the crown disapproved of the diluted version that Prat and Prim had put into place. The intendente was ordered to suspend its operations at once; both were also admonished for abuse of office. The censure was clearly aimed at their unilateral decision, not at the project itself. Prat was also directed to forward the information previously requested on the institute's estimated operating costs and by-laws to officials in Madrid.[114]

When Governor Pezuela took office in 1848, the Loíza property, whose appraised value had risen to 133,000 pesos, lay fallow. Although the local officials claimed that Los Frailes was abandoned, free blacks had been making charcoal, hunting, raising cattle and growing provision crops there since time immemorial. Some had signed contracts giving them legitimate access; others, who lacked titles, were regarded as squatters by the colonial administration and landed gentry with interests in Los Frailes. In fact, they had formed several small independent villages that vigorously opposed government-sanctioned land privatisation schemes.[115] Desperate to balance the colonial budget, in early September 1848 Intendente Manuel Núñez ruled that those who had fallen behind in payments or not legalised their holdings

[108] Labor Gómez Acevedo, 'Proyecto para introducir colonos asiáticos en Puerto Rico', *Revista del Instituto de Cultura Puertorriqueña*, vol. 3, no. 6 (1960), pp. 41–4.
[109] Monclova, *Historia*, p. 450.
[110] Cited in Acosta's 'notas' to his 1866 edition of Abbad y Lasierra's *Historia geográfica*, p. 304.
[111] *Acta de junta pública efectuada por la Sociedad Económica de Amigos del País el 22 de Enero de 1863* (San Juan, 1863). [112] Gómez Acevedo, 'Proyecto', pp. 43–4.
[113] Chinea, *Race and Labor*, pp. 26 and 135–8.
[114] Prat to Secretario de Estado y del Despacho de Hacienda, 14 May 1848, AHN-Ultramar, leg. 1067, exp. 30. [115] Giusti-Cordero, 'Labor, Ecology and History', pp. 670–700.

would have to put things in order or vacate the property.[116] Pezuela was no friend of the *piñoneros*, whom he once characterised as 'prowlers' living in 'slovenly huts'.[117] However, he favoured a gradual abolition of slavery and was interested in supporting productive initiatives consistent with that goal.[118] Evicting free black villagers without providing other means to keep them gainfully employed would have exacerbated the growing problem of workers' 'vagrancy'.

Whether or not Núñez and Pezuela clashed over the expulsion at Los Frailes is unclear, but they were worlds apart on economic matters, especially with regard to the place of slave versus free labour in Puerto Rican agriculture. Unlike his predecessors, who seemed to have worked with the governors more or less harmoniously, Núñez believed that captains-general were naïve about economic and fiscal matters and therefore imposed inappropriate duties, enforced shaky decrees and squandered state funds.[119] In late 1849 Pezuela recommended an annual head tax of 2 pesos on slaves engaged in rural tasks, purportedly to alleviate the island's budgetary shortfall. Núñez contested the additional duty as economically unsound, arguing that farmers already paid a 5 per cent tax on agricultural production. He felt, therefore, that the new measure would tax both production and the means of production. Besides, he added, it would hurt the island's sugar economy, whose arduous work routine depended heavily on a shrinking pool of enslaved labourers. The intendente's opinion prevailed in the Consejo Real, which called the recommended tax a 'deathblow' to agriculture.[120]

The Pezuela–Núñez tax dispute prompted the Consejo to question the governor's abolitionist claim that free labour was compatible with plantation agriculture. It underscored the supposed humane treatment accorded to slaves in the Spanish Antilles, arguing that it was 'incomparably better than what the industrialists of some countries give to free workers in their factories'.[121] It challenged him to show the advantages of emancipation, and how he would make sure that jornaleros kept a regular work schedule. The body noted that Pezuela had yet to come up with a reliable replacement for slaves, especially since all attempts to entice white migrants to the islands had so far failed.[122] The Consejo also felt that, once freed, the ex-slaves would

[116] Núñez, 'Ligeras observaciones'; 'Expediente en averiguación de los productos que hubiesen rendido las poseciones que aparecen arrendadas en la Hacienda de Loíza', 1848, AGPR, OP, Propiedad Pública, caja 120.
[117] Giusti-Cordero, 'Labor, Ecology and History', pp. 697–8.
[118] Antonio Cibes Viadé, *El gobernador Pezuela y el abolicionismo puertorriqueño (1848–1873): etapas históricas y grandes sucesores* (Río Piedras, 1978).
[119] Núñez, 'Ligeras observaciones'.
[120] Resolution of Consejo Real, 28 Feb. 1850, AHN-Ultramar, leg. 1071, exp. 14.
[121] Resolution of Consejo Real, 10 May 1850.
[122] Chinea, *Race and Labor*, pp. 25, 129–37.

likely fall back on their 'natural indolence'; that free labour would negatively affect the quality, quantity and price of the tropical commodities, rendering them less competitive than those produced in Java, Brazil and the United States; that the free labourers would increase operating costs by demanding better working conditions, including sufficient wages to support themselves and their families and for their medical and unemployment needs; and that production would probably decline as it had in Jamaica after emancipation.[123]

Although Pezuela's levy did not meet with metropolitan approval, he managed to get Núñez recalled before year's end, ostensibly for exceeding his authority by reorganising the customs houses without the captain-general's consent.[124] With his nemesis out of the way, Pezuela devised a new plan for agricultural development. Dubbed the *colonia agrícola*, it proposed dividing and distributing the Loíza property's nearly 4,000 acres to 100 or more families at no cost to them except a tenancy fee payable after the parcels began producing. All farmers would be encouraged to plant cacao, vast quantities of which were being exported to Spain from South America via Puerto Rico.[125] Pezuela asked for cacao seeds and an expert from Venezuela to assist the locals; by such means, he asserted, Puerto Rico would acquire the hard cash and produce the exportable tropical staples, besides sugar and coffee, likely to attract the peninsular trade that normally skipped the island in favour of Cuba.[126]

Predictably, there was a labour control/security aspect to his scheme as well. A year earlier the governor had issued a decree, the *libreta* (passbook) forced labour ordinance, requiring the estimated 25,000 agregados in the country to take up agricultural pursuits, either as farmers or day labourers, within one year. Two-thirds had complied; the rest remained scattered about the countryside, allegedly living an ungodly existence and refusing to toil in agriculture, where they were in great demand due to the shortage of bonded workers. Pezuela had begun sentencing these so-called vagrants, who reputedly led a nomadic, savage, criminal lifestyle, to compulsory labour in public works projects. Now, however, he wanted them sent to the agricultural colony to turn their lives around and contribute meaningfully to society. Writing of the 'abandoned' Loíza site, he added that the colonia would convert a territory that was distant, hard to police and a hotbed of immorality, disorder and public nuisance into a safe, productive setting. Officials in

[123] Resolution of Consejo Real, 10 May 1850.

[124] Antonio Cibes Viadé, 'El Intendente Núñez reta al Gobernador Pezuela', *Revista del Instituto de Cultura Puertorriqueña*, vol. 8, no. 26 (1965), pp. 29–35.

[125] 'Sobre creación de una colonia agrícola en terrenos de Loíza', AHN-Ultramar, leg. 2044, exp. 7; Birgit Sonesson, *Puerto Rico's Commerce, 1765–1865: From Regional to Worldwide Market Relations* (Los Angeles, 2002), p. 60.

[126] 'Sobre creación de una colonia agrícola'.

Spain approved the plan, which 'would snuff out a revolutionary element that might be frightful on an agitated day and [at the same time] strengthen the [mercantile] links that unite [Puerto Rico] to the metropolis'.[127] The island's new intendente, Miguel López de Acevedo, optimistically anticipated that projected revenues would be large enough to free municipal taxpayers from having to subsidise the Casa de Beneficencia.

In the end, Pezuela's proposal faded away. On 25 October 1850 the *Ministerio de Gobernación* had dispatched a *real orden* giving Pezuela the green light to split up and sell the land. No one checked with the *Ministerio de Hacienda*, which had previously (10 June) ordered López de Acevedo to sell off the Loíza lands. The Spanish crown intervened to clear up the confusion, informing the interim governor, Enriques España y Taberner, that it had nullified the Treasury's order and authorised him to proceed as the Ministerio de Gobernación had previously directed. Neither the crown nor the governor notified the intendancy, which contended that it could not release the property without official clearance from the Treasury. While Madrid bureaucrats pointed the finger at each other, López de Acevedo looked for another way to increase production. In December 1851 he sought authorisation to grant state land and extend generous tax incentives to colonos willing to plant it with cotton, coffee and cacao. After calling attention to the Puerto Ricans' alleged slothful and unmotivated traits, the Spanish Treasury dismissed the intendente's suggestion as 'wishful thinking'.[128] When Norzagaray took over as governor in May 1852, nothing had come of Pezuela's agricultural-labour mobilisation project.[129]

At that point, Bishop Gil Esteve y Tomás stepped in with his own plan for Los Frailes. Like Prat, Prim and Pezuela, he took notice of the 'squalid and despicable appearance of the islanders, particularly the needy classes'.[130] A large number of abandoned children who roamed the streets, some of them 'offensively' naked, were among them. Since there had been no pastoral tour of the island during the previous two decades, in 1849 he organised a Preaching Society to propagate the faith to his spiritually starved flock. In 1856 he persuaded the governor to transfer the Loíza property to the Catholic seminary. The Church would attempt to sell the property and use the funds to expand the seminary so it could train those called to the ministerial service more effectively. From his perspective the poverty-stricken islanders were suffering from a dearth of moral and religious instruction, not from the negative impact of the dominant plantation system. His diocese had only 118 priests, many of them aged 50 or older, to look after a widely

[127] *Ibid.*

[128] López de Acevedo to Secretario de Estado y del Despacho de Hacienda, 22 Dec. 1851, AHN-Ultramar, leg. 296, exp. 36, and 23 April 1852, AHN-Ultramar, leg. 1097, exp. 3.

[129] 'Sobre creación de una colonia'. [130] 'Administración del B. Obispo D. Gil Esteve'.

disseminated population exceeding half a million people. The projected sale did not take place, and the government was left with no choice but to reassume control of the property in 1859.[131]

The Limits and Silences of Agricultural and Labour Reform

There is no question that excessive administrative wrangling and delays hindered the agrarian institute/model hacienda project from the start. These were fairly common and were the result of a complex peninsular administration, considerable distance between the colony and its metropolis, and high turnover among officials on both sides of the Atlantic. While communication hitches led to discontinuities and improvised modifications along the way, the inconsistent direction given by those in charge of the project proved just as detrimental. Cerero had originally aimed to develop an agricultural labour force and an agricultural institute. Prat and Carpegna expanded on this by underscoring agricultural diversification and modernisation. After Carpegna departed for Spain, Prat and Prim reshaped the project into something that looked more like a reformatory for the homeless than a training school for farmers. Finally, Pezuela moulded it into a land distribution programme designed to settle the spatially mobile jornaleros in Los Frailes, where the colonial government could keep them gainfully occupied.

High staff turnover also contributed to the substantial alterations in the project during the six-year interval. While Cerero served in Puerto Rico for over a decade, he had merely drafted the project when he abruptly resigned. Prat, Carpegna, and Pezuela worked on the project briefly or remained in their posts for relatively short stretches, averaging around two years, and therefore acted on partial information or left things undone before leaving the island for good. Somewhat idealistic and inexperienced, most of those who worked on the project were hard-pressed to find quick solutions to knotty conditions whose broad dimensions and ramifications they did not fully grasp. Some were duped or bought off by individuals or groups seeking to influence government policy on Los Frailes, including the Dominican religious community, land barons, the Catholic Church, speculators, surveyors, scribes and others who saw an opportunity to profit from the deal. These facts were rarely relayed to their superiors in Spain.

Some examples of this meddling can be cited. A prominent San Juan city councillor, Tomás Pizarro, grabbed a sizeable portion of the land illegitimately, starting in the 1790s. In later decades his heirs obstructed the project by repeatedly pressing the claims he had fraudulently acquired and complaining that recent demarcations of Los Frailes infringed on their

[131] *Ibid.*

neighbouring parcels.[132] Since the monastic orders resented the government's confiscation decree, they did not rush to help the administration with information about their possessions, which took years to sort out. Thus, four separate auctions of Los Frailes were held between January and March 1839, before the full inventory of the Dominicans' assets required by the *desamortización* decree. Not surprisingly, the original paperwork on the 1838 sale of the Los Frailes slaves was conveniently lost or displaced. Moreover, surveyors repeatedly deceived the authorities by flagrantly underestimating the quality and value of the land.[133] These problems were generally omitted from the correspondence that reached metropolitan officials, and this probably impeded them from making informed decisions one way or the other.

These officials may have been just as unaware of, or unconcerned about, the intense resistance mounted by the free black community of Piñones against the authorities' attempt to evict them forcibly from Los Frailes. During the entire period from 1838 to 1859 the government had regularly claimed that Los Frailes was either deserted or that no one lived there except for squatters – 'usurpers' who had settled the territory 'on their own authority'. By contrast, the piñoneros contended that their forebears were granted access to the land in reward for their decisive military role in thwarting the British invasion of 1797.[134] Nor, they claimed, were they slaves or trespassers, as the local officials and planters held.[135] When they heard of the model plantation plan in 1846, two free blacks, Juan Bibiano González and Bonifacio Canales, voiced their disapproval formally. Their *súplica* (petition) showed that upwards of 60 heads of family whose ancestors had dwelled there since 1786 stood to lose their lands. Eight years earlier the tenants had prevailed in court against a planter, Casimiro Capetillo, who had also tried to evict them.[136] In 1848 their *compañeros*, Mauricio del Rosario, José Martinillo, Damaso de la Cruz and Ysidro Manso, also petitioned the government to call off their expulsion.[137] An audit conducted that year revealed that three unscrupulous individuals – a neighbouring hacendado, Pedro Calderón; a revenue officer, Javier Coton; and the Río Grande municipal mayor, Lucas Fuentes – took rental fees from lessees at Los Frailes without properly reporting them or turning them over to the Treasury.[138]

[132] Giusti-Cordero, 'Labor, Ecology and History', pp. 685–91.
[133] 'Administración del B. Obispo D. Gil Esteve'.
[134] Giusti-Cordero, 'Labor, Ecology and History', pp. 692–8.
[135] Javier Coton to Superintendente, 6 Nov. 1848, AGPR, OP, Propiedad Pública, caja 120.
[136] Gónzalez and Canales to Superintendente, 16 June 1846, AGPR, OP, Propiedad Pública, caja 120.
[137] Del Rosario, Martinillo, de la Cruz and Manso to Superintendente, 27 Nov. 1848, AGPR, OP, Propiedad Pública, caja 120.
[138] 'Relación general de los habitantes que residen en la Hacienda … de los Frailes …', in José Antonio Castro to Intendente, 22 Sep. 1848, AGPR, OP, Propiedad Pública, caja 120.

The agrarian institute/model hacienda project also appears not to have appealed to the interests of the island's plantocracy, which continued to produce sugar (and later coffee) with slaves and libreta-bound jornaleros until both forms of compulsory labour were abolished in the 1870s. Some of them hastily introduced technological improvements for powering the mills, extracting the juice and refining the sugar in an attempt to enhance the quantity and quality of the finished product.[139] Such innovations proved elusive for most financially strapped growers, however.[140] Only 31 steam-driven mills were in place island-wide in 1846.[141] In 1867 this had risen to 151, but at the time 239 mills were propelled by draught animals and another 20 by water.[142] There was only one sugar refinery operating in the mid-1850s.[143] In Ponce, oxen-driven mills outnumbered those fuelled by steam engines between 1845 and 1863.[144] By contrast, 15 of the 23 sugar plantations (65 per cent) in Guayama employed steam engines in 1866.[145] On the whole, then, efforts to modernise sugar plantations in Puerto Rico prior to the 1870s fell short.[146] The sugar industry survived to the eve of abolition in 1873, aided in part by the effects of the Ten Years' War in Cuba and the US Civil War.[147] It did so largely by increasing its exploitation of workers and placing more land under cultivation.[148] For these diehard planters, perhaps, the urgency to make radical changes had not yet translated into outright desperation.

The bureaucrats' attempts to enforce decisions from above with little regard for, or input from, their colonial subjects was destined to fail. Jack P. Greene reminds us that although early modern Atlantic empires liked to flaunt their power, effective political relations between colony and metropolis very often involved some degree of reciprocity. Ruling unilaterally from above would have required a powerful standing army to enforce metropolitan prerogatives, making colonial domination a costly endeavour in human and financial terms. Officials thus resorted to bargaining with the subjects, especially the elites, in a number of areas where their concurrence was vital

[139] Andrés A. Ramos Mattei, *La hacienda azucarera: su crecimiento y crisis en Puerto Rico* (*siglo XIX*) (San Juan, 1981); Lizette Cabrera Salcedo, 'De los bueyes al vapor: caminos sinuosos de la tecnología en Puerto Rico y el Caribe, 1778–1873', unpubl. PhD diss., Universidad de Puerto Rico, 2005, pp. 384–425.

[140] Cabrera Salcedo, 'De los bueyes', p. 237.

[141] *Ibid.*, p. 412.

[142] *Ibid.*, p. 421.

[143] *Ibid.*, p. 224.

[144] *Ibid.*, pp. 468–70; Scarano, *Sugar and Slavery*, p. 68; José Curet, 'De la esclavitud a la abolición: transiciones económicas en las haciendas azucareras de Ponce, 1845–1873', in Andrés Ramos Mattei (ed.), *Azúcar y esclavitud* (Río Piedras, 1982), p. 65

[145] Luis A. Figueroa, *Sugar, Slavery, and Freedom in Nineteenth-Century Puerto Rico* (Chapel Hill NC, 2005), pp. 68–9.

[146] *Ibid.*, p. 77.

[147] Santamaría and Naranjo, 'Las últimas colonias', p. 240.

[148] Curet, 'About Slavery', p. 127; Andrés Ramos Mattei, 'Technical Innovations and Social Change in the Sugar Industry of Puerto Rico, 1870–1880', in Fraginals et al. (eds.), *Between Slavery and Free Labor*, p. 160.

to ensuring smooth colonial control. Greene's concept of 'negotiated authority' also sheds some light on the failure of the model plantation/agricultural institute.[149] All the principal advocates of the project were Iberian-born bureaucrats who sought to make Puerto Rico economically viable for Spain. Although their concern with the negative impact of slave-based plantations on the island's environment and labourers seemed genuine, their chief motivation was to find a new, more effective way to increase colonial revenues through a more harmonious and productive agro-industrial sector.

Conclusion

The crisis of the Puerto Rican slave-based plantation system was linked to the distinctive colonial evolution of the island, which had developed a large, dispersed peasantry. As the population grew, so did the internal demand for subsistence crops. Commercial sugar production, made possible largely by a short burst of immigrant labour and capital on the eve of the closing of the African slave trade, remained concentrated in a few technologically weak plantation enclaves. Since the Spanish market for the island's sugar and other products was very limited, the metropolis derived most colonial revenues from onerous taxation and customs duties, particularly after the 1830s.[150] Structurally, as Emilio de Diego García notes, these conditions left the island vulnerable to the succession of environmental, social, political and economic pressures that began to converge in the late 1830s. Some, such as the undersupply of servile labour and capital, had shackled the industry from its inception in the sixteenth century and re-emergence in the post-Bourbon era. The subsequent unprecedented and unchecked exploitation of land, rivers and forests to increase sugar output depleted the country's natural resources. Global competition came on the heels of expanding production of the sweetener and its by-products in other parts of the world and from various crops, including sugarcane, beet sugar and maple.[151]

The accumulation and confluence of these factors around the late 1830s triggered the economic downturn in the sugar industry. In seeking a way out of the economic stagnation that also jeopardised the fortunes of Spain's Second Empire, the local bureaucrats drew insights from efforts to promote agro-industrial development in the peninsula dating from the last third of

[149] Jack P. Greene, *Negotiated Authorities: Essays on Colonial Political and Constitutional History* (Charlottesville and London, 1994), pp. 1–24.

[150] Santamaría and Naranjo, 'Las últimas colonias', pp. 206–41 and 303–13; Antonio Santamaría García, 'Crecimiento económico y renta colonial en Puerto Rico', in Inés Roldán de Montaud (ed.), *Las haciendas públicas en el Caribe hispano durante el siglo XIX* (Madrid, 2008), p. 238.

[151] De Diego García, 'Puerto Rico'.

the eighteenth century. Attempts to replicate these initiatives on the island did not succeed due to the economic and demographic problems just noted. The manner in which the project was developed, pitched and briefly executed – beset by inconsistent goals, feeble administrative encouragement and follow-through, interference from several interest groups and failure to elicit local support, especially from the plantocracy – also got in the way. To make matters worse, the interventions were ill-timed. According to Christopher Schmidt-Nowara, the consolidation of the liberal Spanish state in the 1830s strengthened imperial authority in the islands.[152] The building of protectionist walls, increased taxation and forced loans, and the exclusion of the Puerto Rican deputies from the Spanish Cortes exemplify this political shift.[153] As Antonio Santamaría García observes, this brought the reformist upsurge of previous decades to an end, and with it the incentives that had supported sugar producers.[154] These conditions forced one-third of them out of business or towards coffee cultivation.[155] The difficulties of financing the project and the lack of support from peasants and farmers meant that the envisioned initiative of agricultural and labour reorganisation also fell victim to many of the same limitations.

Spanish and Portuguese abstracts

Spanish abstract. Para fines de los años 1820, Puerto Rico y Cuba eran las únicas colonias restantes que tenía España en Latinoamérica y constituían su mayor fuente de ingresos coloniales. Una década después, sin embargo, el sistema de plantación esclavista en Puerto Rico empezaba a mostrar signos de estancamiento debido a la convergencia de una serie de fuerzas locales e internacionales. A fines de los años 1840 la burocracia colonial ibérica inició una serie de propuestas para estimular la transformación de Puerto Rico en una economía agrícola moderna, diversificada y con fuerza de trabajo libre. Esta iniciativa falló dado el ambiente económico adverso, la confusión administrativa y las rivalidades existentes por un lado y, por el otro, el fracaso de los funcionarios en la isla para obtener el apoyo o de los terratenientes locales o de la gente en niveles más bajos de la sociedad. Este artículo explora en detalle las razones de tal fracaso.

Spanish keywords: plantaciones, azúcar, agricultura comercial, exportaciones tropicales, Antillas Españolas, imperio español, Puerto Rico

[152] Schmidt-Nowara, *Empire and Antislavery*, p. 16.

[153] María M. Flores Collazo, 'Vulnerabilidad económica y política de la élite criolla del Puerto Rico del siglo XIX', *Secuencia*, vol. 29 (1994), pp. 171–90.

[154] Santamaría García, 'Reformas coloniales', p. 712.

[155] Luis Martínez-Fernández, 'The Sweet and the Bitter: Cuban and Puerto Rican Responses to the Mid-Nineteenth-Century Sugar Challenge', *New West Indian Guide*, vol. 67, nos. 1–2 (1993), pp. 59–60.

Portuguese abstract. Já no final da década de 1820, as últimas colônias restantes da Espanha nas Américas eram Porto Rico e Cuba, sendo elas sua principal fonte de lucro colonial. Todavia depois de dez anos o sistema de plantio baseado em mão de obra escrava em Porto Rico apresentava sinais de estagnação devido a convergência de várias forças internas e internacionais. No fim da década de 1840, a burocracia colonial ibérica iniciou uma série de propostas para estimular a transformação de Porto Rico em uma economia rural moderna, diversificada, com trabalho assalariado. A iniciativa faliu devido a um ambiente econômico hostil, confusão e rivalidades administrativas, e ao fracasso de oficiais na ilha em ganhar apoio de fazendeiros locais e das camadas mais baixas da sociedade. O artigo explora os motivos por este fracasso em detalhes.

Portuguese keywords: fazendas, açúcar, agricultura comercial, exportações tropicais, Antilhas Espanholas, Segundo Império Espanhol, Porto Rico