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**‘They can now digest strong meats:’ Two Decades of
Expansion, Adaptation, Innovation, and Maturation on
Barbados, 1680-1700.**

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Introduction

Part I: Historiography

Historians have long been drawn to the story of Barbados and the tales of sugar, slavery, empire, and wealth that defined the colonial history of this small West Indian island lying on the southeastern margins of the Caribbean Sea. First settled by the English in 1627, it quickly developed into ‘one of the richest Spotes of ground in the wordell’ after the introduction of sugar cane agriculture in the early 1640s and, by 1660, had become one of the most valuable and influential colonial possessions in the western hemisphere.¹ Barbados was famous in its own time, especially after Richard Ligon, a three year resident on the island from 1647 to 1650, wrote his popular *A True and Exact History of the Iland of Barbados* in 1657. In this work, he vividly described a range of topics that included the island’s exotic flora and fauna, the methods used to convert cane into sugar, the trials many experienced in adjusting to life in the tropics, and the arrival of enslaved Africans for a public eager to receive such information on the distant domains of a growing empire. Contemporary scholars followed Ligon with other works in which Barbados figured prominently, such as John Oldmixon’s *The British Empire in America* (1708) and two important natural histories by Hans Sloane (1708) and Griffith Hughes (1750). It also served as the setting for many popular works, including a brief poem by the well-known English bard Richard Flecknoe and Richard Steele’s famous newspaper serial ‘Inkle and Yariko.’²

¹ Henry Whistler, quoted in Richard Sheridan, *Sugar and Slavery: An Economic History of the British West Indies, 1623-1775* (Barbados: Caribbean Universities Press, 1974), 124-125.

² Flecknoe’s poem is short and inane, but specifically mentions the famous planter James Drax and outlines the great wealth of Barbados in 1670. ‘How rich *Barbados* is, and how much worth/ We well may see by Sugars, it brings forth/Of all the rest, the Richest Merchandize/And if by th’ patern, we

Academic interest in the island's past has also remained high since the eighteenth-century, with historians consistently drawn to Barbados' integral role in the development of sugarcane agriculture based on enslaved African labour and the influence this had on England's imperial mission. As B.W. Higman explains:

the colonial history of the Caribbean is commonly characterized by the intimate relationship of sugar and slavery...and the defining moment of that relationship is located in the sugar revolution, beginning in Barbados in the middle of the seventeenth century. It is the sugar revolution above all which has come to represent the vital watershed, starkly separating the history of the islands from that of the mainland, not merely in terms of agricultural economy, but in almost every area of life, from demography, to social structure, wealth, settlement patterns, culture, and politics.³

Higman's quotation highlights the important work on the island's past that has already been completed by modern historians, especially in regard to sugar, slavery, and their combined effects upon the economic and political relationships that dominated the planters' lives. Richard Dunn, for example, notes that 'we have detailed political and institutional histories of the several Caribbean colonies in the seventeenth centuries and excellent studies of Stuart colonial policy in the West Indies.'⁴ Books such as those written by Dunn, Vincent Harlow, Gary Puckrein, Larry Gragg, Noel Deerr, Richard Pares, Carl and Roberta Bridenbaugh, Richard Sheridan, Russell Menard, and Hilary Beckles have successfully highlighted the importance of Barbados' place within the sugar-producing Caribbean and have helped to contribute to the further understanding of the relationship between the development of the plantation complex, the growing power of the West Indian

may judge ot'h' piece/How Rich it is in men, we well may see/By bringing forth brave *Drax* such men as thee.' Richard Flecknoe, 'On the Riches o'th' Barbadoes,' from *Epigrams of all sorts*, (1670).

³ B. W. Higman, 'The Making of the Sugar Revolution,' in Thompson, Alvin O., *In the Shadow of the Plantation: Caribbean History and Legacy* (Kingston: Ian Randle Publishers, 2002), 40-41 and 'The Sugar Revolution,' *Economic History Review*, vol. 53, no. 2 (May 2000), 213-236.

⁴ Richard Dunn, *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713* (Chapel Hill: The University of North Carolina Press, 2000), 47.

planter, and the forced enslavement of a large African population.⁵ Combined, these authors adequately cover most of the important events in Barbadian history, ranging from the early settlement period and the emergence of sugar to the emancipation of the enslaved in 1834. Nevertheless, gaps in the historiography still exist, leaving several significant periods of the island's history under-analyzed and misunderstood.

One such lacuna exists for the twenty-year period between 1680 and 1700, a vital two decades that represented great tragedy, violence, and change throughout the English empire from an ugly combination of rebellion, revolution, and war. These events profoundly influenced and altered the lives of the 66,000 people living on Barbados. Yet, many historians gloss over this period in favor of either the island's early settlement period or later emancipation era. They often avoid the 1680s and 1690s by hastily contending that the two decades were a period of relative decline defined by a combination of low prices, limited supply, infertile soil, war, and disease. Historians often attempt to justify these assertions by pointing to two contemporary documents that, when read in tandem, appear to paint a dismal picture of island conditions during this era. The first of these is the 1680 census, a compilation of demographic statistics collected by each parish vestry at the request of Governor Sir Jonathon Atkins in 1679. Under intense suspicion from the Lords of Trade and Plantations for not following the proper protocol concerning colonial laws and for refusing to send requested information back to England, Atkins demanded

⁵ Noell Deerr, *The History of Sugar*, (London: Chapman and Hall, 1949), Larry Gragg, *Englishmen Transplanted: The English Colonization of Barbados, 1627-1660* (Oxford: Oxford University Press, 2003), Gary Puckrein, *Little England: Plantation Society and Anglo-Barbadian Politics, 1627-1700* (New York: New York University Press, 1987), Vincent Harlow, *A History of Barbados, 1625-1685* (Oxford: Oxford University Press, 1926), Hilary Beckles, *White Servitude and Black Slavery in Barbados, 1627-1715* (Knoxville: The University of Tennessee Press, 1989), Carl and Roberta Bridenbaugh, *No Peace Beyond the Line: The English in the Caribbean, 1624-1690* (New York: Oxford University Press, 1972), Richard Pares, *Merchants and Planters* (Cambridge: Cambridge University Press, 1960), and Russell Menard, *Sweet Negotiations: Sugar, Slavery, and Plantation Agriculture in Early Barbados* (Charlottesville: University of Virginia Press, 2006).

the name, location, acreage, and labor force of every landowner living on the island. He also collected specific accounts of the militia, island fortifications, and emigration, while receiving tallies of the Anglican baptisms, deaths, and marriages that occurred in each parish. Many historians use these demographic statistics to draw important conclusions about Barbados, including the continuing consolidation of the island's limited acreage by the elite, the wealthy's dominance of politics and the military, the lopsided burial to baptism rate, the high number of white emigrants, and the near-complete replacement of indentured servants by enslaved Africans.⁶

Edward Littleton, a successful and wealthy former planter working as an island agent in London, wrote the second influential document from this period, *Groans of the Plantations*, in 1689.⁷ First arriving in 1666 as a secretary to Governor Willoughby, Littleton married a wealthy heiress and by 1673 owned six hundred acres of land in St. James' parish. In both 1674 and 1676, his fellow planters elected him to a seat in the assembly and he acted as judge at Holetown from 1670 until 1683 before returning to London to work as an agent for Barbados. Paid to represent the planter elite at Whitehall, he shamelessly depicted his fellow Barbadians as loyal, dutiful, and deferential colonists who were quickly being driven to ruin by the tyranny of Parliament, the King, and the monopolistic Royal African Company (RAC). Littleton's original intent for his pamphlet was to depict how severely the

⁶ DAB, BS 19, 1680 Census. Ironically, the Board relieved Atkins of his position as a direct result of this census because the numbers did not match up with previous accounts from the island. Atkins also omitted vital details, including the total number of white inhabitants and some import/export figures. TNA, CO 391/3, 6 August, 1680, Journal of Lords of Trade and Plantations, and Richard Dunn, 'The Barbados Census of 1680: Profile of the Richest Colony in English America,' *William and Mary Quarterly*, vol. 26, no. 1 (Jan. 1969), 3-7.

⁷ TNA, CO 1/30, 28 May, 1673, Colleton to Council of Trade, CO 31/1, 8 January, 1674, Council Minutes, and 2 December, 1674, Council Minutes.

planters would suffer from the addition of burdensome impositions to exported sugar implemented by James II upon his ascension to the throne in 1685.

However, after a brief introduction, Littleton instead challenged the Stuart's overreaching imperial policies of political and economic centralization that had threatened the islanders' ability to trade freely and that had cut deeply into their dwindling profits. This proved to both Littleton and his fellow planters that England's government saw them as inferior and their island as little more than a colonial dependency. Calling the English 'Egyptian Tax-masters' who 'would bring us into the State of Villenage,' Littleton further complained that the Barbadians could do little to assert their own position or fairly defend themselves, given that 'we have none to represent us in Parliament.' Thus, he wanted to show the world 'By what cruel Methods, and by what fatal Degrees, the once flourishing English Colonies have been brought to ruine.'⁸ To do this, he evoked the spirit of earlier petitions and grievances from the Barbadian government and renewed the complaints that centered on more traditional issues, such as the English government's habit for meddling in island affairs, the monopolistic nature of the RAC, and the restrictions placed on free trade through the Navigation Acts.

Littleton's *Groans* and Atkins' census are influential and important contemporary sources because they have specifically shaped and informed the historiography that has stigmatized the late-seventeenth century as an era of declining economic, political, and social conditions across the island. Richard Dunn, for example, has studied the 1680 census extensively and claimed that by using the document 'as a base, one can trace the political collapse of the big planters during the

⁸ Edward Littleton, *Groans of the Plantations*, (1689), 1 and 19.

succeeding decade.’ He further concluded that this collapse led to a ‘paralyzing crisis’ by 1690, as the planters suffered from a ‘deteriorating economic...situation on the island’ that led to ‘signs of soil exhaustion,’ a decline in annual exports, and profits that were ‘eroded by the steady drop in sugar prices.’ He also used the census to argue that Barbados was socially unstable for both white and black populations, as neither group could maintain a steady rate of natural increase, with many islanders dying young, unmarried, and childless. According to Dunn, this made Barbados a demographic catastrophe, as mortality rates easily exceeded baptismal rates among all of the island’s social groups.⁹

Many other historians have echoed Dunn’s assessment of this period in Barbadian history, and allied themselves with Littleton’s infamous depiction. Carl and Roberta Bridenbaugh wrote off the era as one of ‘deep depression,’ full of ‘moderate to severe hardships’ for those on Barbados. Otis Starkey further labelled the second half of the 1680s as ‘a period of depression’ and the 1690s as the beginning of ‘a half-century of crises’ and ‘uncertainty.’ Vincent Harlow provided a particularly damning account of the island, citing ‘the exhausted condition’ of the soil as the central issue that eventually led to severe ‘losses by emigration,’ a reduction of the militia ‘to such low numbers that the dangerous expedient of arming negroes had been resorted to,’ a government ‘nearly at a standstill,’ a ‘public debt that amounted to 1,200,000 pounds of sugar,’ forts ‘lying in decay,’ and commercial restrictions that threatened to eliminate ‘the little...trade now left.’ He further argued that the sugar trade, which had once ‘brought great wealth to the island,’ was now ‘beginning to affect that social and economic decay which is so striking a feature of

⁹ Dunn, *Sugar and Slaves*, 101-103 and 300-334.

West Indian history.’ The reason for this was that the price of sugar had reached historic lows during the 1680s, therefore threatening planters’ profits. Muscovado sugar, for example, once costing £23.5 per hundredweight, had dropped to £17.25 by 1684, and reached a nadir of only £16.75 by 1686. Thus, by the 1680s, as Richard Sheridan claimed, Barbados had dramatically devolved from ‘the fair jewell’ of English colonies into one of ‘the marginal sugar producers of the Caribbean region.’¹⁰

Many historians have also approached the 1680s and 1690s through an overly imperialistic lens and, mirroring Littleton, perceived all seventeenth-century Barbadians as subordinated and powerless participants of an increasingly centralized empire. Historians who take this approach implicitly contend that the islanders lacked the ability to control their own lives and to supply their own needs, placing them at the heart of a conventional mercantilist model that allowed for the metropole to profit at the expense of a passive and dependent periphery. Lawrence Harper, for example, maintained that England’s mercantilist legislation represented ‘English measures designed for English ends...that contributed to England’s commercial and maritime development.’¹¹ George Louis Beer stated that since ‘England assumed the heavy responsibilities incidental to the establishment of a colonial empire, counterbalancing advantages must be derived in some other way.’ This benefit came from acting as additional marketplaces for ‘the quickening of English commerce and of freeing England from a...dangerous dependence on rival nations,’ and by

¹⁰ Otis Starkey, *The Economic Geography of Barbados: A Study of the Relationships Between Environmental Variations and Economic Development* (New York: Columbia University Press, 1939), 79-88, K.G. Davies, *The Royal African Company* (London: Longmans, Green, and Co., 1957), 366, Harlow, *History*, 259-268, Sheridan, *Sugar and Slavery*, 398-411, Bridenbaugh and Bridenbaugh, *No Peace*, 124 and 295-311 and TNA, CO 1/20, 12 May, 1666, Willoughby to the King.

¹¹ Lawrence Harper, *The English Navigation Laws: A Seventeenth-century Experiment in Social Engineering* (New York: Octagon Books, 1964), 240-245 and 376.

developing 'English industry and trade by creating a self-sufficient commercial empire in which the colonies were to supplement the economic activities of the mother country.'¹²

Mercantilist historians assume that Barbados, as an isolated colony of England, inevitably fell into the expected metropole-periphery model that formed the framework for this system. Both Charles II and James II attempted to tighten the government's control over the colonies through a variety of economic and political maneuvers that eventually led to both money and power flowing back into England. Charles II created the most permanent and influential of these measures when he implemented a series of three Navigation Acts in 1660, 1663, and 1673 and the 4.5% duty on all Barbadian sugar in 1663, both of which came to define the colonial-metropole relationship throughout the seventeenth-century. Furthermore, he also established the Royal African Company, once in 1663 and again in 1672, and created the powerful Lords of Trade and Plantations in 1675.

While James II added only a few new policies to the administration of the English West Indies, including the aforementioned additional duties and a desire to create a monopolistic company to regulate the Caribbean sugar trade, he also stressed greater levels of obedience and empowered his island governors to more aggressively uphold all rules and regulations. This oftentimes created great strife in Barbados, as overzealous governors, such as Sir Richard Dutton and Edwin Stede, came into conflict with outspoken planters like Edward Littleton who resented the increased interference in their production of sugar. Yet, as Dunn suggests, the late Stuarts'

¹² George Louis Beer, 'The Early English Colonial Movement, I' *Political Science Quarterly*, vol. 23, no. 1 (March, 1908), 81-83, 'The Early English Colonial Movement, II' *Political Science Quarterly*, vol. 23, no. 2, (June, 1908), 242, and *The Old Colonial System, 1660-1754, Part I: The Establishment of the System, 1660-1688*(New York: MacMillan, 1912), vii.

attempts at consolidation only represented what many historians believed that island planters had always desired: 'closer unity with the home government.' Dunn also claims that 'the pre-1675 style of political and economic autonomy had isolated [Barbadian planters and farmers] from the English business community.' Many historians therefore believe that elite Barbadians sought compromise with the metropole, as many planters were willing 'to jettison some of their old local independence in exchange for better connection with Whitehall officials and London merchants.'¹³

Many other historians provide similar interpretations of the mercantilist relationship between Barbados and England. Richard Pares described a white Barbadian population that eventually grew to know its role within England's imperial model. At first, the exclusion of foreign ships and merchants from the island's coast 'drew the bitterest complaints from the colonists.' Yet, within a few years, the planters 'understood... the necessity of confining [trade] to the markets of the mother country,' a relationship that had 'begun to look natural and almost convenient' by the beginning of the eighteenth-century.¹⁴ Harper argued that the advantages offered by mercantilism represented the best economic relationship for Barbadian planters at the time, as the English protected the island's sugar trade, 'which found [its] best market within the British Empire.'¹⁵

These beliefs also imply that most white and black Barbadians developed a strong dependency on England for its necessary imports. Harlow wrote that by the 1670s and 1680s, Barbados relied on London 'almost entirely for her supply of food

¹³ Richard Dunn, 'The Glorious Revolution and America,' in Canny, Nicholas, ed. *The Oxford History of the British Empire: Volume I: the Origins of Empire: British Overseas Enterprise to the Close of the Seventeenth Century* (Oxford: Oxford University Press, USA, 2001), 448-454.

¹⁴ Pares, *Merchants and Planters*, 27.

¹⁵ Harper, *Navigation Laws*, 240-245 and 376.

and other necessities.’¹⁶ Sheridan echoed this interpretation, arguing that all Barbadians had to sacrifice their earlier independence, as they were becoming ‘increasingly dependent on imported supplies as more and more resources were devoted to sugar production,’ and could no longer supply even a quarter of the provisions necessary for their survival.¹⁷ Puckrein added that mercantilist leaders in London believed ‘that the metropolis would supply [Barbados] with food, clothing, and equipment while monopolizing those colonial commodities that the mother country could not produce by itself.’¹⁸ Larry Gragg has argued that the island’s ‘powerful planters’ understood ‘their political dependence on the mother country’ and ‘found themselves dependent’ on England ‘for many of their necessities,’ including food, alcohol, lumber, livestock, and clothing.¹⁹ Although it represented a closed system of trade that limited expansion and caused prices to increase in the metropole’s favor, imperialist historians have maintained that Barbadian planters and merchants inevitably desired to participate in a mercantilist structure that appeared to provide enough benefits to overcome the lack of independence that resulted. Thus, when paired with the accompanying claims that Barbados was a society in social, economic, and political decline by the 1680s and 1690s, a disturbing portrait of the island emerges that portrays a formerly wealthy colony struggling with impoverishment, a lack of production, limited self-sufficiency, and little influence over its own welfare.

Recently, however, a small group of historians have revisited this era and have posited that the 1680s and, to a lesser extent, the 1690s were a period of both

¹⁶ Harlow, *History*, 172-173.

¹⁷ Richard Sheridan, *The Development of the Plantations to 1750* (Barbados: Caribbean Press, 1973), 27-28.

¹⁸ Puckrein, *Little England*, 91-108.

¹⁹ Gragg, *Englishmen Transplanted*, 110-112.

continued growth and high profit. Russell Menard and John McCusker, for example, contend that the standard ‘story of stagnation and decline is a myth...encouraged by planters who hoped to use tales of their difficulties to strengthen their case for various concessions from the metropolitan government.’ In actuality, these were still ‘the halcyon days’ that saw returns of ‘as much as 20 percent’ on capital.²⁰ David Eltis also postulates that this era ‘was something of a boom period in Barbados.’ His analysis of the Customs Records shows that the island’s per capita income reached figures during the 1680s and 1690s that were well above the traditional peak of the Barbadian sugar trade in the late 1650s and early 1660s.²¹

Other historians have also begun to revise the Anglo-centric mercantilist interpretation of Barbados as a dutiful and dependent colony operating within a well-ordered and highly regulated imperial world, claiming that this model is no longer sustainable. Instead, they have shifted towards the opposite end of the spectrum, depicting an Atlantic economic society that was predicated on free trade and a near lack of centralized control. As Alison Games argues, ‘the English Empire was not constructed and shaped at the imperial center....It was an empire whose ultimate configuration depended not on the coherent vision imposed by a monarch or the Board of Trade but instead on the experiences of men who lived around the globe in a series of overseas experiments.’²² William Pettigrew even goes as far as arguing that the terms ‘metropole’ and ‘periphery’ have no actual meaning in the

²⁰ Menard, *Sweet Negotiations*, 81-105, John McCusker, and Russell Menard, ‘The Sugar Industry in the Seventeenth Century: A New Perspective on the ‘Barbadian Sugar Revolution,’ in Stewart Schwartz (ed.), *Tropical Babylons: Sugar and the Making of the Atlantic World, 1450-1680* (Chapel Hill, North Carolina, 2004), 289-330.

²¹ David Eltis, ‘The Total Product of Barbados, 1664-1701,’ *Journal of Economic History*, vol. 55, no. 2 (June, 1995), 322-323 and 328-330.

²² Alison Games, ‘Beyond the Atlantic: English Globetrotters and Transoceanic Connections,’ in Philip Morgan and Molly Walsh, *Early North America in Global Perspective* (New York: Routledge Taylor and Francis Group, 2014), 97-114.

seventeenth-century Atlantic and that all attempts at separating economic and political interests by these terms are mere 'interpretative fallacy.'²³

Christian Koots echoes these views by openly supporting a porous Atlantic world dominated by private traders who frequently moved vast quantities of illegal merchandize between markets, regardless of the English economic regulations passed to prevent this. As Koots maintains, 'Instead of well-regulated and accountable shipping, we would find individuals acting improvisationally in the pursuit of personal and colonial profit...and the endurance of cross-national cooperation in the Atlantic that had been forged in the first decades of European settlement.' In Koots's interpretation, 'the Atlantic Ocean itself, as opposed to European empires,' stands at the center of any effective analysis, as 'culture, goods, and entrepreneurial activities flowed across imperial boundaries in a more integrated circum-Atlantic economy than previously perceived.' As such, Koots believes that modern historians need to think of Caribbean trade within terms of 'Transatlantic communities' instead of the older notion of 'distinct empires.'²⁴ Most recently, Abigail Swingen writes that 'although many scholars acknowledge the mutability of mercantilism as a concept, few have explicitly recognized that imperial and commercial policies and the ideas and theories used to support them were highly contested.'²⁵

²³ William Pettigrew, 'Free to Enslave: Politics and the Escalation of Britain's Transatlantic Slave Trade, 1688-1714,' *William and Mary Quarterly*, vol. 64, no. 1 (Jan., 2007), 19-21.

²⁴ Christian Koots, *Empire at the periphery: British colonists, Anglo-Dutch trade, and the development of the British Atlantic, 1621-1713* (New York: University of New York Press, 2011), 1-3 and 'A Dangerous Principle: Free Trade Discourses in Barbados and the English Leeward Islands, 1650-1689,' *Early American Studies*, (Spring 2007), 161.

²⁵ Abigail Swingen, *Competing Visions of Empire: labor, Slavery, and the Origins of the British Atlantic Empire* (New Haven, Yale University Press, 2015), 2-3.

While a step in the right direction, these new interpretations of Barbadian society between 1680 and 1700 still fail to provide an accurate depiction of the island's economy. This dissertation contends that the claims of Eltis, Menard, and McCusker do not go far enough in dispelling the Littleton myth that has informed much of the historiography and seeks to prove that the 1680s and parts of the 1690s were more than just another rapid, but temporary, economic 'boom period' for the Barbadian planters and farmers. Instead, this work presents the 1680s as a peak moment for production and trade on the island, with the white Barbadians reaching the height of their seventeenth-century economic powers during this decade. With a planter class that had formally established firm control over most forms of economic, social, and political power, the wealthy sugar planters of Barbados sat at the apex of colonial society, creating an insular world that faced little outside competition while manipulating the imperial system to reflect their own interests. This was best demonstrated by the movement of goods into and out of the island during this era. A detailed analysis of the Naval Office Returns shows that more ships, carrying greater tonnages, legally arrived at the island from a wider variety of origins than during any previous decade and carried away a consistently large quantity of sugar, rum, and molasses that rivalled, and often surpassed, the highest export totals from earlier peak periods. Their success, however, extended beyond the movement of provisions, sugar, and manufactured goods, as Barbados also remained at the epicenter of the Caribbean slave trade. Huge numbers of enslaved Africans entered Barbadian ports during this decade, where most quickly sold for historically low prices. In fact, the island's labor market became so glutted that enterprising planters and merchants attempted to reestablish the Spanish slave trade, while sending others to their

undersupplied neighbors. Thus, the 1680s, as well as the post-war years of the 1690s, represented an island at the peak of its seventeenth-century trading powers, with the wealthy planters legally importing and exporting goods and labor at rates greater than in any previous decade.

Elite Barbadians were able to achieve such commercial success during this era because they inhabited a unique and important place within both the Caribbean and the English world. First, it was during this decade that Barbados passed out of the final stages of its initial sugar boom, as the island's soil became less fertile due to overwork, erosion, and nutritional deficiency. These problems, however, encouraged Barbadian planters and farmers to innovatively adjust to the island's new conditions and, in the process, created the first mature sugar plantation society in the Atlantic World.²⁶ As Governor Dutton wrote in 1682, Barbados was no longer 'in its infancy' as a society; it could 'now digest strong meats.'²⁷ The planters and merchants of Barbados also began to understand that their irrepressible desire for wealth had transformed their environmental world and that the soil they had relied upon to effortlessly produce sugarcane in the past was now worn out and supplied an inferior product. By the late 1670s and early 1680s, they had started to adapt to these changes and, through a series of innovations and experimentations, prolonged their success on the island. Concurrently, the planters also attempted to gain a better scientific understanding of their environment and climate in order to learn how to both modernize production and overcome the natural limitations that regularly threatened their position of power within the Caribbean so that they could continue to produce sugar and generate great wealth on Barbados for years to come.

²⁶ David Eltis, 'New Estimates of Exports from Barbados and Jamaica, 1665-1701,' *William and Mary Quarterly*, vol. 52, no. 4 (Oct., 1995), 645.

²⁷ TNA, CO 1/48, 13 February, 1682, Dutton to Lords of Trade and Plantations.

This interpretation once again challenges Barbados' traditional historiography, as scholars, like Richard Sheridan, have written of the islanders' 'ingrained hostility to innovation' and their idealization of a 'primitive and wasteful agrarian system.'²⁸ Sheridan's analysis, however, is inaccurate, as the early white settlers consistently attempted to decipher the many puzzles of their strange tropical island. Gragg praised the elite Barbadians by calling them 'remarkably adaptable and innovative,' while Koots considered them to be creative entrepreneurs 'improvisationally adopting to their circumstances,' and actively seeking 'the best way to enhance their own wealth and satisfy their own demands.'²⁹ Hilary Beckles further lauded the Barbadian planters for proving 'to be remarkably adaptable and innovative' and 'good capitalists' who were increasingly 'sensitive to changing market requirements.'³⁰

This was especially true during the two decades between 1680 and 1700, as the planters realized that they could no longer wastefully plant their crops as in the past and that continued success would stem from a better understanding of how to manage their plantations and increase their self-sufficiency. While many scholars, such as David Watts, J.H. Galloway, Michael Chenoweth, Matthew Mulcahey, and Russell Menard have identified a variety of the successful innovations implemented during the late seventeenth-century, this thesis brings them together into a single work in order to provide a better sense of the range of techniques the islanders used to produce high yields, regardless of declining conditions. It also adds to this debate by positing how Barbadian planters and farmers attempted to control the weather by

²⁸ Sheridan, *Sugar and Slavery*, 360-364.

²⁹ Gragg, *Englishmen Transplanted*, 185 and Koots, 'Dangerous Principle,' 161.

³⁰ Hilary Beckles, *History of Barbados: From Amerindian Settlement to Nation-State* (Cambridge: Cambridge University Press, 1990), 13.

forecasting future climatic conditions and how they creatively overcame the lack of local resources to consistently obtain the tremendous amounts of energy needed to produce their sugar.

In addition, the elite Barbadians entered their peak moment at a very particular period in English history. The last twenty years of the seventeenth-century were a chaotic time in England, as dangerous challenges to Charles II's legacy, including the Popish Plot (1678-1681) and Monmouth's Rebellion (1685), plagued his last few years in power, and James II's tumultuous reign led to a domestic revolution (1688) that resulted in a Dutch Stadtholder assuming the throne and immediately launching the country into a prolonged international conflict (1689 to 1697). With England's economic and political attentions occupied by this series of challenges, the metropole proved unable to provide significant support for the island throughout the 1690s and had to allow the Barbadians to frequently operate on their own volition. For much of the 1690s white Barbadians relied on a vast commercial network, accumulated over the course of 50 years, which conveniently connected them to world markets in both hemispheres. Cross-national in character, they depended on these neighbors for the alternative opportunities that they provided, sending large quantities of rum, molasses, and excess sugar to them in return for the provisions, wood, and manufacturing materials that they could not get from England. Thus, Barbadian trade was never a bilateral exercise between metropole and colony, as was the focus of much of the island's early historiography, but was instead a part of a vibrant and extensive commercial network that extended throughout the Atlantic world.

Island planters and merchants desired this economic freedom, especially during the 1690s, and they energetically manipulated and shaped their trading networks to best suit their own needs and profit lines, oftentimes with little fear of punishment from a distracted metropole. Utilizing a mixture of violence, cunning, and isolation, they frequently participated in an import and export trade that sent and received goods from as far away as Nova Scotia in the north to Suriname in the south, and from Vera Cruz in the west to Russia and Madagascar in the east. When it benefited them, Barbadian planters and merchants openly disobeyed government regulations to illegally trade with foreign nations, oftentimes in collusion with those specifically sent by London to protect the metropole's interests. Yet, the extant records also show that these same Barbadians realized the value of working within England's mercantilist system. When the conditions allowed for it, they took advantage of the metropole's guaranteed markets, chartered monopolies, government regulations, and naval protection that often led to vast quantities of goods at low prices and competitive rates for exported sugars.

Thus, this dissertation offers a new model of the elite Barbadians' relationship with the metropole that consequently challenges both the traditional mercantilist view of the island as a well-ordered and obedient plantation society that relied almost exclusively on England for supplies, protection, and markets, as well as the newer interpretation of Barbados as a center of free trade within an extremely porous and openly transnational Caribbean Sea. Existing at opposite ends of the economic spectrum, neither approach effectively captures the nuance that realistically defined the trading relationship between the island and the metropole. Instead, the records show that late seventeenth-century Barbadian planters and

merchants inadvertently created a new economic mentality that was capitalist in nature, that operated according to their terms, and that was built around the idea of developing greater levels of self-sufficiency. Yet, it simultaneously continued to take advantage of the government regulations and policies that best suited their own goals, showing that they at least partially believed in England's imperial vision. This allowed them, as Puckrein and the Bridenbaughs both note, to create a dynamic and creolized society that transformed, developed, and matured 'in response to [the] wars, rebellions, and crop failures' that defined life in the Caribbean.³¹ This attitude helped to bring about a peak moment of trade, production, wealth, and power that resulted in a Barbadian society that was far more adaptable and responsive to change than the one that Littleton had mythologized in his infamous pamphlet.

Part II: The Sources

In order to offer a more well-rounded perspective of late-seventeenth century Barbadian society, this dissertation utilizes a variety of different source types from archives in the United Kingdom, Barbados, and the United States. The Naval Officers' Returns for Barbados, stored at the National Archives in Kew (henceforth TNA), provide a survey of the island's import and export trade as recorded by the Naval Officer and represent the most important source used in this work. First established in the Navigation Acts of 1673, the Council for Trade and Plantations introduced Naval Officers to the colonies in an effort to improve enforcement of the previous Acts passed in 1660 and 1663. Appointed by the English Commissioners and placed at the head of a staff that consisted of collectors, surveyors, and surveyors general, the Naval Officers monitored the collection of the island's plantation duties

³¹ Puckrein, *Little England*, 1-11, Bridenbaugh and Bridenbaugh, *No Peace*, 160-161, 377, 410-411.

and worked to eliminate illegal commerce.³² They kept quarterly shipping lists which cataloged vessels entering and leaving colonial ports in order to better track the 4.5% duty placed on all enumerated goods produced in and exported from Barbados. In their most complete form, the Returns include information on dates of entry and clearance, ship's name, home port, tonnage, ship build, captain's name, number of guns, imported goods being carried, last port of clearance, next destination, and the plantation goods exported by each vessel.³³

Unfortunately, the Naval Office Returns suffer from a variety of shortcomings. First starting in October of 1679, they are incomplete, with significant gaps existing between 1680 and 1700, especially during the Nine Years War. All records are missing for 1693 and 1694, as are at least 50% of the returns for 1689, 1692, 1695, and 1699. Overall, only 48 out of a possible 84 returns (57%) have survived for this 21 year period. Moreover, the information given for each recorded ship varies over time. Early entries contain only the essential facts for each voyage, including the date, ship name, origin, captain's name, and the goods that the ship was carrying. The government introduced the tonnage of each ship in the last quarter of 1680, the next port of call and island exports in 1688, the number of cannon on each ship with the outbreak of war in 1689, and build in 1690. The Returns also do not provide any value for the goods being imported or exported and use various units of measure for the volume or weight of each item. These amounts fluctuated dramatically based on the good and the size of the container used to ship it. As freight was usually charged per container rather than by weight, the planters

³² Nuala Zahedieh, *The Capital and the Colonies: London and the Atlantic Economy 1660-1700* (Cambridge: Cambridge University Press, 2010), 35-37 and Harper, *Navigation Laws*, 167-172.

³³ Anne Thurston, *Records of the Colonial Office, Dominion Office, Commonwealth Relations Office, and Commonwealth Office*, vol. 1 (London: HMSO, 1995), 1-3 and 30-32.

regularly exceeded the traditional expectation that a hogshead of sugar contained 500 pounds in an effort to minimize freight expenses. Furthermore, many of the units of measure provide little detail concerning the actual quantity of a specific good. The Returns contain such vague terminology as ‘a parcel,’ or ‘some,’ or just a list of the type of merchandise present on a ship (ex. ‘wood, staves, hoops, horses’). Finally, and most importantly, the Returns only provide information on legal trade and ignore that which was not compliant with the Navigation Acts, a value that was certainly substantial. Thus, all calculations that I have made in this dissertation represent minimums, as the actual quantity of imports and exports were probably much higher than the figures offered below. However, while the Naval Officers’ Returns are a severely limited source, they represent the best evidence available on Barbadian commerce during the 1680s and 1690s, and can offer a valuable indication of the scale and direction of legal trade for late seventeenth-century Barbados.

David Eltis et al’s’ *Transatlantic Slave Trade Database* (henceforth *TASTDB*) represents another important source used throughout this dissertation. This online database incorporates more than 40 years of archival research and brings together images, maps, voyage logs, and other records of nearly 35,000 transatlantic slave ship crossings, laden with 10,125,456 enslaved Africans, which occurred over a 352 year period between 1514 and 1866. While many countries involved in the slave trade suffered from spotty administrative record-keeping throughout the late-seventeenth century, England’s archives are particularly rich for this period, as the RAC carefully recorded information on its transactions in both Africa and the colonies. For most Company owned vessels, the average English database entry lists the captain’s name, ship owner, make of the vessel, departure and arrival dates, costs

of the average enslaved individual, gender, days in the Middle Passage, ports of departure, region of enslaved purchase, and general outcome of the voyage. When taken together, this information offers historians a broad picture of the economic and political dimensions of the slave trade and can be manipulated to show how the Atlantic-wide movement of enslaved labor affected specific locations, such as Barbados.

Like the Naval Office Returns, the *TASTDB* is also an imperfect source, containing two important flaws. The biggest obstacle is that there is still data missing and much of what does exist must rely on calculated assumptions.

According to Eltis:

‘Because few voyages in the historical record contain complete information on the routes taken and the captives carried, we have to surmise where the vessel went and how many slaves it carried. Often we know where the voyage intended to go but not whether it actually arrived. For other voyages we might know the numbers purchased but not the number sold or vice versa, or in some cases we know only the number the captain intended to buy.’³⁴

As such, with many of the voyages missing information, most of the conclusions drawn from the database are conjecture at best. The second weakness of the database centers on an uncertainty of ‘how many voyages are missing,’ as some ‘slave vessels did make voyages without leaving any historical trace of their activities,’ especially before 1680.³⁵ Some of the gaps in the data are to be expected, as the interloper trade is particularly hard to trace. When available, interloping statistics are included in period totals throughout this dissertation. Yet, these are still fairly rare and all

³⁴ David Eltis and David Richardson, ‘A New Assessment of the Transatlantic Slave Trade,’ in Eltis and Richardson (eds.), *Extending the Frontiers: Essays on the New Transatlantic Slave Trade Database* (Yale Scholarship Online, 2013), 6-10.

³⁵ Ibid.

subsequent calculations will therefore be less than the actual numbers involved in the trade.

Other omissions, however, are less expected and consist of RAC ships that have fallen through the gaps. Fortunately, historians can turn to three other sources in order to piece together the remaining legal slave trade. The first is the aforementioned Naval Office Returns. Since the English viewed the enslaved as an imported good, the island's Naval Officer recorded the number of Africans that arrived on board each ship. The second source is the RAC's Homeward Invoice Records (T 70/938-949). Filled out by the island's RAC agents, these documents kept track of arriving ships and the enslaved individuals they carried, as well as the outcome of the auctions held in Bridgetown. Letters and transcripts from the RAC agents in Barbados to Company officials in London (T 70/1-16 and T 70/75) provide an additional perspective of the slave trade. These letters, however, have mixed value, as they often deviate from strictly discussing matters of direct concern to the RAC. Instead, island agents often shared general island gossip, including food and crop prices, weather, health, and the occurrence of interesting or unusual events. Hence, they only occasionally contain information concerning the quotidian business details surrounding the slave trade. They are, however, a useful source for the manner in which they discuss island life and, consequently, provide historians with a limited, but important, window into how illicit trade operated. Thus, unlike other historiographical accounts of the Barbadian slave trade, this dissertation combines the RAC's letters and transcripts with the Homeward Invoice Records, the Naval Office Returns, and the trips archived in the *TASTDB* to provide a more accurate

account of the size, scope, and flow of the movement of enslaved African labor to Barbados during the seventeenth and early-eighteenth centuries.

This dissertation also uses four surviving censuses from Barbados that cover the 35 years between 1680 and 1715. Conducted in 1679, 1683, 1711, and 1715, and referenced by the year in which they reached London (ie. 1680, 1684, 1712, and 1716), these documents are of varying completeness and can often contain unique information. The most famous of the Barbadian censuses is the aforementioned 1680 version, ordered by Sir Jonathon Atkins in accordance with the Council of Trade and Plantations' demand for information on the island. This is the most complete of the four censuses, as it contains a detailed account of the number of acres, indentured servants, and enslaved Africans owned by each landholder in Barbados, the total baptisms, deaths, and marriages that took place in each parish during the year, and a precise list of those emigrating.³⁶ The 1684 version, implemented by Governor Richard Dutton, is less comprehensive overall, but includes the numbers of sugar works on the island, free white population totals, and the specific households in each parish, while also providing a meticulous breakdown of Barbados' entire government. This document serves as the most 'economic' of the censuses, as it contains a wider variety of commercial information that includes the duties collected both on imported liquor and sugar, shipping records, and the number of enslaved Africans and indentured servants imported into the island over the course of the year.³⁷

The two post-1700 censuses do not match the demographic detail of earlier examples, but both documents are useful for analyzing the island's population totals.

³⁶ Department of Archives, Barbados (henceforth DAB), BS 19, 1680 Census.

³⁷ Newberry Library, Chicago (henceforth NLC), Ayers MS 827, 1684 Census

The 1712 census, collected by Governor Robert Lowther, includes three fields of particular interest. The census includes the first report on the number of enslaved Africans ‘fitt to Bear armes,’ a trend that represented changing views on the trust given to this segment of the population, and encloses a tally of the number of horses in each parish.³⁸ Finally, the 1716 census, also ordered by Robert Lowther, is the least informative of the four, only providing figures for the white population, the total number of enslaved Africans imported into Barbados, and an inventory of the number of weapons available throughout the island.³⁹

These censuses are important sources for the modern historian, as they provide distinct windows into the lives of the inhabitants of Barbados at four specific and important moments in the colony’s history. Dunn, famous for his work on the 1680 census, maintains that they are especially important to the island’s historiography because of the insight they offer into the influence and power of the elite planters and ‘how they dominated the island’ both economically and politically during this period.⁴⁰ In reality, though, their importance actually lies in the fact that they provide a passing glimpse into the lives of the 17,000 other white inhabitants of Barbados. While this information is often limited, they do appear as property holders, members of the militia, and as a part of the marriage, baptism, and burial totals, proving that they did exist as vital members of this colonial society. Moreover, they emphasize the fact that thousands of white families labored on both medium and small farms, growing many of the provisions and raising much of the livestock that helped the wealthy thrive, while others lived in towns and villages as artisans, seamen, or merchants. The 1716 census even includes the ages of each

³⁸ DAB, Pam. C283, 1712 Census.

³⁹ DAB, BS 19, 1716 Census.

⁴⁰ Dunn, *Sugar and Slaves*, 17-18.

white Barbadian, proving that many had been permanent residents on the island for years, if not decades.⁴¹

Yet, the censuses also suffer from a variety of shortcomings, the most crucial of which is the standard information that can be missing. The 1680 census, for example, famously contains no population figures for either the free or unfree white inhabitants of the island and lacks important import and export statistics. It is also missing a list of those individuals who immigrated to the island, as well as the number of windmills or sugar works in use at the time. The 1712 census also does not record indentured servants and, strangely, has no data for Christ Church, one of the island's largest and most productive parishes. The 1716 census conveniently breaks down the free white population by gender and age, but offers no demographic information for the other social groups living on the island. Other figures are purposefully inaccurate. Atkins' census, for example, reported that only 51 ships arrived at Bridgetown in 1679, a figure that the Lords of Trade and Plantations instantly recognized as 'a mistake,' as in most years 'above 200 generally trade from Barbadoes every year and in one year 270.'⁴² It is also well-known that many planters underreported the amount of land they owned and the laborers that they enslaved in order to avoid costly taxes.⁴³ Thus, while the four censuses relevant to

⁴¹ According to Harlow, it was the presence of this important segment of the population that allowed late seventeenth-century Barbados to maintain its place as 'a populous, virile colony,' instead of becoming just another 'politically unimportant sugar plantation.' Harlow, *History*, 150-153.

⁴² Atkins almost certainly misreported the number of ships arriving at Barbados and neglected to send import and export data specifically to hide the islanders' collaboration with illicit traders and merchandise. TNA, CO 391/3, 14 June, 1680, Journal of Lords of Trade and Plantations.

⁴³ The reasons for why Barbadian planters and farmers omitted to report specific pieces of information are oftentimes unclear. Misreported information, however, likely resulted from the fact that the governor wanted to hide the actual conditions of the island from both the local government and the metropole. As early as 1673, Peter Colleton, a wealthy sugar planter and President of the Barbadian Council, wrote to London to warn them that any official population count of the island's enslaved Africans would be low by at least one-third, as a per-head tax on black labor caused many Barbadian planters to underreport how many they owned. TNA, CO 1/30, 28 May, 1673, Colleton to Council.

this study provide a bevy of useful demographical statistics for late-seventeenth and early-eighteenth century Barbados, these numbers also must be analyzed with care, as, like most other sources, they only offer the data that the elite planters and merchants wanted to make public and, therefore, stop short of painting a truly accurate portrayal of the island's social composition.

Maps have also been used in this project, as they provide a unique look at how contemporaries saw Barbados and what features they viewed as important and worth depicting. Ever since Richard Ligon first published his own amateur sketch of Barbados in 1657, new editions of the island's cartographic features regularly appeared in London. Five maps survive for the fifty-two-year period between 1670 and 1722. The majority of these are unimportant to modern historians, as they contain little that differentiates them from one another and often appear to be updated copies of older versions.⁴⁴ Two maps, however, contain especially valuable information and represent useful sources in any examination of Barbados. The first of these is Philip Lea's 1685 map, which not only accurately depicts the island's geographical features, but also includes the location of each major plantation, as well as who owned it, how many mills were on each property, and whether they were cattle, wind, or water mills.⁴⁵ A 1722 map, surveyed by William Mayo between 1717 and 1721, similarly depicts every major planter and the number and type of mills each one owned, but offers a better map of Bridgetown and an index that aids

⁴⁴ The map from 1670, attributed to Johannem Ogiluium, does, however, contain a few peculiarities. The cartographer has chosen to show enslaved Africans processing sugar by using antiquated milling techniques and depicts random landmarks that include Fontabelle, the governor's mansion, a random smith shop and watch house, Colonel Bailey's well, and Foster's pot house. TNA, CO 700/Barbados1, 1670. Two similar maps are John Speed's 1674 map, which is more accurate geographically, but copies Ogiluium's landmarks, and John Thornton's map from 1700, which is inaccurate and lacks detail. TNA, CO 700/Barbados2, 1674 and CO 700/Barbados4, 1700.

⁴⁵ TNA, CO 700/Barbados3, 1685.

in finding specific planters.⁴⁶ These two maps, when combined with the acreage figures present in the 1680 census, allow for a more accurate insight into planter settlement patterns, including how Barbadian planters utilized space, and the manner in which the population moved and changed over time.

The only significant drawback to the Lea and Mayo maps are that they provide limited context for the information that they contain. It is unclear how representative the maps are of the greater planter population, as the number of planted acres needed for inclusion was not defined. Furthermore, the maps make inexact references to the plantations depicted, providing only a last name to signify ownership. In some cases, this becomes confusing and difficult to track, as different generations of families held land throughout the island and deciphering who lived on each plantation can become complicated without very specific knowledge of Barbados' genealogical history. Finally, Mayo's 1722 map is in fairly bad shape and, while not illegible, can be hard to read in some places.

The final social sources used in this dissertation are the white islanders' wills and deeds and general parish documents, both of which are stored in the Department of Archives in Barbados (henceforth DAB). The wills and deeds are the more important of the two for this project, as the occasional inventories inserted into an otherwise formulaic legal script provide information about the types and quantities of goods owned by rich, middling, and poor white landowners. While these inventories contained varying amounts of description, some included specific details of the different buildings on the property, and the name, number and value of each enslaved African, indentured servant, and any livestock present on the farm or plantation.

⁴⁶ TNA, CO 700/Barbados5, 1722.

This dissertation contains information from over 40 inventories, culled from an examination of hundreds of wills and deeds between the years 1682 and 1696. Since these documents exist for individuals from all social classes, they provide a particularly useful insight into the lives of the non-elite white population, a group that rarely appears in island records. Yet, as existing inventories from poor and middling farmers and planters appear less frequently than those created by the elite, the figures are not completely representative of the Barbadian population and again emphasize the small number of wealthy merchants and planters at the expense of the poorer majority.

The general parish records used in this dissertation include the historical marriage, baptism, and burial registers kept in Barbados. While all three provide an important insight into life on the island, the latter are most useful for this specific project, as they add quantitative proof regarding the spread of disease and whether it affected the white population as dramatically as many contemporary sources attest. Although the majority of parish records for the seventeenth century have not survived, three parishes, St. Michael's, St. Philip's, and Christ Church, maintain almost complete sets between 1680 and 1700, while St. John's run uninterrupted between 1685 and 1695 and then after 1700, and St. James' begins after 1692. The late start of St. James' records is particularly disappointing since parish officials included the cause of death for those that passed from a diagnosable disease. Once again, though, caution needs to be exercised with these sources, since the information that they contain is limited. As an English colony, Barbados was nominally Anglican and, consequently, most parishes only married, baptized, and buried members of that religion. Those who practiced another faith would not have been

included in any parish registry. Thus, like most of the aforementioned sources, parish vestry records only suggest what life on Barbados might have been like during the late-seventeenth and early-eighteenth centuries, as they are often too incomplete and exclusive for historians to use to draw definitive conclusions about the island. Yet, when handled correctly, they can be utilized to provide a useful insight into the lives of a small group of islanders in a very specific region of the island.

Overall, the sources combine to provide a window into what life might have been like on Barbados between 1680 and 1700. While each set of documents contains a variety of flaws, especially in regard to their exclusivity and their lack of continuity due to the destructive natures of time, hurricanes, and humidity, they do manage to provide valuable insight into an otherwise isolated and enigmatic society that attempted to hide as much as possible from the metropole.

Part III: The Dissertation's Structure

This dissertation seeks to prove three key points. First, it challenges the established depiction of late-seventeenth century Barbados. Instead of taking Littleton's description of a plantation society plagued by depression and decline at face value, this dissertation redefines the era as one of growth, adjustment, and maturity for the island's white population. Living within a mature plantation society, Barbadian planters, merchants, and farmers experienced an economic peak moment during the 1680s, with more ships and greater tonnages arriving at island ports than ever before. While the 1690s saw Barbados absorbed into England's imperial conflict, the inevitable economic downturn that resulted for the island was, for many, only temporary and of limited import, as the planters and merchants rallied to

reestablish their high levels of production after the war's opening stages by implementing a series of measures that paved the road to recovery and that, as the Returns prove, allowed the island to emerge from the bloodshed in 1697 with increased economic potential.

Secondly, this dissertation shows that in order to defend their prosperity, Barbadian planters and merchants implemented a pragmatic, responsive, and flexible approach to Atlantic commerce, pursuing a policy that was neither as mercantilist nor as open and free in its outlook as previously argued. These individuals were not driven by ideology and not interested in following any specific economic creed. Instead, they wanted to reshape England's mercantilist rules in their own interests, insisting on moving goods in a way that first and foremost benefitted their own prosperity and survival. Yet, imperial boundaries still mattered. When all things were equal, most white Barbadians willingly traded within the confines of the Navigation Acts and gladly took advantage of the supplies and protected markets that the metropole offered. Finally, this dissertation examines how the planters and merchants of Barbados utilized both scientific experimentation and innovation during the 1680s and 1690s to overcome the environmental and climatic difficulties of this era to such an extent that they remained at the forefront of English-Caribbean trade for decades. Suffering from a variety of problems that included decreasing soil fertility, declining access to necessary natural resources, and consistently poor climatic conditions, Barbadian planters and farmers refused to let nature dictate their fate, and instead implemented a variety of creative innovations that increased output and reduced costs.

It is also necessary to stress what this dissertation does not attempt to include. Most notably, it does not seek to thoroughly analyze the social experiences and agency of the tens of thousands of enslaved Africans that lived and worked on Barbados. This is not to say that this dissertation ignores the island's enslaved population. In fact, this work does not shy away from recognizing the brutal conditions and systemic exploitation that they experienced at the hands of their white masters when relevant and appropriate. It also recognizes their integral role within the sugar production complex and acknowledges that it was a combination of their labor and knowledge of tropical conditions that specifically allowed for the emergence of the matured plantation society examined throughout this dissertation. Finally, this work looks at the enslaved as an essential island community and includes them in all analyses that touch on local health, nutrition, and supply. Yet, no single chapter focuses solely on the island's black population and its agency within a late-seventeenth century plantation society.

This dissertation deliberately omits the plight of the Barbadian enslaved for three crucial reasons. First, the purpose of this work is to offer an economic study that primarily focuses on the planter and merchant elite, with a smattering of detail and data from the lives of the island's black and less-wealthy white inhabitants, for a very specific period of time within Barbados' history. While slavery represents an important element of any plantation society, this work approaches the inhumane practice through an economic methodology that has been filtered through the perceptions and biases of white Barbadian planters and farmers, which often meant that the poor black men, women, and children that arrived from Africa were dehumanized and viewed as little more than commodities to bought and sold. Most

of the records consulted for this work portray them in precisely this manner, as either numbers in the Naval Office Returns or as prices in the Royal African Company Invoice books. While this approach inevitably strips the enslaved of their own agency and humanity, there is an important purpose to this practice, as it does allow for an important insight into island life for both races: By looking at the institution through a white economic perspective, historians can gain a better understanding of the size, movement, and detailed intricacies of the slave trade, the transformation of the ideology behind slavery on Barbados, and how white planters and farmers internalized the incorporation of a population of unfree laborers into their own world when it became clear that they were a required component of establishing a profitable sugar production complex.

Secondly, this dissertation argues for the ‘maturation’ of seventeenth-century Barbadian society, a process that unfortunately did not really affect the island’s enslaved population in a positive or productive manner. While they gained access to slightly larger quantities of salt fish, they ultimately did not benefit from the expanding trade networks and the great increases in imports, as few of these went to unfree laborers. They also certainly did not profit from Barbados’ emergence as the largest marketplace for enslaved Africans in the Caribbean, as they became further dehumanized and commodified as a result. Even more universal improvements, such as a better understanding of the island’s climate, environment, and diseases or technological advancements in the sugar production process, only made their lives on the island more difficult, as their better health allowed them to work longer and harder than ever before. This realization, however, leads to perhaps one of the cruelest ironies of slavery: the industry and knowledge of the enslaved Africans

provided the money, understanding, and conditions that were necessary for the development and maturation of Barbados' plantation society, changes that inevitably led to the creation of great fortunes and important political careers for many of the island's white planters, merchants, and farmers. In order to maintain this success and to keep up profits, white islanders were consequently forced to expand the practice of slavery, while establishing greater measures of control and oppression. Thus, the enslaved, while largely responsible for much of the maturation of Barbadian society, helped to create the very conditions that allowed for both the intensification of their exploitation and their further dehumanization within a society that had already widely commodified them. This leaves much of the black experience outside of the scope of a dissertation that focuses on the 'positive' maturation of a transforming and expanding sugar plantation society.

Finally, while Barbados has few works that appropriately cover the island's economic, cultural, or political history between 1680 and 1700, its historiography in regard to enslaved culture and the black population's social agency is particularly rich and diverse, as an array of authors have worked hard to show how the island's unfree black laborers fought to establish a life that was at least partially built on their own terms. Economic and social historians have frequently addressed the conditions of the enslaved on Barbados in a variety of different ways. A few authors, such as Karl Watson and Pedro Welch, have looked at the trials and tribulations of black life and urban slavery in Bridgetown and how these individuals carved out a space for themselves in the metropolitan heart of Barbados. Others, such as David Eltis, Jason Sharples, and Hilary Beckles have looked at how the enslaved often incorporated acts of both violent and non-violent resistance into their daily lives in an effort to

challenge white supremacy. Beckles, Watson, and Welch have shown how both enterprising enslaved laborers and freed blacks negotiated ‘room to maneuver’ within the white/black relationship and were able to use this space to achieve control and power over their own fate and to better their own lives. Finally, Jerome Handler has also published numerous works that specifically focus on the lives of the black population and that attempt to understand them as separate social beings. His articles address their approach to food and shelter, as well as their understanding of disease, medicine, and the environmental world in which they lived.⁴⁷ Overall, these works highlight the many ways in which the enslaved created vibrant creolized communities of their own, and how they were able to establish, through the shared experiences of dehumanization, maltreatment, and exploitation, powerful local bonds that white owners could never adequately break.

When this ample historiography is combined with the limitations of the primary sources used in this work and general overall paucity of enslaved records, it

⁴⁷ For more on the agency of the enslaved in late-seventeenth century Barbados, please consult David Eltis, Stephen D. Behrendt, and David Richardson, ‘The Costs of Coercion: African agency in the pre-modern Atlantic World,’ in *Economic History Review*, vol. 54, no. 3 (August, 2001), 454-476, David Eltis, ‘Free and Coerced Transatlantic Migrations: Some Comparisons,’ *American Historical Review*, vol. 88, no. 2 (April, 1983), 251-280, David Galenson, ‘White Servitude and the Growth of Black Slavery in Colonial America,’ *Journal of Economic History*, vol. 41, no. 1 (March 1981), 39-47, Jerome S. Handler, ‘Escaping Slavery in a Caribbean Plantation Society: Marronage in Barbados, 1650s-1830s,’ *New West Indian Guide*, vol. 4, no. 3, (1997), 183-225, Handler ‘Slave Revolts and Conspiracies in Seventeenth-Century Barbados,’ *New West Indian Guide*, vol 1, no. 2, (1997), 5-42, Jerome S. Handler and Frederick Lange. *Plantation Slavery in Barbados: An Archaeological and Historical Investigation*, (Cambridge: Harvard University Press, 1978), Jerome S. Handler and Diane Wallman, ‘Production Activities in the Household Economies of Plantation Slaves: Barbados and Martinique, Mid 1600s to Mid-1800s,’ *International Journal of Historic Archaeology*, (18 June 2014), Jerome S. Handler and Stephanie Bergman, ‘Vernacular Houses and Domestic Material Culture on Barbadian Sugar Plantations, 1640-1838,’ *Journal of Caribbean History*, vol. 43, no. 1 (2009), 1-36, Hilary Beckles, ‘Creolisation in Action: The Slave Labour Elite and Anti-Slavery in Barbados,’ *Caribbean Quarterly*, vol. 44, no. 1 (March-June, 1998), 108-128, Hilary Beckles and Karl Watson, ‘Social Protest and Labour Bargaining: The Changing Nature of Slaves’ Responses to Plantation Life in Eighteenth-Century Barbados,’ *Slavery and Abolition: A Journal of Slave and Post-Slave Studies*, vol. 8, no. 3, (1987), 272-293, Pedro Welch, *Slave Society in the City: Bridgetown Barbados, 1680-1834*, (Kingston: Ian Randle Publishers, 2003), and Jason T. Sharples, ‘Discovering Slave Conspiracies: New Fears of Rebellion and Old Paradigms of Plotting in Seventeenth-Century Barbados,’ *American Historical Review*, vol. 120, no. 3, (June 2015), 811-843.

becomes evident that a substantial incorporation of black agency within this dissertation would have likely consisted of either a general summary of the current literature or a forced attempt at inclusion that could potentially come across as arbitrary and ineffective within this specific narrative. Thus, with these cautions in mind, it remains the goal of this work to depict the political and economic conditions of late-seventeenth century Barbados and to maintain a focus on the white planter and merchant elite, with some references to the island's enslaved black, impoverished white, and middling farmer populations, but only when their experiences fit into its general argument and conclusions.

In order to more efficiently examine the three aforementioned conclusions, this dissertation is divided into five chapters, the latter three of which correspond to a specific area of life that would have been of integral importance to most late-seventeenth century white Barbadians. The first chapter serves as an introduction to the island's environment and climate and provides a detailed description of what these were like for those living on Barbados. By using a combination of sources that includes the Colonial Office Records, transcripts and letters from the appointed RAC agents, and William Sharpe's journal, a year-by-year reconstruction of the island's weather conditions has been created to show what the Barbadian planters and farmers would have experienced throughout the era. This chapter also addresses the profound environmental and climatic changes that occurred during the 1680s and 1690s and how the island's planters and farmers used a more scientific approach to understand these new conditions and to fix the problems that inevitably resulted from them. The second chapter also concentrates on providing an in-depth look at late-seventeenth century life on the island, but does so from a demographic perspective.

The 1680 and 1684 censuses form the backbone of this analysis, showing settlement patterns, trends among the different social classes, and the growth of the unfree labor force. The chapter also provides insight into the changing perception and understanding of health and disease on tropical Barbados and utilizes the parish vestry records to identify specific health tendencies among the different races present on the island.

Chapter 3 concerns the white Barbadians' relationship to the slave trade and how it expanded and changed between 1660 and 1720, with an especial focus on the period between 1680 and 1700. By 1680, enslaved Africans dominated the island's population and formed nearly 95% of its workforce, making them an integral component of plantation life. Over the course of the next four decades, the RAC, in conjunction with the work carried on by rival interlopers, annually delivered a considerable, but ultimately unknown, number of unfree black laborers to Barbados' well-stocked market. By combining information from known slave voyages already archived in the *TASTDB* with additional ships from the Naval Office Returns, the RAC's Homeward Invoice records, and its letter book, this chapter updates the historiography's traditional figures and posits a series of more accurate totals for the number of Africans sold. These calculations are used to prove that the islanders were better supplied with enslaved labor, at cheaper prices, than any other island in the Caribbean. Finally, this chapter utilizes the RAC's letter books and Homeward Invoice records to show that the Barbadians were not simple pawns of a monopolistic company and explores how they attempted to manipulate and manage this trade on their own terms and to meet their own financial goals, especially in regard to the interloper and Spanish trades.

Chapter 4 addresses Barbados' import and export trade and looks at its development and expansion during the late-seventeenth century. This is done in two distinct ways. First, by using data from the extant Naval Office Returns, it is shown that the islanders reached a peak economic moment in their early history by positioning themselves at the nexus of a complex system of trading networks and relationships that spread across the Atlantic world by the 1680s. The Revolution of 1688 and the ensuing Nine Years War, however, challenged these connections and resulted in a temporary halt to the expansion of trade. This research shows, however, that the planters and merchants of Barbados quickly adjusted to their new economic reality in the early 1690s and reestablished a considerable level of trade through a combination of their own ingenuity and some delayed support from London. Secondly, by overlaying the economic data gleaned from the Naval Office Returns onto maps of the Atlantic world, as well as through the inclusion of a variety of graphs, tables, and charts, this chapter also provides a series of visualizations that emphasize how trade moved and shifted throughout the 1680s and 1690s.

The fifth chapter provides substantial insight into the islanders' various energy requirements and addresses their constant struggle to overcome Barbados' limited resources and to attain the huge quantities needed to run the sugar plantations. Both planters and farmers alike needed access to a variety of different inputs in order to successfully produce their crops. Obtaining this energy, however, became increasingly difficult for these Barbadians during the 1680s and 1690s, as resource depletion, growing competition, and the Nine Years War made previous strategies both risky and expensive. One way to counter this was to find local alternatives to these larger imperial problems. This chapter specifically considers the

levels of self-production present on Barbados during the late-seventeenth century in regard to nutritional energy, animal power, fertilizer, and fuelwood, and how they innovatively approached the task of accruing a part of what they still needed by manipulating their tropical surroundings, while also taking advantage of new goods that London had to offer.

This final chapter is followed by a conclusion that briefly summarizes what this dissertation has argued and how it redefines the current historiography's portrayal of Barbados during the late-seventeenth century. The conclusion also takes a quick assessment of the island's overall condition after 1700, especially in regard to its place within colonial trade and its relationship to the greater imperial system at this time. Emerging from the Nine Years War as a strong and vibrant colony that remained at the forefront of the English sugar trade, the declining conditions within the island, as well as greater competition from national and international rivals, eventually checked this advance and levelled off production. In time, these changes caused Barbados to lose the edge that had made it so unique and prosperous during the seventeenth-century, and forced the island into a role as a second or even third rank producer of sugar for the English. Luckily for the Barbadian planters and merchants, though, it would take another two decades, a second long international war, and the continued development of rival plantation colonies before this occurred, leaving this as a problem for a future generation. Instead, these planters and farmers stood at the center of England's Atlantic Empire, and, because of the island's peak economic moment and great trading successes of the 1680s and late 1690s, remained at the vanguard of sugar's commodity frontier for at least the first two decades of the eighteenth-century.

Chapter 1: An Overview of Late-Seventeenth Century Barbados: Climate and Environment

The island of Barbados, located on the southeastern tip of the Lesser Antilles island chain, appears, at first glance, to possess the expected characteristics of any other tropical island in the Caribbean. It contains the same hot and humid weather, seasonal patterns of precipitation, sandy beaches, and tall, shady palm trees that were found throughout the seventeenth-century tropics. It was also, however, plagued by the same dangers, as deadly diseases and destructive climatic patterns were also common features of island life and claimed the lives of many settlers. Yet, Barbados possessed a series of unique geological and geographical traits that differentiated it from any other island in the Caribbean and helped it to become England's first important producer of sugar in the 1640s. Such initial success, however, eventually proved to be dangerous to Barbadian planters, as it led to decades of aggressive exploitation that, along with naturally shifting weather patterns, permanently changed the island's environmental conditions and made sugar production increasingly difficult. Since this dissertation addresses the maturation and expansion of Barbados' plantation complex during the 1680s and the problems that threatened their profitable sugarcane agriculture throughout the 1690s, it is necessary to look at the specific geological characteristics and climatic patterns that led to so much wealth, power, and success for the Barbadian elite. Moreover, it is also important to recognize how the environment and climate both dramatically transformed during this period and the additional challenges these changes brought to the islanders between 1680 and 1700.

Barbados is a small island by Caribbean standards, measuring only 21 miles in length and 14 miles in width, for a total area of 166 square miles or 106,240 acres.

It is flat in comparison to most of its neighbors, as the topography slowly rises towards a central highland region crowned by Mount Hillaby at just over 1,100 feet above sea level. Unlike many other Caribbean islands, this peak is not a volcano, but the summit of an elongated submarine mountain range formed by the subduction of the South American tectonic plate under its Caribbean neighbor. Forced above water, this ridge exists as the chalky and rocky Scotland district that extends through significant portions of St. John's, St. Joseph's, and St. Andrew's parishes. The rest of the island is primarily made up of fossilized remains of coral and other organic compounds, resulting in a unique blend of soil that differs significantly from other Antillean islands. Most of Barbados can be classified as rendzina limestone, a dark, grayish-brown or black hummus-rich intrazonal soil formed by the progressive weathering of the island's carbonate limestone base. It is frequently clayey, grainy, and often very fertile due to large amounts of potash in its composition from past eruptions of nearby volcanoes.⁴⁸

The first English settlers further contributed to this nutritional stockpile by their rapid clearance of the island's forests. J.R. McNeil highlights the important role of deforestation in Barbados' initial fecundity: 'For a century or two before felling, tree roots had been pulling nutrients up from deep beneath the surface; from depths which neither sugar nor cotton roots could ever reach.'⁴⁹ The huge trees became 'nutrient towers,' storing vast amounts of minerals in their wood and bark. When felled and burned, an abundance of nitrogen, calcium, magnesium, phosphorus, and potassium entered the soil, mixing with the potash and volcanic ash

⁴⁸ David Watts, *The West Indies: Patterns of Development, Culture, and Environmental Change Since 1492* (Cambridge: Cambridge University Press, 1987), 35-37 and 221-223

⁴⁹ J.R. McNeil, 'The Ecological Atlantic,' in Philip Morgan and Molly Walsh, eds. *Early North America in Global Perspective* (New York: Routledge Taylor and Francis Group, 2014), 86-88.

already present. This created a new blend of topsoil that was unique to Barbados and exceptionally favorable for early sugarcane growth. While the soil's composition benefitted the early planters, leading to many quick and easy fortunes, it would become a limiting factor for those that came later, as the ash and potash-heavy mixture hid a remarkably thin layer of loam that was largely unproductive without heavy fertilization.⁵⁰

Location also played a significant role in the island's ascendancy as an early center of sugar production. With its position at the far eastern edge of the Caribbean, Barbados was geographically isolated from both the European Atlantic world and the rest of the Lesser Antilles island chain. The nearest neighboring settlements, St. Vincent to the west and St. Lucia to the northwest, were both over a hundred miles away and sparsely populated for much of the seventeenth-century. The nearest island with a significant population was Martinique, a French colony 140 miles to the northwest. This isolation benefitted Barbados in a variety of ways. First, it helped protect the island from rival European powers, as the natural westward flow of the currents made it exceedingly difficult and time consuming to approach from other Antillean islands or the Spanish Main. Secondly, the North Equatorial current flows directly from Northern Europe to the southern tip of the Lesser Antilles. As the easternmost island of the chain, Barbados served as a natural first port of call for many vessels traveling from England or West Africa, and became a key distribution center for goods, people, and ideas from throughout the Atlantic world.⁵¹

⁵⁰ Otis Starkey, *The Economic Geography of Barbados: A Study of the Relationships Between Environmental Variations and Economic Development* (New York: Columbia University Press, 1939), 33-37, Jason W. Moore, 'Sugar and the Expansion of the Early Modern World-Economy: Commodity Frontiers, Ecological Transformation, 4 and Industrialization,' *Review*, vol. 23, no. 3 (2000), 420-421, and McNeil, 'The Ecological Atlantic,' 87-88.

⁵¹ Beckles, *White Servitude*, 13-16 and Gragg, *Englishmen Transplanted*, 1-3.

Finally, Barbados' average climatic patterns also supported the planters' widespread shift to sugar cultivation, as the consistent and predictable mixture of rain, heat, and humidity created the conditions that allowed the crop to thrive during the late 1640s, 1650s, and 1660s. The weather on Barbados is generally hot and humid all year long, with an annual mean temperature that varies little between winter and summer months, ranging from an average of 28 degrees Celsius in July to 26 degrees in February. Nighttime temperatures generally only dropped by about 3 degrees. The real seasonal differentiation results from changes in the frequency of precipitation. A normal year neatly divides into two distinct seasons: a dry season from January through May and a wet season from June through December. During the dry season, rainfall averages 43.5 millimeters (mm) per month, ranging from January's high of 57 mm to March's low of 33 mm. Planters used these five months of drier weather to harvest and grind their sugarcane, as wet plants were tough to handle and process. Conversely, the wet season averages 147 mm of precipitation, with a high of 178mm in October, November, and December. These seven months served as the perfect opportunity to plant cane, since the young sprouts needed plenty of water to grow.⁵² Overall, the island receives an average of 1,136-1,247 mm of rain a year, a moderate amount when compared to many of its neighbors, but ideal for sugarcane's growing cycle.⁵³

⁵² The importance of rain, however, went beyond agriculture. Even though Barbados lacked natural lakes or inland rivers, the islanders had access to large quantities of clean and healthy drinking water that resulted from the filtration of rainwater through the island's coral bedrock and its eventual collection in underground reservoirs and wells. Thus, drought not only threatened the health of the crops, but also led to drastic reductions in the availability of drinking water. Starkey, *Economic Geography* 15-24.

⁵³ St. John's in Antigua saw 1,251 mm of rain, Pointe-a-Pitre in Guadeloupe 1,847 mm, Port of Spain in Trinidad 1,606 mm, and St. George's in Grenada 1,839 mm. Watts, *The West Indies*, 13-25 and Ward Barrett, 'Caribbean Sugar-Production Standards in the Seventeenth and Eighteenth Centuries,' in Parker, John, ed. *Merchants and Scholars: Essays in the History of Exploration and Trade* (Minneapolis: University of Minnesota Press, 1965), 153-155.

Map 1.1: Eastern Coast and the Scotland District, 1685



Map 1.1: TNA, CO 700/Barbados3, Phillip Lea (1685). This map highlights the predominant use of the windmill throughout the Scotland District, as there are only a few animal mills present in this part of the island by the mid-1680s. Particular points of interest include three separate plantations owned by Roots, Richards, and Thorne that continued to utilize cattle mills during this era and William Sharpe's plantation, sitting on a hill just to the west of the Scotland district.

Another important climatic trait unique to Barbados was the northeast trade winds that regularly swept across the island. Traveling at moderate speeds throughout much of the year, these winds carry great quantities of advective energy and help control the rains that fall on the island. Most planters realized the energy inherent in these winds and, by the 1680s, had built large windmills in an effort to capture and convert the near-constant breeze into a source of power for the cane-crushing rollers, consequently freeing the islanders from a reliance on expensive animals. According to Philip Lea's 1685 map of the island, which details the number and type of mills each planter owned, the island's 314 plantations contained 412 total windmills. In comparison, planters maintained only 35 animal powered mills and,

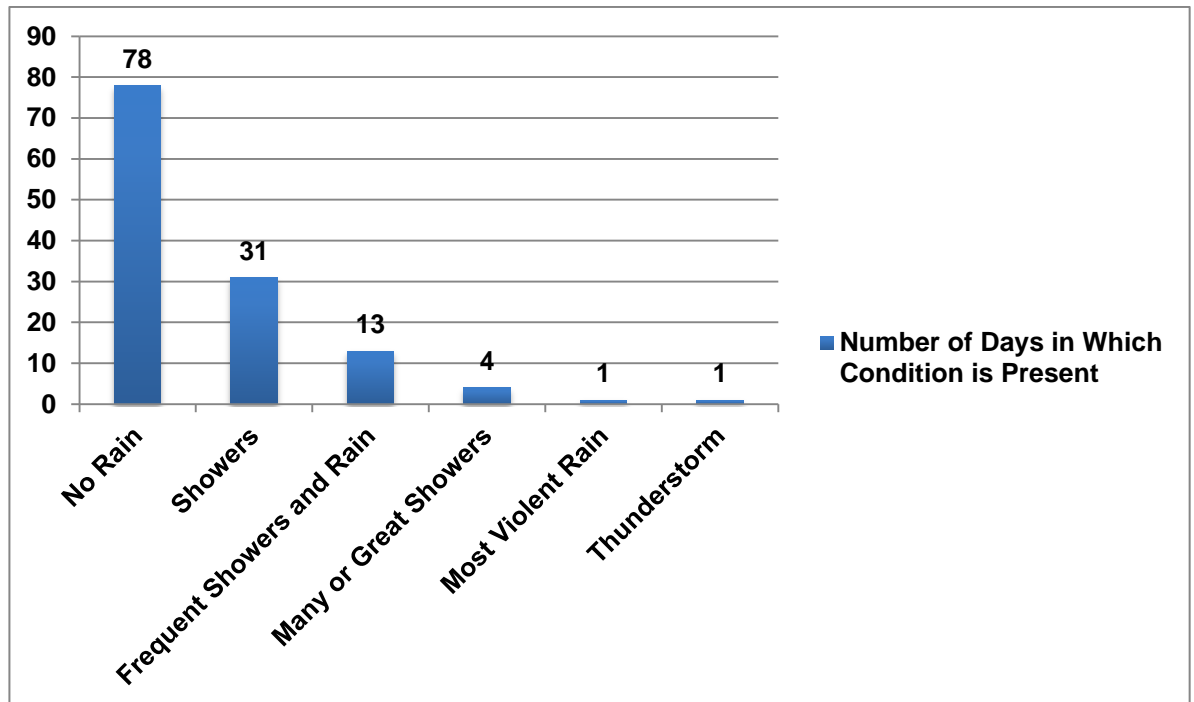
due to the near-complete lack of rivers, no water mills.⁵⁴ Map 1.1, showing St. Joseph's and St. Andrew's parishes from Lea's map, depicts the omnipresence of the windmill, as almost all plantations have at least one, while the wealthy, such as Richard Rich, Thomas Merrick, or George Andrews, might have two or three. Thus, as the only other English island besides Antigua to receive consistent, moderate winds, the Barbadians found themselves with a competitive advantage in the sugar trade, which the island's planter's gladly utilized in an effort to both save money and maximize their production capabilities.

In order to provide a more detailed look at the island's 'normal' weather conditions, the wind and rain patterns for a four month period in 1680 will be addressed in greater depth. In general, 1680 represented a climatically stable year, with weather that was 'well and peaceable' overall. Since the island's planters and farmers witnessed such unremarkable weather patterns, few other climatic descriptions exist. Luckily, Colonel William Sharpe, a wealthy planter owning 480 acres of land split between St. John's and St. Thomas' parishes, kept a journal in which he recorded the daily weather conditions for a 128 day period from 18 April to the 24 August. Asked to experiment with a barometer given to him by the Royal Academy, Sharpe diligently cataloged the wind speed, intensity of rainfall, and barometric pressure for each day. Graphs 1.1 and 1.2 show the results of his observations and can be used to suggest what a 'standard' spring and summer might have looked like in late seventeenth-century Barbados.⁵⁵

⁵⁴ TNA, CO 700/Barbados3, Philip Lea, (1685) and CO 700/Barbados5, William Mayo, (1722).

⁵⁵ Royal Society (RS) LBO/VIII, 127-134. Sharpe's journal has also been analyzed by Michael Chenoweth et al., 'A Pioneer in Tropical Meteorology: William Sharpe's Barbados Weather Journal, April-August 1680' American Meteorological Society, (December, 2007), 1,957-1,964.

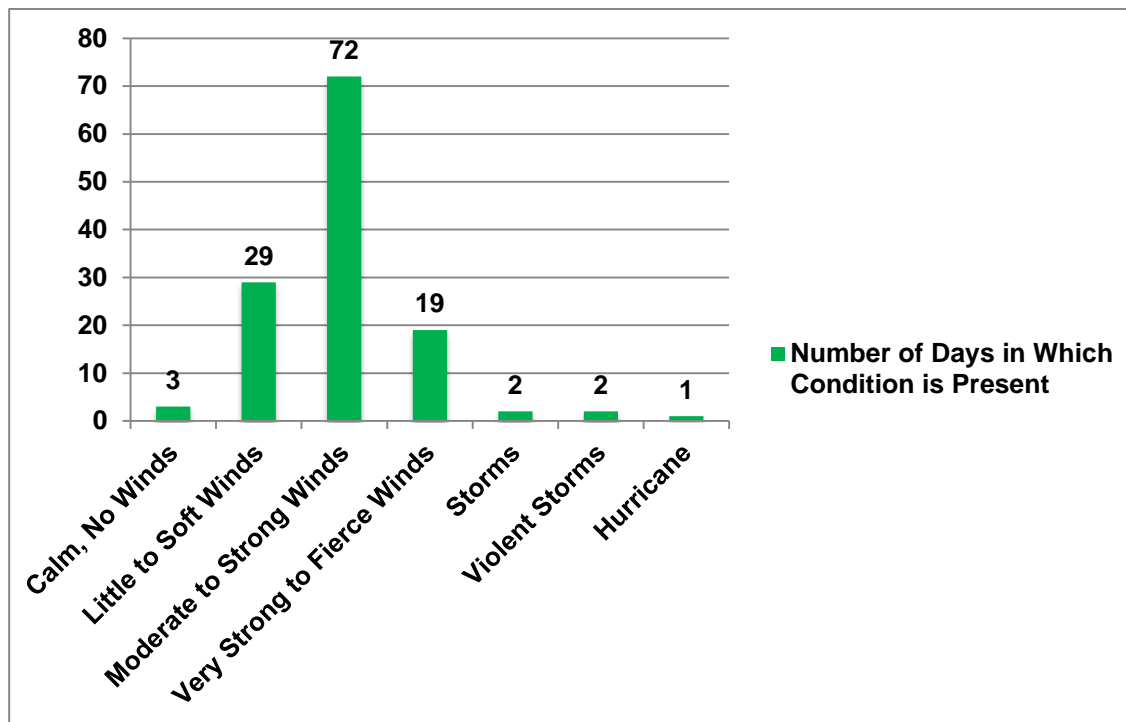
Graph 1.1: Days and Intensity of Rain, 18 April to 24 August, 1680



Graph 1.1: RS, LBO/VIII, 127-134.

Graph 1.1 shows Barbados to be generally dry from the middle of April to the end of August, with Sharpe reporting rainfall on only 50 of the 128 days (39.06%), with the remaining 78 days being completely dry. To some extent, this is to be expected based on when Sharpe recorded his observations, as the first 50 days occurred during the island's dry months and the record ended before the arrival of the year's wettest months. When broken down further, June proved to be the rainiest month, with 13 days of precipitation, and August, surprisingly, was the driest, with only three days of rain, all flanking the tropical storm/hurricane in the middle of the month. When precipitation did occur, it was usually fairly brief and light. Sharpe classified the majority of the rainfall on the island as either 'showers' or 'frequent

Graph 1.2: Strength of Wind between 18 April and 24 August, 1680



Graph 1.2: RS, LBO/VIII, 127-134

showers.⁵⁶ Only rarely did the Barbadians experience ‘many’ or ‘great showers’ and violent storms hardly developed at all. Thus, Barbados, even during its rainy season, did not have a particularly wet climate in 1680, as some months barely saw precipitation. When rainfall did occur, it happened on less than half of the days observed and tended to be gentle rain showers of minimal duration and intensity.

Colonel Sharpe also made daily observations on the wind speeds he observed from his plantation. The journal highlights the famous constancy of the wind, with there being only three days out of the 128 on which he classified conditions as either ‘calm,’ or ‘no winds.’ For the majority of the sample, wind force varied between ‘Little to Soft Winds’ (29 times) and ‘Moderate to Strong Winds,’ (72 times), which reflects the gentle and refreshing breeze that continues to blow across the island at

⁵⁶ Ibid.

eight to ten miles per hour. As spring turned into the summer rainy season, Sharpe witnessed a change in wind patterns. It was during this time that he recorded thirty days of 'Strong Winds,' the second most frequently used descriptor in his journal, as well as 19 days of 'Very Strong to Fierce Winds.' There were also five storms that occurred in the early rainy season, with two classified as particularly violent and one as a hurricane, which swung to the north of the island and just missed making landfall in St. Lucy's. Overall, Sharpe catalogued significant wind speeds for 125 out of the 128 days of his experiment (97.66%), suggesting that wind defined the standard Barbadian climate from April to August to a much greater extent than rain. Thus, Sharpe's journal from 1680 demonstrates the moderate nature of weather in Barbados, depicting consistently mild conditions that rarely swung to extremes, and wind patterns that were always present, but that generally lacked the strength to damage the island's agricultural infrastructure. When combined with the expected heat and humidity of its tropical location, the meteorological situation on Barbados favored the large-scale production of sugar.

Unfortunately, these conditions did not last, as by the mid-1680s, the Caribbean underwent a widespread meteorological shift that resulted in rapidly changing climatic patterns, forcing Barbadian planters and farmers to deal with over two decades of unstable and unpredictable weather that regularly threatened their annual crops. While the cause is uncertain, many historians speculate that these changes resulted from one of the infrequent, prolonged cold spells that defined the Little Ice Age. This environmental epoch, which lasted from approximately 1450 to 1850, consisted of an unbroken run of cold winters and cool, wet summers that caused the global mean temperature to drop and remain about 1.5 degrees Celsius

below the historical average. The Little Ice Age, however, peaked between 1550 and 1700, with particularly severe spells in the 1590s, 1640s, and especially the 1690s, in which the mean temperature dropped by another 1.5 degrees.⁵⁷ Scientists are not entirely sure why the Little Ice Age culminated in this latter decade, but some believe that a historically low number of recorded sunspots led to a sizable reduction in both the sun's production of solar energy and its surface temperature.⁵⁸

Others speculate that the poor weather resulted from increases in the occurrence of El Nino-Southern Oscillation (ENSO) events, in which easterly winds shift their trajectory and blow westward from Asia towards America, bringing with them cool air and large amounts of rainfall. This would result in long, heavy rains that led to intense flooding throughout the Caribbean, especially during the summer months when planters would first begin to plant fragile sugarcane sprouts. Environmental historians postulate that ENSO episodes transpired in 1687-88, 1692, 1694-5, and 1697 by one measure, and in 1681, 1687-88, 1696, and 1701 by another. The nearly continuous run from 1692 to 1697 is unprecedented—such events have historically appeared on average every 3.8 to 5 years—and matches up well with some of the worst weather experienced on the island.⁵⁹

The resulting colder temperatures and wetter conditions dramatically affected the crop cycles that sugar planters and provision farmers relied upon for their living.

⁵⁷ Geoffrey Parker, *Global Crisis: War, Climate Change, and Catastrophe in the Seventeenth Century* (New Haven: Yale University Press, 2013), xxv-14, Karen Ordahl Kupperman, 'The Puzzle of the American Climate in the Early Colonial Period,' *American Historical Review*, (2001), 1,264-1,265, and Richard H. Grove, *Ecology, Climate, and Empire: Colonialism and Global Environment History, 1400-1940* (Cambridge: The White Horse Press, 1997), 5-9.

⁵⁸ While contemporary scientists view on average over 100 sunspots a year, those in the 1680s and 1690s saw only 25 over the entire twenty-year period. Numbers only began to approach expected totals by about 1705. Parker, *Global Crisis*, 14.

⁵⁹ William Quinn, Victor Neal, and Santiago Antunez de Maytolo, 'El Nino Occurrences Over the Past Four and a Half Centuries,' *Journal of Geophysical Research*, vol. 92, no. 13, (December, 1987), 14,449-14,461 and Parker, *Global Crisis*, 10-18 and 587-590. The first series of ENSO events comes from Parker, while the second set comes from Quinn et al.

According to Geoffrey Parker, a 0.1-degree drop in temperature would equal a one day delay in the sugarcane growth cycle, while Karen Kuperman argues that the rate is actually twice this.⁶⁰ Thus, in an average year during the 1690s, crops would be ready 15 to 30 days later than usual, with a 30 to 60 day setback in particularly bad years. The ensuing delay would have been detrimental to both Barbadian planters and merchants because so much of their success came from a well-planned growing schedule that helped get their product to market before their competitors.

The climatic instability also affected and altered the island's valuable trade winds. The nearly constant breeze that had been blowing in an easterly direction since the English arrived in the Caribbean, inexplicably changed direction to the north in the late 1670s or early 1680s. In 1698, John Wallis, a member of the Royal Society, wrote to Dr. Hans Sloane about a conversation he had with Michael Glyde, a Barbadian lawyer, about twenty years earlier. Glyde claimed that at that time the trade winds had started to shift their course dramatically, first moving 'two or three points toward the South; but hath since vied gradually, till it became full East, and is now come to be 3 or 4 points to the Northward.'⁶¹ Governor Atkins also complained of strange and random 'cross-winds' that developed in late summer of 1679 that caused government letters to 'come so confusedly to me that it is impossible to answer them in order' and prevented merchant from arriving to take away the year's sugar crop.⁶² Thus, the culmination of destructive events during the 1680s and 1690s, including the shifting wind patterns, increased ENSO events, and a

⁶⁰ Parker, *Global Crisis*, 587 and Karen Ordahl Kupperman, 'Fear of Hot Climates in the Anglo-American Colonial Experience,' *William and Mary Quarterly*, vol. 41, no. 2 (April, 1984), 233-234.

⁶¹ RS, EL/W2/79 and EL/W2/81, Wallis to Sloane, 21 September, 1698.

⁶² TNA, CO 1/44, 21 May, 1680, Atkins to Lords of Trade and Plantations

Table 1.1: Climatic Conditions, English Caribbean, 1680-1700

Year	Barbados	Jamaica	Leeward Islands	Sugar Production	Sugar Exports
1680	Well and peaceable	Grateful seasons of rain	Major Hurricane	Late and short of expectation	c. 10,000
1681	Greate raines	NA	Two Hurricanes	The raines have put the crop back	7,150
1682	Bad weather, much rain	Droughts	drought	Good Cropp	11,145
1683	NA	NA	Fine weather	Hopes of a Good Crop	c. 14,000
1684	Much Rain	Bad weather	Glorious fair weather	NA	NA
1685	Weather very unseasonable, drought	NA	NA	Loss of this year's crop	NA
1686	Long continuance of ill weather	NA	NA	Plenty and Good Sugar	11,765
1687	Long and unknown cold weather, drought	NA	NA	Late, small Cropp, cane spoiled, no juice	NA
1688	NA	NA	Destructive Drought	Cropp Backward, Cotton/Ginger dear	1,446
1689	Supernatural, stormy, cold winds, drought	Hurricane...not severe.	Much drought, major hurricane	Had great crops	NA
1690	Dry	Drier and hotter than usual	NA	Plentiful Year, Good crop	NA
1691	Seasons have been so dry, drought	NA	Long continued droughts	Half the sugar as last year	11,004
1692	Great raines, most unseasonable weather	Earthquake, tsunami, hurricane	NA	Great loss in the Cropp	NA
1693	Never a more seasonable year	Earthquakes still severe	NA	Good Cropp	NA
1694	Deadly Hurricane	Hotter weather	NA	NA	NA
1695	NA	NA	NA	NA	NA
1696	NA	NA	NA	NA	9,856
1697	Coldness of late years	NA	NA	Production visibly decreaseth	5,475
1698	Very Healthy Year	NA	NA	A Slender crop	20,190
1699	Seasons out of joint, 2 small hurricanes	Weather was bad	Bad Weather, most severe	Sugar Failing this year	11,888
1700	Weather fine	NA	NA	1/3 of lands lie uncultivated	15,399

Table 1.1: TNA, CO 28/2, CO 28/3, CO 29/2, CO 29/3, CO 29/4, CO 31/2, CO 31/3, and TNA, T 70/10 and T 70/12. The report of 'two small hurricanes' in 1699 comes from TNA, ADM 106/525/137, 27 October 1699, Jedidiah Barker to the Navy Board. For each year, I pulled quotations from letters and communications sent primarily by the governors or Council/Assembly of each island and used the descriptions that shared conditions for each particular location. The fifth column, labeled 'Sugar Production,' specifically refers to Barbados and does not reflect the situations on either Jamaica or the Leeward Islands. Sugar exports are calculated in tons.

lack of sunspots, led to many instances of extreme weather and general crop failures that made the few good years stand out as anomalies.

Analyzing yearly weather patterns on a specific island during the 1680s and 1690s is tricky, as no official meteorological records exist that date back to this era and accounts that do focus on the climate are limited and brief. Nevertheless, a chart of the weather for the period between 1680 and 1700 has been pieced together by aggregating descriptions found in sources like the Colonial Office papers, the RAC's letter book, and personal journals and letters. Summarized above in Table 1.1, these records add further support to the claim that the island's weather patterns underwent a significant transformation after 1680. First, while Kuperman and Parker both claim that the 1690s represented one of the most severe decades of the Little Ice Age, the records appear to show that the 1680s were just as difficult for those on Barbados, as the 1690s lacked the prolonged stretches of miserable conditions that plagued the previous decade. The longest stretch of bad weather in the 1690s occurred during the first three years, when a long drought was suddenly ended by a series of great rains that flooded the island in 1692. After that year, there were 'normal' periods with good weather and exceedingly high levels of sugar production spaced between the more difficult ones. In 1693, for example, Governor James Kendall reported of a year 'never more seasonable,' and in 1698 Governor Ralph Grey wrote of a 'very healthy year.'

By contrast, the Barbadians experienced a long stretch of cold weather that oscillated between exceedingly wet and prolonged drought throughout the 1680s that consequently challenged planter production. In 1681, for example, the island experienced 'great raines' that 'put the crop back,' as merchants shipped only 7,150 tons of sugar that year. 1685 was also a particularly bad year, as 'very unseasonable' weather and a prolonged drought caused a widespread 'loss of this year's crops,'

while another drought in 1687, coupled with unseasonable cold, resulted in a ‘Late and small Cropp’ with the ‘Cane spoiled’ and producing ‘No Juice.’ The 1687 drought was especially bad, as Edwin Stede reported to London that, ‘we are in great straits for want of rain, which we have been without for five months....Everything is scarce and dear, and we are in danger of losing the most hopeful crop of corn for these many years for want of rain to wash off the caterpillars. We are past all hopes of any considerable quantity of sugar for the next two crops.’⁶³ The island’s RAC commissioners also wrote to London that year complaining of ‘miserable distresse’ in Barbados, with planters ‘terrified’ and ‘frighted,’ for an ‘island in a poore condition.’⁶⁴ By 1689, the weather seemed to reach its nadir, with ‘supernatural’ conditions bringing a combination of storms, cold winds, and drought, although these surprisingly seem to have had little effect upon the year’s sugar crop.⁶⁵ By this point, however, the planters were growing tired of the unpredictable conditions. Littleton wrote that the contemporary Barbadians ‘sometimes...suffer by extreme Droughts, and sometimes by continual violent Rains.’ He also mentions that unexpected ‘sudden Gusts’ of violent wind were commonplace during the 1680s and that they would often ‘tear or maim our Windmills.’⁶⁶ As such, the uninterrupted run of bad weather in the mid- to late-1680s seemed to pose a great meteorological challenge to

⁶³ TNA, CO 29/3, 19 September 1687, Stede to Lords of Trade and Plantations

⁶⁴ TNA, T 70/12 22 June 1687, 15 October 1687, and 28 November 1687.

⁶⁵ TNA, CO 29/4, 23 April, 1689, Stede to Lords of Trade and Plantations. Stede also provides some detail into the ‘supernatural events’ that he mentions in the letter, recalling that the Barbadians witnessed ‘two great comets [that] have lately appeared, and in an hour and a quarter the sea ebbed and flowed to an unusual degree three times.’ Furthermore, a serious earthquake occurred near Martinique that ‘was slightly felt here’ and was so powerful that ‘sloops at sea between St. Lucia and Martinique thought themselves aground, so violently were they shaken.’ Finally, ‘a rocky islet called Rodunda was great part of it split and turned into the sea.’ It is unclear, however, why the sugar crop was not more adversely affected by this poor weather.

⁶⁶ Littleton, *Groans*, 17-18.

all planters and farmers, as both struggled against a changing climate, strange cycles of intense rain and drought, and unusual winds.

The second important point to take away from Table 1.1 was the increasing frequency of hurricanes across the Caribbean. According to Michael Chenoweth, the historical rate for Caribbean hurricanes has been one every 2.4 years, with a major storm every 5.3 since 1638.⁶⁷ However, from 1680 to 1700, thirteen hurricanes made landfall within the Lesser Antilles, meaning that one occurred every 1.61 years, with five of them (one every four years) classified as major. And while only seven of these actually affected the English West Indies, four were large tempests that caused significant amounts of damage. Two of these hit the Leeward Islands, which regularly dealt with large storms, in 1680 and 1689. A third mercilessly made landfall in Jamaica in 1692, shortly after an earthquake sank most of Port Royal. The fourth hurricane swept over Barbados in 1694, allegedly killing over 1,000 people and damaging or sinking at least 26 ships that were sitting helplessly in Carlisle Bay.⁶⁸ For the Barbadians, the 1694 tempest represented the beginning of a decade of frequent hurricanes, as unpredictable weather seems to have aided in making them a regular feature of the island. The islanders experienced two small hurricanes in 1699, a third in September of 1700, a fourth in 1701, a fifth in 1702, and a surprising hurricane in 1705 that killed six people, damaged or sunk 21 more ships, and resulted

⁶⁷ Michael Chenoweth and Dmitry Divine, 'Tropical Cyclones in the Lesser Antilles: Descriptive statistics and historical variability cyclone energy, 1638-2009,' *Climatic Change*, (February, 2012), 591 and Matthew Mulcahey, *Hurricanes and Society in the British Greater Caribbean, 1624-1783* (Baltimore: Johns Hopkins University Press, 2006), 95-116 and Chenoweth arrives at these numbers by adding together all known Caribbean hurricanes, giving him 70 major and 152 regular tempests.

⁶⁸ This storm occurred twenty years after the last major hurricane, which hit the island in August 1675. The violence, death, and destruction of the 1675 hurricane was so overwhelming that an exasperated Governor Atkins referred to it as 'infandum renovare dolorem (Too painful to Recall). For the 1675 hurricane, see TNA, 1/35, 3 October, 1675, Atkins to Council. For the 1694 hurricane, see TNA, CO 28/2 and CO 29/5, 26 October, 1694, Russell to Lords

in ‘the tops of severall mills being blown off and plantain trees and the corn in many parts destroy’d.’⁶⁹

The Barbadian planters and farmers, however, had become increasingly effective at predicting hurricanes by this point and, besides for the 1705 tempest, experienced minimal damage from the steady stream of storms that plagued the island in the 1690s and 1700s. William Sharpe’s aforementioned experiments, for example, showed that a barometer could be used to accurately forecast short-term weather conditions. His lowest readings of 28.75 and 28.5 p/atm coincided with worsening weather over Barbados and the beginning of a hurricane just to the island’s north. Thus, he concluded that sudden drops in atmospheric pressure often signaled the onset of bad weather and could therefore be used to anticipate approaching storms. He further discovered that he could predict the length of the ‘continuance of the violence of the storm,’ which ‘may be as beneficial as that of its approach,’ by observing how long it took for the atmospheric pressure to begin to rise back towards the standard 29.3 p/atm. Satisfied with his scientific experiments and the barometer’s usefulness in helping his fellow Barbadian planters predict changes in the weather, he wrote back to the Royal Society that he was ‘sufficiently convinc’t of the Exactness of that instrument.’⁷⁰

Captain Langsford, an English seaman closely associated with Barbados, also took a more scientific approach to forecasting the arrival of bad storms. Taking hints from the natural world, he wrote an essay for the Royal Society’s *Philosophical Transactions* in 1698 that described how his encounters with four major hurricanes

⁶⁹ TNA, CO 28/9, 15 September 1705, Granville to Council of Trade and Plantations.

⁷⁰ RS, LBO/VIII, 127-134. Royal Society records also show that they also sent a thermometer to Sharpe, but no records of its safe arrival in Barbados exist.

gave him the knowledge and ability to foresee their arrival up to two weeks in advance. He began by criticizing the Barbadians' traditional methods: sending messengers each June to the native Carib Indians in St. Vincent to request an advanced warning of the arrival of any storms for that year. The Caribs, whom the white Barbadian believed used 'Witchcraft and Councell with the Divel' to inform their predictions, generally complied, arriving ten to twelve days before a storm formed. This gave the islanders a valuable alert, as the Indians seldom failed in their prognostications. Langsford, however, neither believed in the Carib's mystical powers nor in their communication with the Devil. He instead relied upon the power of natural observation. His experiences showed that, 'hurricanes come either on the day of the full, change, or quarters of the Moone.' Langsford then recommended looking for numerous different environmental anomalies:

That day you will see the skies very turbulent, the sunn more red then at other times, a great calme and the Hills clear of Clouds, or Fogs over them....Likewise, in the Hollows or Concaves in the Earth or Wells, there will bee a great noyse as if you were in a storme, and at nights the stars looking very bigg with Burrs about them and the Northwest sky very black and the sea swelling stronger at other times, as usually it does in great stormes, and sometimes that day for an hour or two the wind blows very hard Westerly, out of its usual course and...a great Barr about the Moone and many times about the Sunn.⁷¹

He continued by maintaining that these signs were foolproof indicators of a hurricane and that by following them 'I have not lost a saile, yard, nor mast' in any of the storms that he encountered.⁷² While Langsford's methods were not as scientific as William Sharpe's barometric experiments, they do still show an empirical mind at work. Together, both Sharpe and Langsford offer insight into a late-seventeenth century plantation society filled with planters

⁷¹ BL, Egerton 2395, Captain Langsford, 'Concerning Hurricanes and their Prognosticks and observations of my owne experience thereupon,' 1698.

⁷² Ibid.

and farmers who were making an active effort to develop a greater scientific understanding of their changing environment and to take greater control over their own lives.

Overall, the white Barbadians' relationship to their environment was a difficult one during the late-seventeenth century. In more stable times, they lived in conditions that promoted both sugar production and trans-oceanic trade, as the warm and moderately wet weather was ideal for cash-crop agriculture, while the currents and wind patterns created easily navigable waterways that connected island plantations to markets in both England and the mainland colonies. However, the transformation of long-term weather patterns during the 1680s and 1690s, including a shift in wind direction, an increase in drought, unpredictable quantities of precipitation, and variable temperatures that dipped into unexpected lows, threatened plantations across the island and forced planters to seek a more scientific approach to the natural world around them if they hoped to remain competitive within the Caribbean.⁷³ They innovatively attacked this problem by utilizing scientific experimentation and observation in order to better control their world and come to a more extensive understanding of their environment. Sharpe's barometric experiments and Langsford's observations provide evidence of a growing realization that the natural world was not as mysterious and random as was once thought, and that it could be successfully understood. This belief, along with an ability to redefine their approach to agriculture and a willingness to experiment with different techniques, which will be discussed

⁷³ Richard Grove, *Ecology, Climate, and Empire: Colonialism and Global Environment History, 1400-1940* (Cambridge: White Horse Press, 1997), 188-89.

in greater depth later in this dissertation, allowed both planters and farmers to maintain, and occasionally enhance, their productive capabilities regardless of the natural conditions that surrounded them.

Chapter 2: An Overview of Late-Seventeenth Century Barbados: Demographics and Disease

In 1641, Governor Philip Bell passed legislation through his newly established Assembly that legally divided Barbados into eleven parishes, while endowing each of these with an Anglican church run by a vestry empowered to oversee provincial affairs and parochial Justices to protect island residents. These parishes became a point of identity for many white Barbadians and served as a local social and political center for those that lived in each region of the island. Furthermore, the Assembly and Council used them as an organizational tool that helped to facilitate and systematize their task of administering the island. The parochial divisions were particularly useful when the Assembly and Council attempted to collect specific information concerning island demographics, as parish vestries would occasionally be assigned to gather these local statistics in order to streamline the procedure and ensure greater accuracy.

The censuses that derived from this process are useful to modern historians, since they provide quantitative data for a diverse group of inhabitants and can offer detailed accounts of important island statistics that range from population totals and details on land ownership to immigration and emigration registers. This second chapter uses the valuable 1680 and 1684 censuses, as well as a variety of important vestry records, such as marriage, baptismal, and burial registers, to provide a quantitative view of life and death on Barbados between 1680 and 1700. The first section in this chapter uses specific data from the two aforementioned censuses to create a demographic baseline for what Barbadian society looked like during the early 1680s through an analysis of settlement patterns and the island's existing social

structure, while also providing evidence of continued expansion and development. The second portion of this chapter looks at vestry records and the Colonial Office Papers to evaluate the island's relationship with different Caribbean diseases that threatened to upset the demographic expansion of the era and looks at how the Barbadian government attempted to manage some of these deadly scourges. Overall, this chapter suggests that the Barbadians lived within a dynamic, creolized, and mature plantation society by the 1680s and were able to adapt to many of the difficult demographic challenges that they faced during the late-seventeenth century.

Part I: The 1680 and 1684 Censuses

This dissertation, covering the two decades between 1680 and 1700, takes an especial interest in the conditions of the island that led to both the expansion of the Barbadian economy and the peak moment that resulted. As such, it is useful to provide a basic summary of the important demographic conditions and social trends on the island for the beginning of this period. When examining Barbados in the 1680s, many historians primarily rely on the famous 1680 census sent to England by Governor Atkins. The comprehensive nature of the census has provided a wide range of valuable data that can be used to provide an in-depth quantitative introduction to life within a mature plantation society. A quick analysis of the census reveals four important themes running through its content: the Barbadians' general settlement patterns, elite domination of political and economic life, the islanders' near-complete reliance on enslaved Africans as a source of unfree labor, and the prevalence of a large free white population, made up of both middling and poor planters, throughout the island.

Map 2.1: The Island of Barbados: Parishes and Towns



Map 2.1: <http://www.lib.utexas.edu/maps/americas/barbados.gif>

Table 2.1: Demographic Information Compiled from the 1680 Census

Parish	Households	Acres	White Servants	Enslaved Persons	Large Plantations	Other Households
St. Peter's	208	6,651	375	3,977	24	184
St. John's	124	7,659	156	3,303	26	98
St. Andrew's	109	5,597	47	2,248	22	87
St. George's	122	6,155	78	2,963	31	91
St. Lucy's	437	6,800	118	1,965	10	427
St. Joseph's	88	4,868	72	2,072	15	73
St. James'	183	6,742	113	2,895	21	162
St. Thomas's	192	7,485	226	3,396	26	166
St. Michael's	1,031	7,141	715	5,071	23	1,008
Christ Church	410	12,979	178	4,723	36	374
St. Philip's	407	12,158	115	4,702	39	368
Totals	3,311	84,233	2,193	37,315	271	3,040

Table 2.1: DAB, BS 19, 1680 Census. 'Acres' represents the acreage used by the colonists in some productive manner. By 1680, the Barbadians had still not cultivated between fifteen and twenty thousand acres on the island, although some were not arable due to soil types, topography, or the construction of a town or village on the site. Furthermore, 'Large Plantations' can be defined as those that are made up of 100 or more acres and/or have at least 60 enslaved individuals working on them. Some wealthy planters owned multiple plantations in different parishes. Francis Bond, for example, owned 105 acres in St. George's parish, 120 in St. James', and 160 in St. Michael's. I counted each of these as individual plantations, as they would have functioned as such.

First, the census can be used to gain insight into how English colonists approached settlement on Barbados and how they utilized the different types of land available throughout the island. Out of a total of 106,240 acres, the Barbadians owned and cultivated approximately 84,233 (79.29%) by 1680, signifying that the island was densely settled by contemporary Caribbean standards and had little available space remaining. The most heavily cultivated sections of Barbados were generally located in the southern half of the island, where planters and farmers found ideal rainfall and highly fertile soil. Unsurprisingly, many of the most successful planters inhabited this region of the island, as Table 2.1 shows that they owned 36 large plantations in Christ Church and 39 in St. Philip's. Smaller planters followed

Map 2.2: Plantations in St. Michael's, St. George's, Christ Church Parishes



Map 2.2: TNA, CO 700/Barbados3, Phillip Lea (1685). Lea drew Barbados on its side, as the island's western coast stretches across the top of the map. Thus, the image in Map 2 depicts about half of Barbados' southern coast.

suit, as the two parishes each contained over 400 households and 12,000 acres of cultivated land by 1680. As Map 2.2 depicts, the generally flat and fertile landscape of these southern coastal parishes became congested with planters and their

sprawling plantations, joining the hundreds of cotton farmers who also lived and farmed in this region.¹

Directly to the north, St. Michael's, St. George's, and St. John's parishes also drew many settlers, as they were particularly renowned for their deep black and red soils. The wealthy, especially, flourished in these three parishes, as they contained a combined total of 80 large plantations. Two specific areas within St. George's and St. John's consisted of exceptionally coveted farmland and accommodated many of the biggest plantations on the island. The first of these was found along St. George's Valley, a six-mile strip curving eastward towards St. Philip's Parish Church, and possessed deep, black soil of a high quality. Here, a host of great planters from the island's early settlement period lived on large plantations of hundreds of acres, including Robert Davers (305 acres), Robert Hackett (440), Rowland Buckley (380), the Willoughby's (317), and the Sylvesters (515).

The flat central highlands at the top of St. George's valley formed a second area of particularly fertile soil. This represented the most prestigious region of the island and many of Barbados' most famous planters lived here. Sir Peter Colleton (425 acres), Christopher Codrington (618), Henry Drax (705), Sir Peter Leare (336), John Hallett (163), John Hothersall (528), and Henry Walrond (424) all benefitted from the exceedingly productive red soil and high average rainfall that allowed for the production of high-grade sugar.² Map 2.2 distinctly shows the ridge that divided the valley from the highlands as a small range of hills can be seen in the lower right-hand corner. Everything to the left of the hills sat in the prosperous valley, while those plantations to the right occupied the higher ground. These two stretches of

¹ Patricia Molen, 'Population and Social Patterns in Barbados in the Early Eighteenth Century,' *William and Mary Quarterly*, vol. 28, no. 2 (April, 1971), 292.

² Dunn, 'The Census,' 15 and Starkey, *Economic Geography*, 45-50.

Map 2.3: Bridgetown in 1722



Map 2.3: TNA, CO 700/Barbados5, William Mayo, (1722). This map shows the extent of Bridgetown in the early eighteenth century. The map's poor condition in the upper portion of the picture obfuscates the town's main bridge, the swamp just to its south and the parish church to the southeast. The map has been turned 180 degrees to show how the town is actually situated along the coast.

land contained seven of the ten largest plantations on the island, including those of John Peers (910 acres), Drax, Seger DeHem (632), Codrington, and Grace Sylvester.

The five southern parishes also contained two of the four largest population centers on the island. Bridgetown, located along Carlisle Bay in St. Michael's parish, served as one of the largest and busiest metropolitan port towns in the English colonial world and was a vital hub for all Atlantic trade. By 1680, it housed a population of nearly 3,000 people, had 603 separate households, and contained well over 1,000 buildings, making it, after Boston, the second largest urban center in the

English colonial world.³ In 1700, a French visitor described Bridgetown as ‘fine and noble; its streets are straight, long, clean, and well intersected. The houses are well built...with many glass windows; they are magnificently furnished. The shops and the merchants warehouses are filled with all one could wish from all parts of the world. One sees numerous goldsmiths, jewelers, clockmakers, and other artificers.’⁴ As Map 2.3 depicts, Bridgetown had three long main thoroughfares running north/south for the length of the town before stopping near a large swamp. Cheapside/Broad St. was the town’s primary road and widest thoroughfare, followed by Swan St. to the east and James St. to the far east. A large number of smaller streets running east to west allowed access to the magazine on the eastern edge of town and the warehouses along the waterfront. Bridgetown served as the primary port for the island’s sugar trade, with two large forts, Fort James and Fort Willoughby, guarding the entrance to Carlisle Bay. The town also functioned as a primary market for the English slave trade, a home for the governor, who lived on Fontabelle Plantation just to the northeast of the town, and a religious center, as a large church sat at each end of Cheapside/Broad St.

Oistins, the second important population center, was a coastal community in Christ Church that emerged as an important fishing village of about 20 households at this time. Named after a plantation owner with the surname Austin, who Ligon described as ‘a wilde mad drunken fellow, whose lewed and extravagant carriage made him infamous in the Iland,’ the village possessed a small bay that could be

³ Michael Stoner, and L. Brett Brinegar, ‘Archaeology in the Heart of Bridgetown: Material Culture from the Mason Hall Street Project,’ in Welch and Woodville Marshall ed. *Beyond the Bridge: Lectures Commemorating Bridgetown’s 375th Anniversary* (Cave Hill, Barbados: Barbados Museum and Historical Society), 95-96.

⁴ Father Labatt, as quoted by Pedro Welch, ‘Celebrating Bridgetown: The First 100 Years,’ in Welch, Pedro and Woodville Marshall ed. *Beyond the Bridge: Lectures Commemorating Bridgetown’s 375th Anniversary* (Cave Hill, Barbados: Barbados Museum and Historical Society), 20-21.

used by transatlantic shipping.⁵ Overall, the demographic data shows that the five southern parishes functioned as the economic, political, and social heart of Barbados, as they contained 63% of all island households, 55% of the cultivated acreage, 57% of the elite plantations, and 57% of the enslaved population. Moreover, the regions numerous large plantations, proximity to the island's government, and easy access to important market towns and villages also made the southern regions the wealthiest and most politically important part of the island.

The remaining six western and northern parishes represented a wide range of agricultural characteristics and geographic growth patterns. The parishes of St. Thomas, St. James, and St. Peter, the latter two located along the gentle Caribbean coastline, featured a mixture of shallow black coastal soil and sandy red soil inland that only allowed for limited productivity. In most years, the island's central region produced good crops, but the land suffered severely in times of drought and cost more to maintain than in any other district. The in-land red soil was more productive, and, as Map 2.4 shows, most successful planters worked in the gently sloping eastern section of these regions.⁶ With less productive land available, these three parishes averaged 6,959 acres, 194 households and 23 elite plantations each, quantities far behind the five southern parishes, but significant nonetheless. Planters, such as Sir Timothy Thornhill (521 acres), Benjamin Knight (300), Edward Littleton (205), John Sampson (327) and John Foster (240), could still hold considerable amounts of land and dominated the region economically and politically, but were generally less successful than their southern brethren.

⁵ Ligon, *History*, 25-26.

⁶ Starkey, *Economic Geography*, 34-49.

Map 2.4: St. James' and St. Thomas' Parishes, Lea Map, 1685



Table 2.4: TNA, CO 700/Barbados3, Phillip Lea (1685). This map shows the congested nature of the Caribbean coastline in St. James' parish. The map includes the location of both Holetown and St. James' Parish Church, as well as Sir Timothy Thornhill's extensive plantation (521 acres) in St. Thomas'.

Furthermore, individuals of such high stature were rare in this part of the island, and plantations tended to be smaller than in the south, with few encompassing more than one hundred acres of land. The island's second and third largest villages, however, could both be found in this region. Speightstown, nicknamed Little Bristol and home to a significant international port that specialized in the shipment of cotton, and Holetown, the site of the first settlement, were located along the gentle Caribbean coast in St. Peter's and St. James' respectively. In 1680, Speightstown had 95 separate households, while Holetown had 15.

The three remaining parishes are more geographically interesting than their southern and western neighbors, with their location greatly limiting agricultural productivity and altering their patterns of settlement. The eastern parishes of St. Joseph's and St. Andrew's contain a combination of the hilliest, most isolated, and least arable land in the shared Scotland District, as well as the few remaining pockets of virgin forest. This elevated region was also notorious for its heavily eroded soil, intense Atlantic winds, non-coralline landscape, and frequent landslides, causing few people to settle in either parish. Those that did congregated in the sheltered valleys along the Atlantic coastline, where even the most successful local planters paled in comparison to those residing to the south and the west. John Gibbs, for example, scion of one of the most important early white Barbadian families, barely held over 200 acres in St. Andrew's.⁷ Moreover, the neighboring parish of St. Joseph's contained only 88 separate households and 15 elite plantations, proving that it was also comparatively hard to plant. The most interesting feature of this region is that it became the site for an important local pottery industry, as many settlers took advantage of the substantial clay deposits found in the hills of the Scotland District, especially those near the village of Chalky Mount, and produced many of the sugar pots and drips used by island planters.⁸ Overall, though, these two hilly eastern parishes were not suitable for extensive agriculture and, consequently, had the smallest total populations.⁹

The northern-most parish of St. Lucy's was even more rugged and less conducive to the production of sugar than the hilly Scotland District. The isolated

⁷ DAB, BS 19, 1680 Census.

⁸ Jerome Handler, 'A Historical Sketch of Pottery Manufacture in Barbados,' *Journal of the Barbados Museum and Historical Society*, vol. 30, no. 3, (November, 1963), 129-153.

⁹ Starkey, *Economic Geography*, 44-49.

Map 2.5: St. Lucy's Parish



Map 2.5: TNA, CO 700/Barbados3, Phillip Lea (1685). This map includes the northern portion of St. Peter's (All Saint's) Parish.

area's shallow black soil and slight rainfall meant that the region often suffered severely from drought.¹⁰ Importantly, though, it contained more households than any other parish, aside from the partially urbanized St. Michael's, and stood out as the most paradoxical part of the island. With a soil that was thin and arid, it was nearly abandoned by the elite sugar producers. As Map 2.5 shows, planters did establish sugar plantations along the rugged northern coastline, but few attempted to settle inland. Instead, the island's small and middling farmers, pushed out of more tillable

¹⁰ It was possible to maintain large sugar plantations in this parish, as three out of the ten large landholdings contained over 300 acres. Colonel Simon Lambert and Major Samuel Tidcombe both owned 300 acres, while Captain Thomas Maycock had slightly less than 400. DAB, BS 19, 1680 Census.

Table 2.2: Landholding Patterns, 100+ Acres (1680)

Parish	Land Owners	Enslaved Africans	Avg. Enslaved per Household	% of Enslaved for Group
St. Peter	21	1,503	72	48
St. Andrew	20	1,395	70	65
St. Thomas	24	2,147	89	66
St. John	24	2,204	92	69
St. Lucy	8	788	99	40
Christ Ch.	29	2,858	99	61
St. Philip	28	2,224	79	50
St. James	21	2,163	108	72
St. Joseph	15	1,533	102	72
St. George	29	3,299	114	77
St. Michael	20	1,919	96	52
Totals	239	22,033	92	61

Table 2.2: Puckrein, *Little England*, 148

areas by the elite, flocked to Barbados' northern tip, where they set up small farms specializing in provisions, livestock, cotton, and ginger. Other inhabitants were former indentured servants, or their descendants, who eked out a living as subsistence peasants on the infertile, rocky, sandy lands of the north. Since many were Irish Catholics, shunned and distrusted by an English Protestant majority, they formed their own communities in St. Lucy's back country, with smaller groups moving to St. Joseph's and St. Andrew's. The resulting community of small farmers and minor cash-crop producers, with a correspondingly small enslaved population, likely gave this rugged area a feeling of social equality that was missing from most other parts of the island.¹¹

The census shows, however, that St. Lucy's association with the small farmer was unusual for Barbados and that for most of the island a well-defined social, political, and economic hierarchy, based on land ownership, already existed by the

¹¹ Dunn, 'The Census,' 15-16.

1680s. For this study, the free white population has been divided into three groups based on acreage: the planter elite (100+ acres), freemen (10-99 acres), and the disenfranchised poor (0-9 acres). The planter elite formed the most important group and are represented in Table 2.2 as those individuals who held at least 100 acres of land. 239 households, most of which were centered in the southern five parishes (54.39%), fit this qualification, meaning that only 7.22% of Barbados' landowners controlled about 60% of all cultivatable land. Moreover, the planter elite combined to own over 59% of all enslaved Africans (22,033 out of 37,315), for an average of 92 per plantation. Entering this social group was difficult to do by the 1680s, as a majority of these planters were of second-or third-generation families, whose fathers and grandfathers had established successful plantations during the early halcyon days of sugar production. 40% of the elite's families, for example, had settled on the island in the 1630s, while another 20% had arrived before the Restoration.¹² As such, the planter elite, entrenched within a society that remained hierarchical in nature, quickly came to control both political and economic power within the island and handed it down within certain familial groups. They used their position of power to access a majority of local resources, while jealously excluding the non-elites from sharing in the wealth they generated.

As the census also demonstrates, the planter elite held command over Barbadian politics, repeatedly filling out the ranks of government throughout the decades. Barbados' political system, installed by 1641, was complex and extensive for such a small island. The reigning monarch chose a governor and his Council of eleven wealthy plantation owners, who were to represent the metropole's interests

¹² Dunn, *Sugar and Slaves*, 84-96

and protect the king's prerogative on the island. Working with the Council was a 22 member Assembly, which was made up of two individuals from each parish elected by a narrow franchise of all men who held at least 10 acres of land (1,218 individuals, or 67.29% of free white men could vote in 1680). The Assembly functioned much like the House of Commons in England, as all laws originated in this house and it held considerable power through its control of the governor's salary. To further counter the Assembly, the King chose eight individuals of proven loyalty to additionally represent the Crown on the island, three of whom were to serve as Barons, while the other five held the positions of Attorney General, the King's Retainer, Auditor, General Escheator, and Chief Justice.

Barbados also maintained five separate judicial districts that consisted of 25 judges, 10 clerks, and 13 marshals. The courts then appointed 24 Justices of the Peace to monitor behavior across the island. Added to this total of 114 posts, the islanders also created a variety of other elected positions of lesser power and responsibility, including constables, churchwardens, vestrymen, and tithingmen. When combined with the 243 commissioned militia officers on the island, there were hundreds of available political positions open almost exclusively to the Barbadian planter elites who most ably yielded the required wealth and influence. In the early 1680s, 77 of the wealthiest 175 planters held at least one civil or military post, with many holding multiple positions in different parishes. Archibald Carmichael, for example, held the positions of Deputy Auditor, Marshall for the court in Speightstown, both Marshall and Clerk for the court in the Scotland precinct, and

Captain in the militia, while Stephen Gascoigne served on the Council, represented England as a Baron, and worked as an agent for the RAC.¹³

The 1680 census also depicts the widespread use of unfree labor throughout Barbados. As the first English society with economic and social systems completely built around the institution of unfree labor, the elite planters, small farmers, artisans, merchants, and urban dwellers relied heavily on both indentured white servants and black enslaved Africans. By this decade, however, indentured white servitude appeared to be in severe decline, as only 2,193 remained on the island by 1684. Once the preferred worker for the island's early tobacco and cotton farms, most plantation owners had pulled their white servants out of their fields with the switch to sugar, and either promoted them to act as plantation supervisors, or sent them into town to work as artisans or domestics. Most planters and farmers viewed white servants with a mixture of distrust and disdain, as they were valuable as members of the island's militia, but considered to be expensive, lazy, and ill-prepared to work in the tropics.¹⁴

In 1685, the Assembly wrote a letter to England in which its members maintained that an ideal plantation required one servant for every 14.2 acres of land to maintain optimum efficiency.¹⁵ Few planters, however, bothered to meet this ratio, as only a single parish, St. Peter's, came close to doing so, maintaining one servant for every 18 acres. For the remaining ten parishes, there was little correlation between the number of large plantations and servants. Unsurprisingly, the two parishes with the largest urban centers on the island had the highest indentured servant population, with St. Peter's housing 375 and St. Michael's 715.

¹³ Dunn, *Sugar and Slaves*, 84-96 and NLC, Ayers MS 827, 1684 Census.

¹⁴ TNA, CO 1/37, 15 August, 1676, Atkins to Lords of Trade and Plantations

¹⁵ TNA, CO 31/3, 16 September, 1685, Assembly to Lords of Trade and Plantations

These numbers were far in excess of any other region on the island and combined to form just under 50% of the entire indentured servant population, suggesting that most white servants worked in urban centers by this time.¹⁶

Unfree black labor, however, followed a far more predictable pattern, as the parishes with either the greatest accumulation of large plantations or important towns and villages had the highest number of enslaved laborers. Christ Church and St. Philip's, for example, with more than 35 large plantations apiece, each contained over 4,700 enslaved individuals, while St. Lucy's had only ten and 1,965 respectively. By 1680, all planters preferred an enslaved black workforce, arguing that they were a more cost effective option than white servants and better suited to tropical conditions.¹⁷ Richard Howell and Richard Guy maintained the largest group of enslaved workers on the island, as they co-owned 405 on their 605-acre plantation in St. Michael's, with Henry Drax's 327 coming in a distant second. Ownership on this scale, however, was rare during the 1680s. Only the 16 most successful planters owned over 200 enslaved workers, with 59 other planters owning between 100 and 199, and 100 more between 60 and 99.¹⁸ Overall, the census lists a total of 37,300 enslaved blacks across 3,311 households for an average of over 11 per home.

Tables 2.3 and 2.4 depict how ubiquitous enslaved labor was for even the smallest landholders on the island. Table 2.3 shows the ownership trends of the 979 freeman, who owned 11,865 enslaved Africans, or 12 per household. Many of these planters would have lived on small-to-mid size sugar plantations, especially in St. George's, St. Joseph's, and St. John's parishes, where the average enslaved per

¹⁶ Beckles, *White Servants*, 130-134

¹⁷ Edward Rugemer, 'The Development of Mastery and Race in the Comprehensive Slave Codes of the Greater Caribbean during the Seventeenth Century,' *William and Mary Quarterly*, vol. 70, no. 3 (July, 2013), 429-458.

¹⁸ TNA, CO 31/3, 16 September, 1685, Assembly to Lords of Trade and Plantations.

Table 2.3: Landholding Patterns, 10-99 Acres, (1680)

Parish	Land Owners	Enslaved	Avg. Enslaved
St. Peter	90	1,190	13.22
St. Andrew	43	633	14.72
St. Thomas	74	982	13.27
St. John	49	860	17.55
St. Lucy	145	1,032	7.12
Christ Church	154	1,503	9.76
St. Philip	184	1,978	10.75
St. James	57	727	12.75
St. Joseph	31	550	17.74
St. George	52	932	17.92
St. Michael	100	1,478	14.78
Totals	979	11,865	12.12

Table 2.3: Puckrein, *Little England*, 148

household reached over 17.5. Others, often on smaller plots of land, grew provisions or raised livestock, using enslaved labor to help in this capacity, as well. Table 2.3 further suggests that the fertile southern parishes of Christ Church and St. Philip were home to many provision farmers, with lower averages of 9.76 and 10.75 enslaved Africans per household, while to the far north St. Lucy's, famous for its small farms, had only 7.12.

Furthermore, as Table 2.4 shows, the 592 Barbadian landowners who had between zero and nine acres of land still maintained an overall black workforce of 2,176 enslaved blacks, or 3.68 per household. These ranged from an average of 1.96 per landowner in St. Lucy's to 5.03 in St. Peter's and 5.06 in St. George's. With little land to work, many poorer Barbadians found creative ways to profit from their unfree workers. Some, for example, took advantage of the high demand for labor by hiring out their enslaved to planters that needed additional help with crops or to the parish or island government to work on a specific local project. Henry James and

Table 2.4: Landholding Patterns, 1-9 Acres (1680)

Parish	Land Owners	Enslaved	Avg. Enslaved
St. Peter	93	468	5.03
St. Andrew	36	102	2.83
St. Thomas	37	130	3.51
St. John	28	127	4.54
St. Lucy	78	153	1.96
Christ Church	107	344	3.21
St. Philip	89	279	3.13
St. James	36	122	3.39
St. Joseph	12	47	3.92
St. George	16	81	5.06
St. Michael	62	293	4.73
Totals	592	2,176	3.68

Table 2.4: Puckrein, *Little England*, 148

John Swinestead, for example, both had 40 enslaved Africans that they hired out for small fees, as neither owned any actual land on Barbados.¹⁹ Others would teach their enslaved different artisanal crafts and would help themselves to the money that the black craftsman earned. Overall, these figures demonstrate a pervasiveness of the institution that was contemporarily unique to Barbados, as all free white inhabitants looked to own at least one unfree worker.²⁰ Besides their capacity for work, white Barbadians also saw the enslaved as an important investment, representing a better value than land due to their mobility and high liquidity. Thus, almost all free white settlers participated in this institution, regardless of whether they maintained large sugar plantations, small cotton or provision farms, or, in the case of merchants and artisans, owned no land at all, making slavery a systemic institution on Barbados that permeated all social classes and formed the sinews that drove all types of manual labor on the island.

¹⁹ DAB, BS 19, 1680 Census.

²⁰ Dunn, *Sugar and Slaves*, 126-131.

Along with the returns from individual plantations, Governor Atkins also provided a glimpse into the island's slave trade by including a separate letter attesting to the number of enslaved Africans transported to Barbados in 1679. According to these numbers, the Barbadians bought 1,425 enslaved blacks from the RAC for £20,520, or about £14.4 per head.²¹ While the price appeared to be favorable to the planters and would seem to signify oversupply, the RAC actually underperformed and sent Barbados an unusually low number of enslaved workers for this era.²² The reason for the RAC's lack of effectiveness is unknown, but it is possible that 1679 was a particularly busy year for interlopers, and that the islanders' demand was already met by the time the Company's slave ships arrived in Bridgetown. This would help to explain the combination of low supply and low prices. It is also well known that Governor Atkins, in league with the elite planters on the island, often turned a blind eye to illegal commerce. Thus, this letter offers one last view of the slave trade under the planter-friendly Governor Atkins before his replacement by the Crown with a series of progressively more loyal and monopoly-friendly administrators.

Finally, the census also reveals the considerable presence of middling and small farmers on the island and demonstrates how much of white Barbadian society did not revolve around the large-scale production of sugar. While Atkins did not record the total white population, it can be reasonably inferred from the 1684 census that the island housed approximately 17,000 free white inhabitants in 1680, more than in any other contemporary English colony in the western hemisphere except

²¹ DAB, BS 19, 1680 Census.

²² See Chapter 3 for more on the slave trade.

Virginia and Massachusetts.²³ Importantly, it was the non-elite farmers and white townspeople that constituted most of the island's free population, making up over 90% of all households. The majority of islanders lived modest rural lives, each owning, on average, 22.02 acres of land, with a median size of only ten acres. Middling and poor planters could be found scattered across the island in settlement patterns that were similar to the larger sugar plantations. Numerous white farmers settled in the more fertile parishes of St. Philip's, St. Michael's, St. Peter's, and Christ Church, while few lived in hilly St. Andrew's and St. Joseph's. The only two parishes that differed significantly were St. George's and St. Lucy's, for reasons discussed above.

Moreover, members of these two social groups held both land and labor and could use these to generate reasonable levels of wealth when compared to individuals of similar social standing in other colonies. Thomas Richards, for example, owned only 40 acres of land and 27 enslaved Africans in St. James, but still produced enough sugar to require his own windmill and boiling house, and had enough leftover molasses to also justify a still house. Richards' operation was valuable enough to sell for £543 to Edward Parsons, a Barbadian merchant, in the spring of 1692, an impressive sum for a moderately sized farm in Barbados at the height of a war.²⁴ Furthermore, Richard Townshend, of St. Philip's rented a 64 acres cotton farm with eight enslaved Africans for £87.5 per year, while Michael Wiley's 10 acre provision farm in St. George's generated enough money for him to build a 40 ft. dwelling house, a corn house, an extra kitchen, a hen house, a stable for his four

²³ NLC, Ayers MS 827, 1684 Census.

²⁴ DAB, RB 3/18, ff. 496-501, 1 June, 1692.

Table 2.5: Demographic Information Compiled from the Census of 1684

Parish	Households	Acres	Free Persons	Indentured Servants	Enslaved Persons	Sugar works	Other Hhlds.
St. Peter's	577	6,529	1,977	212	4,199	41	536
St. John's	165	7,319	846	191	3,710	32	133
St. Andrew's	172	7,049	946	109	3,374	38	134
St. George's	200	9,884	1,032	274	5,221	48	152
St. Lucy's	462	6,825	2,222	75	2,536	16	446
St. Joseph's	151	4,825	845	90	3,460	20	131
St. James	204	6,578	999	210	3,582	29	175
St. Thomas's	275	7,738	1,854	258	4,070	39	236
St. Michael's	915	7,514	3,203	451	5,663	25	890
Christ Church	425	12,854	1,854	305	5,605	39	386
St. Philip's	510	13,400	2,365	206	5,181	31	479
Totals	4,056	89,306	17,187	2,381	46,602	358	3,698

Table 2.5: NLC, Ayers MS 827, 1684 Census

cattle, and houses for at least five enslaved Africans.²⁵ Similarly, thousands of other middling and small farmers, artisans, merchants, sailors, and townspeople labored in relative anonymity, and, like Richards, Townshend, and Wiley, made a decent living, while providing many of the basic provisions and services necessary for the elite to continue to grow sugar and pursue great wealth.

Only four years later, Governor Richard Dutton asked for the parish vestries to conduct another census of the island in order to update the records of the Lords of Trade and Plantations and give them a more accurate depiction of life on Barbados under a new government and a more trusted governor. This census is less comprehensive than its predecessor, but included important information missing from Atkins' 1679 edition, including the free white population, the total number of operational sugar works, and a meticulous breakdown of the local government. Dutton also sent back details on some economic statistics, including the duties

²⁵ DAB, RB 3/16, ff. 226-227, 25 March, 1687 and RB 3/20, 104-108, 4 June, 1692.

collected both on imported liquor and sugar, shipping records, and the number of enslaved Africans and indentured servants imported into the island over the course of the year.²⁶

Like its predecessor, the 1684 census highlights numerous themes that are worth mentioning and that depict how the island changed in only four short years. First, the figures depicted in Table 2.5, when compared to those in Table 2.1, reveal an insular society that was still expanding during the 1680s, as the census displays quantitative growth in almost every statistical measurement. One key area of development was in the islanders' cultivation practices, as they brought an additional 5,073 acres of land into use. With this increase, the Barbadians established 745 more households throughout the island, causing drastic demographic transformations in most of the island's eleven parishes. St. Joseph's increased from only 88 households in 1680 to 151 in 1684, a 72% increase, while St. George's experienced a 64% increase in households, with an additional 3,730 acres placed under cultivation. St. Andrew's also grew significantly in both acreage (26%) and households (58%). Interestingly, people moved away from the island's urban center at Bridgetown, causing St. Michael's population to drop by 11%, but to Speightstown, which experienced a 177% increase. Oistin's and Holetown evidently grew as well. One draw to the smaller towns of Barbados, according to Dutton, was the refurbishment of many of the original houses, which were being 'rebuilt with stone or brick and covered with tiles, slate, or shingles, and built after the English fashion for commodiousness and decency as well as strength.' This rebuilding program suggests that the Barbadians were creating a permanency for themselves in these small

²⁶ Ibid.

settlements, and within the island as a whole, as the new homes were meant to withstand 'time, fire, or hurricanes.'²⁷

The 1684 census also suggests that with the shifts in population, more sugar plantations also began to appear in the booming northern regions, creating balanced production throughout the island. While St. George's parish remained at the heart of the industry, with 48 sugar works, the number of mills in St. Andrew's, St. Thomas', and St. Peter's also appear to have expanded significantly. St. Peter's possessed 41 sugar works in 1684, the second most on the island, and St. Thomas, St. Andrew's, and St. James' now ranked third, fifth, and seventh respectively. Consequently, the number of plantations in the south seemed to have either stabilized or declined slightly, as St. Philip's, St. Michael's and Christ Church remained approximately the same.

The enslaved African population had also grown substantially by 1684. The census shows an increase of almost 10,000 in the four years since 1679, with gains most pronounced in the regions of both high population and extensive sugar production. St. George's, for example, experienced a 2,258 person increase, while St. Andrew's grew by 1,126, Christ Church by 882, and St. Michael's by almost 600. However, while most Caribbean 'slave societies' underwent drastic population transformations that left many islands with enslaved African to free white ratios approaching a 10:1 discrepancy, Barbados stood as a meaningful exception. Even with the massive influx of enslaved Africans, Table 2.6 shows that Barbados' ratio of enslaved black Africans to free white settlers stood at just 2.7:1 in 1684 and did not officially push past the 3.0:1 threshold until the middle of the eighteenth-century.

²⁷ TNA, CO 1/47, 11 June, 1681, Dutton's answers to enquiry respecting Barbados.

Table 2.6: The Free White Population in Barbados, 1655-1748

Year	Free White Population	Enslaved Black Population	Ratio of Black to White
1655	23,000	20,000	0.87:1
1673	21,309	33,184	1.56:1
1676	21,725	32,473	1.49:1
1684	17,187	46,602	2.71:1
1712	12,528*	41,970	2.48:1
1715	17,018	NA	NA
1748	15,252	47,132	3.09:1

Table 2.6: TNA, CO 1/30, 28 May, 1673, Colleton to Council for Trade, TNA, CO 29/2, 13 February, 1676, Atkins to Lords of Trade and Plantations, NLC, Ayers MS 827, 1684 Census, DAB, Pam. C283, 1712 Census, and DAB, BS 19, 1715 Census. The asterisk next to the 1712 population figures signifies an incomplete data set, as the totals from Christ Church were not included in the final tallies. As a fertile and well-settled area of the island, Christ Church likely had between 1,800 and 2,000 free whites (1,914 in 1715), which would push the population up to almost 14,500 and would have caused the ratio to rise to 2.89:1.

These figures suggest that, while undoubtedly a ‘slave society’ by the 1680s, Barbados retained a significant white population throughout its first century that did not fit within the established stereotype of eighteenth-century plantation societies.

These ratios were possible because the island’s free white population remained consistently high for a Caribbean plantation society throughout the late-seventeenth and early-eighteenth centuries. Assuming that the 1673 and 1676 totals from Table 2.6 include the island’s indentured servants, which the sources suggest and which would have consequently added at least 3,000 more inhabitants to the total, Barbados’s free white population remained between 17,000 to 18,500 for most the 42 year period between 1673 and 1715, regardless of the limitations caused by two wars, frequent outbreaks of disease, periods of unstable weather, and a preference for enslaved black labor. The only exception to this constancy was in 1712, when the census returns added up to only 12,528 free whites, although this total lacks the sizable figures for Christ Church. Thus, the free white population in the period covered by this dissertation showed little change, as the 17,187 present in 1684 was nearly identical to the 1715 total of 17,018, even though nearly twenty

years of warfare occurred between these two eras. These numbers therefore suggest that modern historiographical claims of the island promoting white flight and representing a white 'demographic disaster area' are exaggerated, as a significant free white population remained on the island throughout its early history.²⁸

Overall, the censuses of 1680 and 1684 provide a varied look into white Barbadian society during the last quarter of the seventeenth-century and portray three distinct images of life on a Caribbean island. On one hand, they provide the first quantitative look at a mature plantation society, with a few important urban centers and a small group of elite planters who controlled the political, economic, and social aspects of Barbados. These leading planters welcomed the establishment of a fully developed 'slave society,' England's first, where unfree black labor had effectively replaced white indentured servitude. On the other hand, these censuses portray an island community with over 17,000 free whites, most of who lived rurally, worked as middling or poor planters and farmers, and owned unfree labor. They represented the 'truest' depiction of a white Barbadian population: creolized individuals who lived their entire lives on the island, where they worked, married, had children, and died. These were the representatives of a society that was now 'part European, part African, and uniquely Barbadian.'²⁹ Finally, the censuses show that by the 1680s, Barbados was flourishing as an economic and social power in the Caribbean. Its white population appeared to still be growing, slavery was becoming more prominent across all social classes, and sugar production continued to expand in most parishes. Thus, by the late 1670s and early 1680s, the censuses suggest that the conditions on

²⁸ Dunn, *Sugar and Slaves*, 62, 67, 75, 88-89, 300-301, 334-340, Starkey, *Economic Geography*, 82-88, Puckrein, *Little England*, 184-194, and Harlow, *History*, 215.

²⁹ Stoner and Brinegar, 'Archaeology,' 106.

Barbados were ideal for a peak economic moment to occur during the late-seventeenth century.

Part II: Disease on Barbados during the 1680s and 1690s

While the 1680 and 1684 censuses generally depict a society on the ascendency, they also contain a startling series of statistics that reveal how dangerous the tropics could be for its inhabitants. In 1680, for example, 1,058 burials occurred, compared to only 630 baptisms, for a ratio of 1.68:1. By 1684, conditions appear to have become worse, as there were 1,026 burials and only 407 baptisms, leading to a troubling ratio of 2.52:1. Contemporaries recognized the deadly nature of the late-seventeenth century tropics and most realized how abruptly life could be taken by pestilential forces not yet properly understood by the island's inhabitants. In 1684, Thomas Tryon, in a pamphlet offering advice to English planters, posed a rhetorical question concerning the very real fear that gripped both black and white Barbadians: 'Do not we see how men are cut off by Diseases in the prime of their Years, and very few attain to old Age? *Soon Ripe, Soon Rotten.*'³⁰ Tryon's question would have likely been answered in the affirmative by many living on the island, as the threat of disease became one of the defining factors of life in the tropics. Yet, regardless of its prominence, it continued to be woefully misunderstood by those who experienced it.

Part of this confusion derived from the fact that seventeenth-century scientists still believed in a Hippocratic theory of health that centered on the existence of four humors that controlled the body's overall condition. Blood, yellow bile (choler), phlegm, and black bile (melancholy) needed to remain in perfect balance for an

³⁰ Thomas Tryon, *Friendly Advice to the Gentlemen-Planters of the East and West Indies*, (1684), 49.

individual to maintain good health; however, each specific climate created its own characteristic humoral mix, causing new arrivals physical distress while their bodies adjusted to a novel environment. Choler, corresponding to fire, was understood to be exceedingly prevalent in the hot and humid Caribbean. According to Thomas Trapham, a planter and doctor in Jamaica and author of the first English book on tropical medicine, 'That Choler abounds between the Tropicks, is but reasonable as well as matter of fact; for the inflaming Sun must needs kindle its like on its nearest subjects.'³¹ The resulting sickness, and its accompanying discharges and excretions that most experienced upon arriving in Barbados, was believed to be the body's natural adjustment to the new conditions.³²

To counter the effects of a rapid transition to a Caribbean climate, West Indians recommended that each new arrival undergo a period of seasoning, a one-to-two-year acclimation cycle that prepared one for a healthier life in the tropics. During this time, a person could expect to suffer from serious illness, but in surviving this ordeal built up immunities to prevalent diseases and reduced the risks of catching others in the future. The new arrival could also use this time to slowly adjust to the island's unique dietary and work regimes and begin to accrue the knowledge necessary for survival.³³ Timing was also important, as the Caribbean year had eight 'healthful months...from the middle of September to the middle of

³¹ Thomas Trapham, *A Discourse of the State of Health in the Island of Jamaica*, (1679), 84, M.T. Ashcroft, 'Tercentenary of the first English book on tropical medicine,' *British Medical Journal*, (August, 1979), 475-477.

³² Kuperman, 'Fear,' 213-217.

³³ Adjusting to the new food could be particularly difficult, especially if a newcomer was not free or wealthy enough to readily afford either imported English fare or fresh meat from island livestock. Henry Pitman, for example, ate little more than a bit of fish or beef and large amounts of corn meal as an indentured servant in the 1680s. This 'course and mean fare brought me to a violent Flux, insomuch that I was forced to complain to my Master, desiring him to allow me some Flower instead of Indian corn to make Dumplings withal.' Henry Pittman, *A Relation of the Great Sufferings and Strange Adventures*, (1689), 11.

Table 2.7: Reports of Outbreaks of Disease in Barbados, 1684-1700

Year	Reports of Disease in Barbados
1680	‘It hath pleased Providence to send a great mortality...which swept away many of our people and slaves.’
1684	Widespread reports of the dry bellyache
1685	Great mortality among negroes and servants through small pox, fevers, dry bellyache
1686	Small pox, violent feaver killed many of our best, belly-ache amongst all sorts of people
1687	Fever and ague among us, great mortality among Christian servants, negroes, and cattle, Small pox
1688	NA
1689	Bloody flux
1690	Mortality among men has been little less violent than among beasts
1691	Epidemic Fever
1692	Sickly time, the island continues sickly, fever
1693	In a Perfect State of Health (Winter), Sickly seasons, fever (Summer)
1694	Increased...sickness...now rages among us, Bridgetown also is very sickly, fever
1695	Sickness increases...with greater malignancy than ever, dry bellyache returns, fever, small pox
1696	Very sickly more than ever it hath been, the People die very fast in Towne and Country, very unhealthy
1697	A succession of deadly seasons, the mortality among the white men had been very great
1698	Fever
1699	The island was sickly with the distemper that has for long reigned in these parts of the world
1700	The continuance of the pestilential fevers and great mortality in Barbados, especially among the negroes, had resulted in a declining trade, A Rageing and Violent Sickness

Table 2.7: The information for this table comes from descriptions of island conditions contained in letters between Barbadian governors and the English government, now kept in the CO papers. The 1696 descriptions, however, come from TNA, ADM 106/494/24, 26 July 1696, Reeves to the Commander of His Majesty’s Navy and TNA ADM 106/49/51, 10 September 1696, Reeves to Ibid.

May,’ and four ‘unhealthy months from the latter end of May to the middle of September.’ For many, the hot and humid summer weather represented the perfect conditions for the rapid spread of deadly fevers caused by the ‘intemperate and pestilent’ midday summer air and the dewy moisture-laden nights that followed. As such, it was best to ‘arrive some little time before those four months,’ as it gave the newest islanders a chance to begin the seasoning process, ‘so that the change of weather seldom affects them.’³⁴ Surviving this period meant that one’s body had sufficiently adjusted to the new environment in a variety of ways: the blood would

³⁴ TNA, CO 137/4, 22 October 1697, Jamaican Agents to Council of Trade and Plantations.

have adequately paled and thinned, choler levels would have appropriately increased, and the four humors would have rebalanced themselves in a way more suitable for life in the tropics.³⁵ Unfortunately, this theory of health was erroneous and, regardless of how long their seasoning lasted, those living in seventeenth-century Barbados continued to struggle with the new diseases that they encountered.

The range of deadly maladies that destroyed the ‘peace of Mind, health of Body, and outward Estates,’ was vast, and included ‘the Stone, Collick, windy distempers, palsies, Cramps, Leprosies, Kings-Evils, Gout, dry Belly-aches, dropsies, Consumption, and an hundred other Evils of this Nature.’³⁶ Table 2.7 shows that outbreaks occurred for many of these illnesses at some point between 1680 and 1700, a period that can be best organized into three separate disease cycles. The records show that the first, 1681-1683, represents a relatively healthy sequence of years, with disease existing only at the individual level. After Atkins’ claims of a ‘great mortality’ in 1680, island reports and governor letters remain silent on the issue, providing no evidence of any epidemical outbreaks in the early parts of the decade. While the 1684 census hints at the possibility of the prevalence of disease, as the figures from the burial registers convert to a crude burial rate of 53 deaths per 1,000 free white inhabitants, a surprisingly high number given the economic expansion that occurred during the era, contemporary sources offer no additional information and show that the planters had no general fear of an epidemic.³⁷ Thus, it appears that Barbados was a generally healthy society throughout the early 1680s with few substantial outbreaks of disease.

³⁵ Kuperman, ‘Fear,’ 213-222 and Puckrein, ‘Climate,’ 183-185.

³⁶ Tryon, *Friendly Advice*, 136.

³⁷ Puckrein suggests that the 1683 returns could cover more than a single year, and that the corresponding high numbers might be nothing more than ‘a function of time.’ NLC, Ayers MS 827, 1684 Census and Puckrein, *Little England*, 188-89.

The second period spans from 1684 to 1690. In these years, a myriad of serious illnesses occurred that infected all social and racial groups on the island. The outbreaks began in 1684 with a bad case of the dry bellyache developing among the free white population that turned into a minor epidemic for ‘all sorts of people’ by 1686. In that same year, a violent fever also broke out, threatening many of the island’s ‘best.’ Enslaved blacks and white servants both suffered from a three-year period of ‘Great Mortality’ that began with a severe case of smallpox in 1685. Finally, after a year of respite, the ‘Bloody flux,’ or dysentery, swept through the island for a short time in 1689. After this, the outbreaks of disease subsided for a few years, although the records indicate that 1690 saw large numbers of animals perish from an undisclosed sickness. Thus, while many different lethal diseases infected the Barbadians during the mid-1680s, the epidemics were relatively short-lived. Table 2.7 even suggests that three out of the last four years of this period were generally healthy for the human population.

The final phase of this period, however, stands out as being marked by exceptionally deadly and prolonged fevers. Mired in an era of historically cool and rainy weather between 1692 and 1700, the records suggest that mosquitos flourished on Barbados and annually spread their deadly maladies to a population already weakened by war and the subsequent lack of imported necessities. Starting out as mere ‘sickly times’ with epidemic fever in 1692, the island had become, according to Governor Kendall, a ‘Region of Death’ by 1693. ‘It was a sad and Reall Truth’ that within three years of his arrival ‘one halfe of the Inhabitants have since... paid their Tribute to that Sovereign Prince of Terrors.’³⁸ In 1694, illness had spread to

³⁸ Ibid., 13 February 1693, Kendall to Committee of Trade and Plantations.

Bridgetown, where the new Governor, Francis Russell, also witnessed the destructive power of tropical disease, admitting that ‘it is the Misfortune of this Island’ that the fever, in conjunction with a new outbreak of dry bellyache, ‘hath swept away some hundreds’ of island inhabitants.³⁹ By 1695, the island experienced a ‘greater malignancy than ever,’ and became ‘very sickly, more than ever it hath been’ in 1696, with people dying ‘very fast in Towne and Country.’ The last four years of the decade saw little relief from the deadly fever that gripped the island and, by the end of the century, had appeared to have spread, with a ‘great mortality,’ even breaking out within the enslaved black community.

What made the rapid spread of disease so terrifying during the 1690s was that it seemed to affect people of all social and racial backgrounds; few could escape the wide variety of sicknesses that tormented the island. The Council and Assembly calculated in 1696 that the enslaved population, which had previously ‘approached 70,000... now appears to be but 42,000’ and the white population, almost 17,200 in 1684, had reportedly declined to barely 12,000.⁴⁰ The planter elite also suffered, as wealthy Barbadians, such as Sir Timothy Thornhill and Lieutenant-Colonel John Reade, succumbed to the ravages of fever in 1693.⁴¹ High profile deaths like these caused a group of concerned elite planters to send a petition to King William III, in which they lamented the ‘miserable and dangerous condition of the said Island.’ Furthermore, as a result of ‘the late Mortality,’ which, ‘having extremely dispeopled the Island,’ they had become ‘so impoverished that very many considerable families and Plantations are ruined.’⁴² Governor Russell further complained that the fever

³⁹ TNA, CO 29/5, 23 March 1694, Russell to Committee of Trade and Plantations

⁴⁰ TNA, CO 29/2, July 1696, Council and Assembly to Whitehall

⁴¹ TNA, CO 28/2, 10 February 1693, Kendall to Lord President.

⁴² Ibid., 1694, Petitioners to William III

had even reached his own plantation at Fontabelle, and that the sickness ‘reigns here very much,’ resulting in the recent burial of ‘three of my servants [with] five more lying sick at this time.’⁴³ Thus, death was a powerful social equalizer, with the fear of disease and its devastating effects present in the minds of men and women from all classes and racial groups.

As the varied descriptions presented in Table 2.7 suggest, the most worrisome diseases of the late-seventeenth century were the dry bellyache and fever.

Historiographical and anecdotal evidence contend that fever, generally classified as either malaria or yellow fever, was the far deadlier of the two and was more prevalent throughout Barbados than any other malady during this sickly decade.

John Oldmixon, an eighteenth century historian, claims, for example, that fever was so widespread during the 1690s that it killed almost a third of the colony’s population.⁴⁴ These are only partial truths, however, as parish records suggest that neither malaria nor yellow fever actually affected the Barbadian population as much as the letters sent back home implied. Malaria, for example, was almost non-existent in seventeenth-century Barbados, as *Plasmodium Falciparum*, transferred to humans through the *Anopheles* mosquito, could not yet find an adequate vector on the island. Much of the African population was highly resistant to this strand, with the frequent presence of either the sickle cell trait or a blood enzyme deficiency known as glucose-6-phosphate dehydrogenase deficiency, or G6PD, greatly limiting those susceptible to the disease. Others possessed lesser-known blood variations, such as Hemoglobin C and the thalassemia trait, which further helped to protect those of West African descent. The middling and poor white population, while highly

⁴³ TNA, CO 29/5, 25 September 1694, Russell to Lords of Trade and Plantations

⁴⁴ John Oldmixon, *The British empire in America*, (1708), 112.

vulnerable, also had limited exposure to the contagion through herd immunity, while the wealthy had access to a cure made from the quinine-rich bark of the Peruvian cinchona tree. Known as Jesuit's Bark to most Europeans, its curative powers had become common knowledge to many in the medical profession by the 1680s, although it was expensive and difficult to obtain, as it grew high in the Andes Mountains.⁴⁵ Moreover, the practice of penning animals, especially at night, at a significant distance from human habitation also limited any potential spread of the disease. *Anopheles* mosquitos, preferring animal to human blood, would have been able to adequately feast on the large livestock population kept by the Barbadians, limiting the transmission of the protozoa.⁴⁶ Thus, *Plasmodium Falciparum*, finding few vulnerable hosts in Barbados, did not plague the island in any meaningful way during the seventeenth-century.⁴⁷

Yellow fever, on the other hand, was far deadlier, killing thousands in Barbados throughout the 1690s. Originating in Africa and spread by the *Aedes Aegypti* mosquito, the disease took a brutal toll on the human body and killed 50% of those it infected. The survivors suffered from fever, muscle cramps, nausea, jaundice, and some internal hemorrhaging. In most lethal cases, however, 'victims generally ooze blood through the nose and ears, suffer delirium, and vomit up partially coagulated blood, often roughly the color and consistency of coffee

⁴⁵ Kenneth Kiple, *The Caribbean Slave: A Biological History* (Cambridge: Cambridge University Press, 1985).14-22, Philip Curtain, 'Disease Exchange Across the Tropical Atlantic,' *History and Philosophy of the Life Sciences*, vol. 15, no. 3 (1993), 344-348, James Goodyear, 'The Sugar Connection: A New Perspective on the History of Yellow Fever,' *Bulletin of the History of Medicine*, vol. 52, no. 1 (Spring 1978), 5-21, J.R. McNeil, 'Ecology, Epidemics and Empires: Environmental Change and the Geopolitics of Tropical America, 1600-1825' *Environment and History*, vol. 5, no. 2 (June 1999), 175-184.

⁴⁶ Kiple, *Caribbean Slave*, 16 and McNeil, *Mosquito Empire*, 54-55.

⁴⁷ The first malaria epidemic in Barbados did not actually occur until 1924. Schuyler Fonnaroff, 'Did Barbados Import Its Malaria Epidemic,' *Journal of the Barbadian Museum and Historical Society*, vol. 34 (1973), 122-130.

Table 2.8: Mortality Statistics for Five Parishes in Barbados, 1680-1700

Parish	Number of Years	1st Half of Year	2nd Half of Year	% in 2nd Half	Overall	Per 1,000
St. Michael's	18	3,260	3,736	53.00%	6,996	121
Christ Church	21	475	626	56.86%	1,101	28
St. Philip's	21	308	368	54.43%	676	14
St. John's	12	106	217	67.20%	323	32
St. James'	8	97	154	61.40%	251	28
Totals	21	4,246	5,201	55.00%	9,347	57 (22)

Table 2.8: DAB, RL 1/1 (St. Michael's), RL 1/29 (St. John's), RL 1/25 (St. Philip's), Ang. 14/1/1 (St. James) and RL 1/21 (Christ Church) These five parishes have extant records for most of the period between 1680 and 1700. Some, however, are incomplete, as St. Michael's only runs through 1698, St. James' begins in 1693, and St. John's is missing through 1684 and from 1696-1699. The parish ministers only recorded white Anglican deaths in their registries.

grounds: the black vomit.⁴⁸ Unfortunately for those on Barbados, the sugar islands of the Caribbean were a near-perfect environment for this species of mosquito.

Aedes Aegypti thrive in mild climates with temperatures hovering around 26 degrees Celsius, which would have likely been the norm in Barbados during the cool summer months of the 1690s, and were able to survive on sugar when a blood meal was unavailable. Moreover, they favored wet, hot, urban landscapes, and reproduced easily within an island setting, using small catches of water in gutters, water barrels, jars, or clay sugar pots to lay their eggs. Finally, with Bridgetown's position as an important trans-Atlantic port and destination for English mariners and soldiers, a large number of young men arrived each year, populating the town with thousands of individuals who had never had the opportunity to acquire a previous immunity.⁴⁹

These conditions combined to quickly transform the bustling port town into one of the deadliest places in the world. An analysis of mortality statistics from the five southernmost parishes of Barbados shows how deadly the area became by the

⁴⁸ McNeil, *Mosquito Empire*, 33-36.

⁴⁹ Goodyear, 'Sugar Connection,' 5-21, McNeil, 'Ecology,' 175-184, McNeil, *Mosquito Empire*, 33-62, Kiple, *Caribbean Slave*, 17-20, Curtin, 'Disease Exchange,' 347-348

mid-1690s. Table 2.8 demonstrates that almost 7,000 people died in St. Michael's parish between 1680 and 1697, a number more than twice as high as the other four parishes combined. Overall, the parish experienced an incredibly high crude burial rate of 121 deaths per 1,000 individuals, cresting well above 150 during particularly deadly years. To put this statistic into context, Trevor Burnard calculates that contemporary mortality rates for the Chesapeake and Carolinas ranged between 50-70 deaths per 1,000 people, London 45 per 1,000, and Philadelphia, another colonial port town, 46 per 1,000. In Jamaica, St. Catherine's and St. Andrew's parishes peaked at 76 and 61 burials per 1,000 respectively during the 1690s.⁵⁰

Regardless of what the statistics reveal, however, yellow fever never really became a 'Barbadian' disease, as it instead mostly infected the soldiers and sailors who docked in Bridgetown during the Nine Years War and threatened few outside of St. Michael's parish. Thrust into a disease environment that they could not properly handle, it was these 'unseasoned transients' who were particularly susceptible to yellow fever and who made up the majority of those who died in St. Michael's between 1689 and 1697.⁵¹ In 1693, for example, Governor Kendall complained of the unfortunate effects the fever was having upon the armed forces sent to protect the island. Lamenting that 'this late distemper has been severely fatall to the regiments rais'd for an expedition against the French,' it was particularly disastrous because it killed 'severall inferior Officers, and no inconsiderable number of common soldiers.'⁵² In 1694, Edward Cranfield also related how 'the distemper...hath proved very fatall to the new Comers in the last fleet...and many of them are dead of it, and

⁵⁰ Trevor Burnard, 'The Countrie Continues Sicklie': White Mortality in Jamaica, 1655-1780,' *Society for the Social History of Medicine*, vol. 12, no. 1 (1999), 45-51 and Dunn, *Sugar and Slaves*, 325-330.

⁵¹ Dunn, *Sugar and Slaves*, 325-330

⁵² TNA, CO 28/37, 13 February 1693, Kendall to Committee of Trade and Plantations.

Table 2.9: Mortality Figures Divided into Five Year Periods, 1681-1700

Years	St. Michael's	Christ Church	St. Philip's	St. John's
1681-1685	1,780	280	268	23
1686-1690	1,120	213	149	161
1691-1695	2,898	275	106	114
1696-1700	902	302	73	25
Totals	6,700	1,101	676	323

Table 2.9: DAB, RL 1/1, RL 1/29, RL 1/25, and RL 1/21

I fear few of the rest will escape.’⁵³ The anecdotal evidence correlates well with the mortality statistics. Table 2.9 shows that the five year period between 1691 and 1695, which covers the height of the war, represented the single deadliest period in St. Michael’s, as there were over 1,000 more deaths during this time than in any of the other three five-year periods analyzed.

The three neighboring parishes of Christ Church, St. Philip’s and St. John’s, however, experienced little or no increase in the number of deaths during this same period.⁵⁴ As Table 2.9 indicates, St. Philip’s even experienced declining death rates during the 1690s, with total burials dropping from 268 in 1681-1685 to only 73 in 1696-1700. In St. John’s parish, the numbers also declined, falling from 161 in 1686-1690 to 106 in 1691-1695. The mortality rates for these four parishes, as shown in Table 2.8, were surprisingly low for both a tropical environment and an era defined by disease. Outside of St. Michael’s, St. John’s had the next highest crude burial rate, at 32 deaths per 1,000 people, with Christ Church and St. James’ both following at 28 per 1,000. St. Philip’s was last with only 14 per 1,000, which

⁵³ Ibid., 30 October 1694, Cranfield to Duke of Shrewsbury.

⁵⁴ DAB RL 1/29, RL 1/25, and RL 1/21

dropped it below even New England's famously low mortality rate of 15 per 1,000.⁵⁵ When St. Michael's inflated numbers are removed from the calculations, the four parishes averaged a crude burial rate of 22 per 1,000 for the period, which compares very favorably to Puckrein's extended historical calculations.⁵⁶

Instead, the Barbadians appear to have largely adapted to yellow fever by the end of the seventeenth century, with the disease killing far fewer local inhabitants than the government's communications back to England contend. The main reasons for this were two-fold. First, infected children under the age of 14 were typically resistant to the disease and suffered from few of the harsh symptoms that their elders experienced. Moreover, their survival guaranteed them a hereditary immunity for life. This meant that a significant portion of the creolized white population had developed immunities by the 1690s, as many would have either caught the sickness in a mild form as a child or had ancestors who survived the 1647 outbreak and passed their immunities on to future generations. As West Africans had been exposed to this contagion for centuries, the vast majority of enslaved blacks would have also had immunities passed down to them. This allowed for a herd immunity to develop in Barbados among the creolized and African populations that could effectively kill off the disease through a lack of susceptible vectors.

Secondly, *Aedes Aegypti* has a very limited range and short life span, making it rare for the insect to travel more than 300 meters from its birthplace, or port of entry. This kept the disease in the Bridgetown area, with surrounding parishes

⁵⁵ These numbers only take into account the island's white Anglican population. The enslaved had a mortality rate between 40 and 60 per 1,000 and the white indentured servants probably died with a similar frequency.

⁵⁶ Puckrein calculates overall crude burial rates for the census years between 1680 and 1716, and then in a series from 1749 to 1762. His rates all fall between 22 and 51 per 1,000, although they do include St. Michael's throughout. Puckrein, *Little England*, 189.

Table 2.10: Mortality Figures for St. James' with Causes of Death, 1693-1701

Year	Total Deaths	Fever	Dry Belly-ache	Small-Pox	Other Disease	Crude Burial Rate
1693	21	0	0	0	0	21
1694	18	0	0	0	0	18
1695	48	0	0	14	0	48
1696	38	0	0	3	0	38
1697	14	0	0	0	0	14
1698	28	0	6	0	0	28
1699	42	1	4	0	2 Fitts	42
1700	42	0	6	0	1 worms, 1 consumption, 1 gout, 1 dropsey	42
1701	31	1	2	0	1 dropsey	31
Totals	251	2	18	17	7	28

Table 2.10: DAB, Ang. 14/1/1. The records in St. James' Parish do not start until 1693 and only contain the burial information for the white Anglican population. Therefore, enslaved blacks and Catholic indentured servants would not be included in this total.

showing little evidence of its spread. Table 2.10, for example, demonstrates that St. James', directly to the north of St. Michael's, had little contact with this disease, as the vestry ministers only recorded two deaths from any type of fever out of the 251 that occurred between 1693 and 1701. Thus, it was the large number of transient sailors and soldiers that arrived in Bridgetown each year as part of the English war effort that succumbed to the island's deadly fevers and most heavily influenced the characteristically high death rates in St. Michael's.

There were two diseases, however, that did pose a much greater threat to the island's rural population. The first was smallpox. Originating as a European disease that spread through human vectors via respiration, it was brought to Barbados by outsiders, usually through either infected children or adults that caught it from an imperfectly immunized society. It was particularly dangerous because neither the enslaved Africans nor the creolized white population had any resistance to it. Luckily for both black and white Barbadians, epidemical outbreaks of smallpox

appear to have been infrequent. Table 2.7 suggests that there were only two such occurrences between 1680 and 1700, although the records provide little detail about the extent of the disease's spread. The first appeared to be fairly serious, as it began in 1685, during a time of 'great mortality,' and remained on the island for three years, through 1687. The second outbreak, corroborated by the burial records from St. James, appeared in 1695 and lasted until the next year. During this time, vestry ministers recorded that 17 free whites died from smallpox in St. James alone, constituting about 20% of the total burials for these two years. The disease also likely infected a considerable portion of the black population, as their very limited exposure to the strain in Africa left few immune. Yet, this second outbreak was short and the disease's spread must have been narrowly confined to a few parishes, as smallpox soon disappeared from the seventeenth-century records.⁵⁷

The second disease, the dry bellyache, was perhaps the most paradoxical illness encountered on the island, as it was both extremely common and the most mysterious. Existing in Barbados since at least the 1660s, planters had little knowledge of what caused the dry belly-ache before eighteenth century scientists identified it as lead poisoning and island doctors could not find a consistently successful cure for it. The observable symptoms of lead poisoning were easy enough for most on Barbados to identify: initial chills quickly led to spasms of the abdominal wall muscles, excruciatingly painful intestinal cramps, and severe constipation. As the disease advanced, limbs could become paralyzed, sometimes permanently, and the body could go into frequent and prolonged seizures that eventually led to coma and death. Seventeenth-century Barbadians, however, could not fully understand the

⁵⁷ Curtin, 'Disease Exchange,' 348-353, Kiple, *Caribbean Slave*, 11-13.

long-term effects of the disease, and did not realize the extensive damage it caused to cognitive and behavioral function or the nervous system's electrical conduction, which is what caused the mysterious paralysis and fatality.

Many erroneously believed that the disease resulted from the digestion of unripe roots and fruit or from the juice of the sugarcane.⁵⁸ Others, such as Thomas Tryon, blamed it on a lack of 'Heat and Moisture in the Bowels' for turning 'the Excrement...into so hard a substance, that it cannot freely pass,' but also admitted that 'there is scarce a Doctor that hath yet found out a certain Remedy.'⁵⁹ The best that Governor Russell could recommend upon diagnosis was to immediately 'go into a cold climate if this distemper be not taken at the very beginning but suffered to hang upon any one but a little time, it is absolutely incurable, and the party grieved remains a Cripple during life.'⁶⁰ In actuality, though, the pandemic nature of the disease resulted from the fact that lead was everywhere in Barbadian society, including in a variety of luxury goods and, more importantly, used to line both the cisterns and gutters built to collect rain water to drink and the distillery pipes used to turn molasses into rum. Thus, since it inevitably ended up in both the water and the rum that the Barbadians drank, it affected individuals of all social and ethnic groups to a considerable degree.⁶¹

As Table 2.7 illustrates, the dry bellyache was most prevalent in Barbados during two specific periods: from the mid-1680s, as Governors Dutton and Stede

⁵⁸ Richard Sheridan, *Doctors and Slaves: A Medical and Demographic history of slavery in the British West Indies, 1680-1834* (Cambridge: Cambridge University Press, 1985), 34-35.

⁵⁹ Tryon, *Friendly Advice*, 59.

⁶⁰ TNA, CO 29/5, 23 March 1695, Russell to Committee of Trade and Plantations.

⁶¹ Other lead-based items common to Barbados include paint, hair dyes, cosmetics, medicines, and spices imported into the island, the pewter that made up kitchen utensils, and storage containers. Jerome Handler and Arthur Aufderheide, et al. 'Lead Contact and Poisoning in Barbados Slaves: Historical, Chemical, and Biological Evidence,' *Social Science History*, vol. 10, no. 4 (1 December 1986), 403-415 and Dunn, *Sugar and Slaves*, 306.

reported annual outbreaks between 1684 and 1686, and in 1695. Yet, it is likely that these only represent times when the disease was at its worst, since it was always present to some degree on the island. Table 2.10, for example, shows that another outbreak occurred in St. James for an additional four-year period between 1698 and 1701. During this time, it claimed the lives of at least 18 free white inhabitants, the highest toll for any single identified disease in that parish. An understanding of the scope of this ailment, however, is impossible without realizing just how many enslaved blacks also suffered from it. According to Jerome Handler, the enslaved, as well as poor whites, were particularly vulnerable to the disease, as they drank most of the ‘low-wine’ rum, which was the cheaper product of the first distillation and would have passed through a series of lead pipes in its production. Handler, based on his extensive research of the bones from the slaves who worked on Samuel Newton’s sugar plantation, concluded that 27% of the black enslaved population had enough lead in their blood to result in moderate to very severe lead poisoning. If this proportion remained consistent throughout Barbados, nearly 12,000 enslaved blacks would have experienced at least some of the dry bellyache’s primary symptoms. When combined with the fact that a significant portion of the white population also maintained harmful levels of lead in their bodies, the dry bellyache represented the truest epidemic that the islanders had to face during the 1680s and 1690s, since it affected all groups of people, could be found in most parishes, and, given the general lack of knowledge about the disease, never actually disappeared.⁶²

Unknown and misunderstood diseases, such as yellow fever or the dry bellyache, challenged the medical knowledge of the era and demonstrated how

⁶² Handler, ‘Lead Poisoning,’ 403-408.

grossly ineffective European medicine was in the seventeenth-century Caribbean world. Continuing to rely on Galenic medical theory and traditional European practices, the majority of the medical cures prescribed by doctors centered on rebalancing the four humors. The prevailing theories taught that a fever resulted from excessive heat and humidity, which caused the body to fill with extra blood. As such, most European doctors endeavored to cure this illness through venesection: opening an artery in the arm and removing as much as 15% of the body's blood at the onset of feverish conditions. Other favorite techniques included emetics made from dangerous metals such as mercury, antimony, or zinc sulphate; laxatives; sneezing powders; enemas; blistering; poultices; and bezoars (crushed stones from the intestines of Persian goats). These were generally ineffective and often left patients sicker and weaker than before their treatment.

Hans Sloane, the famous physician and visitor to Barbados, carried a medicine cabinet around the Caribbean that contained hundreds of different 'cures' for the disease that he expected to encounter. The range of 'cures' that he kept with him showed the sad state of western medicine at the end of the seventeenth century. His compartments contained such random items as indigo, annatto, ambergris, rhubarb, coffee, egg, crushed cowrie shells, lace, cochineal, feces, a product called 'yellow', and a variety of materials that even he did not recognize, including an 'unknown root,' an 'unknown seed,' and a mysterious item that looked 'like rice.'⁶³ While his 'cures' were largely ineffective, he remained skeptical of local medicine and its practitioners, ironically concluding that 'they do not perform what they pretend.... Their ignorance of anatomy, Disease, Method, etc. renders even that

⁶³ BL, Sloane 3984, *The Contents of what Sort of Drugs there is in my Trunck*, 120-124.

knowledge of the Vertues of Herbs not only useless, but even sometimes hurtful to those who imploy them.’⁶⁴ Yet, regardless of Sloane’s beliefs, the medical profession’s impotency in the Caribbean became famous, as many, such as Thomas Tryon, mocked these ‘Lip-Learned Doctors’ and ‘modern Fire-working Chymists or Vertuosi’ who seemed perpetually ‘confined to the old musty Rules of Aristotle or Galen.’⁶⁵

Many white Barbadians, however, began to realize that the natural world freely provided them with a variety of antidotes, and that the medicinal techniques and treatments perfected by the enslaved African population could be highly effective at fighting tropical diseases. Making use of a mixture of West African traditions and locally available flora, the black population created a wide range of medicines that competently relieved many island ailments. Tryon recognized that there were many Africans on the island ‘that God and Nature have endued with Gifts of knowing the Vertues of Herbs, and that can by genuine Skill, administer good Medicines, and perform greater Cures’ than Europe’s ‘famous Doctors, with their hard Words and affected Methods.’⁶⁶ Table 2.11 contains some of the medicinal plants regularly used by the black population in Barbados during the pre-Emancipation period, their contemporary applications, and how each is used today. Both white and black Barbadians, for example, learned to use small traces of poison from the Poison Wood Tree to ripen boils and tumors and to heal sores.⁶⁷ They also learned that if they accidentally used too much poison, covering the afflicted area

⁶⁴ Hans Sloane, *A Voyage to the Islands of Madera, Barbados, Nevis, S. Christ., and Jamaica*, (1707-25), 1: 54.

⁶⁵ Tryon, *Friendly Advice*, 192.

⁶⁶ *Ibid.*, 192-193.

⁶⁷ RS, Cl.P/10i/18, ‘Of the Poison Wood Tree in New England,’ 16 March 1721 and EL/L5/114, ‘An Account of Mr. London’s Collection towards a natural and moral history of Barbados,’ 28 Dec. 1680.

Table 2.11: Pre-1834 Medicinal Plants Used in Barbados

Pre-1834 Name	Pre-1834 Medical Use	Modern Medicinal Usage
Aloe	Burns, Purgatives, Swelling	Burns, vulnerary, pain and swelling, purgative, worms in children
Arrowroot	Poison Antidote, dysentery, fevers, yaws	Tea for diarrhea, teething aid
Barbados Nut	Purgative, dropsy, fresh wounds	Purgative, burns, painful joints, boils
Bearded Fig Tree	Poison Antidote	Manchineel antidote
Blueweed	Venereal Complaints	NA
Bread and Cheese Vine	Yaws	NA
Briny Roots	Purgatives, scurvy, deobstruent	Purgative, deobstruent
Cassia Fistula	Purgative, opener of the veins	NA
Crab Eye Vine	Consumptive and other coughs	Tea
Iron Vine	Diarrhea, dysentery	Diuretic, spinal trouble
Lignum Vitae	Dropsies, 'to purify the blood,'	Arthritis, rheumatism, abortifacient
Loggerhead Weed	Kills Worms in Children	NA
Milk weed	'Cleanse the Blood'	Tuberculosis
Palma Christi	Swelling, fevers	Fever
Pangwyn	Fevers	NA
Paw Paw	Ringworm and other skins disorders, fevers	Roundworms, high blood pressure, skin ulcers, digestive aids
Pigeon Pea	Diarrhoea, dysentery	NA
Plantain	Eye Inflammations, fevers, blisters	NA
Poison Wood Tree	Ripen Boils and tumors, heals sores	Ripen Boils, chronic Ulcers
Red Trubba	Colic, disorders of the stomach	NA
Soldier's Bush	Vulnerary, inflammations, and swellings	Sores, burns, swellings
Silk Cotton Tree	Fevers	Fevers
Varvain	Deobstruent, aids menstrual flow, fever	Fever and Ague, dropsy, diuretic
Wild Basil	Vulnerary	Chest colds, wards off mosquitos

Table 2.11: Jerome Handler and JoAnn Jacoby, 'Slave Medicine and Plant Use in Barbados,' *Journal of the Barbados Museum and Historical Society*, vol. 41, (1993), 74-98. Those treatments that modern medicine has shown to be ineffective are labeled with an 'NA.'

with a poultice made from the arrowroot plant would lead to rapid recovery. To help combat fever, the islanders turned to flora such as the pangwyn plant, silk cotton tree, palma christi, and varvain with varying success. Even when a particular cure did not have a positive effect upon an ailment (such as when an individual applied a plantain poultice to their forehead to relieve feverish symptoms) the results were rarely

harmful and never fatal, offering a pleasant alternative to the risks inherent in European medical practices.

By the end of the century, white Barbadians were also beginning to rationalize and understand the origins of the diseases from which they frequently suffered and realized that simple changes to their sanitation methods could drastically improve the population's overall health. In May of 1700, an anonymous resident conducted a scientific survey of the island and attempted to discover why sickness broke out so easily and how it could be prevented in the future. He claimed in his resulting report that his goal was not to show 'how [disease] first came,' as that 'may create Disputes,' but to reveal some 'real truths...which according to reason may be causes thereof.' He proceeded to offer a list of ten variables that he believed helped to spread illnesses across the island. The first three concerned general sanitation and included eating fresher food, especially fruits and vegetables at the expense of red meat and rotten provisions, sanitizing the hospitals, and keeping the streets of Bridgetown clean and tidy.⁶⁸

The seven remaining recommendation centered on the drainage of the numerous sitting bodies of tainted water that existed in Bridgetown's general vicinity. The worst example of this neglect was the harbor, as those living nearby showed little hesitation in 'throwing overboard the Sweepings of rotten fish and other things of ill smells from the Vessells that lye within the Bar.' This flotsam 'wholly choaked' the harbor and 'left it filled with stinking noisome smells...which is verily believed to be one great Cause of the late and present sickness.' To reopen these blockages, the author asked for the creation of a 'mote or deep Canall' that

⁶⁸ CO 29/7, 14 May 1700, 'Some of the Causes of the Continuance of the Pestilential Feavers and great Mortality in Barbados.'

would connect the various bodies of sitting water within the town to the sea so that they could empty out and start flowing cleanly again.⁶⁹

The findings of this pamphlet were important, as they informed the Barbadian government of the squalid and filthy conditions across the island and inspired them to pass legislation ordering a variety of improvements. In May, 1700, Governor Ralph Grey responded to these finding by declaring in an island-wide proclamation that the ‘violent and raging sickness’ in Bridgetown resulted from ‘the filth and dirt lying in the streets, cellars, warehouses, storehouses, and other places and the great quantities of decayed, putrified, and corrupt provisions.’ Those who owned rotten provisions had to remove them at least a ‘quarter of a mile’ from Bridgetown. He further demanded that the Barbadians show more ‘dilligent and effective care’ in keeping the island ‘cleansed and purged from all filth, dirt and other nusiances.’ Anyone who refused to obey these orders could be prosecuted and punished in Court.⁷⁰ These initial improvements seemed to make a substantial difference, as by the end of the year, Governor Grey reported to London that ‘the Island is now blessed be God in a good state of health.’⁷¹ Many white Barbadians resorted to other measures to promote a healthier overall lifestyle. They worked to eliminate the consumption of rancid foods by building cooler underground rooms for the storage of perishable goods and replaced tainted drinking water with rain collected in outdoor basins.⁷²

⁶⁹ Ibid.

⁷⁰ TNA, CO 31/5, 25 May 1700, Proclamation from Governor Grey. Grey could not, however, completely distance himself from the peccatogenic approach to health. On the same day that he issued his Proclamation, he also called for a fast and day of Thanksgiving to ‘implore the Grace of God’ to end the spread of disease ‘which our sins justly deserve,’ and to ‘remove [that] evil’. CO 31/5, 25 May 1700, Proclamation.

⁷¹ TNA, CO 28/4, 19 December 1700, Grey to Board of Trade.

⁷² Kuperman, ‘Fear,’ 229-234.

Unfortunately, this progress was only temporary. By 1703, the arrival of war meant that the island again experienced an influx of soldiers and sailors, which allowed for the return of epidemical levels of yellow fever. Governor Bevil Granville warned the Council of Trade and Plantations that ‘this island is more unhealthy then it was ever yet known to be, there being a very dangerous distemper all over the country as well as in the towns.’⁷³ This caused the members of the Barbadian government to once again consider how to clean up their island. By July of 1705, the Barbadian Grand Jury had written up an official list of requests for Queen Anne that continued to focus on clearing up the common shore and all other clogged and stagnating water courses, which ‘overflowed...upon every great rain,’ flooding Bridgetown. They also reiterated Grey’s suggestion that all residents regularly clean the ‘beastliness and filthiness of the streets of St. Michael’s,’ as ‘they are thereby rendered unhealthy.’ Furthermore, island leaders requested that money be set aside for the construction of a new mould and that the islanders cleaned up the sludge that clogged most wharfs so that they were ‘made navigable that boats may come into them.’⁷⁴ Once again, acknowledging these problems appeared to bring a temporary improvement in some parts of the island, as by 1709 Governor Milford Crowe could write that besides for ‘St. Michaels, by reason of the small pox raging in the Bridge Town...the Island is in general more healthy than for many years before.’⁷⁵

Thus, as the eighteenth century began, white Barbadians exhibited a greater understanding of the diseases that routinely threatened their lives and worked to better regulate their own health. They still did not always understand their new

⁷³ TNA, CO 28/6, 16 June 1703, Granville to Council of Trade and Plantations.

⁷⁴ TNA, CO 28/9, 16 July, 1705, Presentments of the Grand Jury

⁷⁵ TNA, CO 28/12, 2 September, 1709, Crowe to Council of Trade and Plantations.

world, as they continued to believe that perspiration led to laxity in the muscle fibers and general bodily weakness and that the best way to adapt to the tropics was through the mass consumption of hard liquor and spicy peppers. Furthermore, their actions often encouraged the spread of disease, as they routinely had trouble keeping Bridgetown and the surrounding waterways cleared of trash and continued to eat rotten provisions. Yet, many at least realized that the diseases that regularly broke out in St. Michael's parish were not sent by a wrathful God or caused by miasmatic imbalance.⁷⁶ Instead, they began to understand that there were logical scientific explanations for the unhealthy conditions experienced on the island and viable solutions that could be easily implemented to overcome them. Thus, by developing a better understanding of the natural world that surrounded them, white Barbadians had proved that they could adapt to their tropical environment and, by so doing, reconfigured preconceived notions of how the English, used to 'the vigor and sprightfulness we have in colder climates,' could survive and prosper in such a hot and humid region of the world.⁷⁷

Conclusion

This chapter depicts two very different demographical interpretations of life on late seventeenth-century Barbados. On the one hand, the 1680 and 1684 censuses portray a matured plantation society showing distinct signs of rapid expansion and development. Between 1679 and 1683, for example, a large free white population put thousands of additional acres of land into use for growing both sugar and

⁷⁶ By 1710, George Lillington, the acting-Governor, continued to see poor island conditions. He once again demanded the islanders to keep 'the streets and common shores of St. Michael frequently cleansed and repaired, the neglect whereof has been the occasion of many distempers and consequently may tend to the discouragement of trade.' TNA, CO 28/13, 25 June, 1710, Lillington to Council of Trade and Plantations.

⁷⁷ Ligon, *History*, 27.

provisions and elite planters continued to increase their production capacity by building dozens of new plantations with recently constructed windmills towering over them. White planters and farmers also showed an increased need for unfree labor, importing nearly two hundred indentured servants and 10,000 enslaved Africans during the short four year period. The censuses further depict a group of elites that were able to maintain both their omnipotent grip on the island's economy and their entrenchment within its government, while also describing a substantial and important free white population, over 17,000 strong, that managed to preserve their valuable roles within the island community as provision farmers, artisans, merchants, livestock breeders, seamen, and small cash-crop planters. It was their names that most frequently appeared in the parish baptism, marriage, and burial registers, island immigration/emigration lists, and land deeds, making them in many ways the island's quintessential white inhabitants. 979 landowners, for example, represented the middle class, who owned enough land to make a comfortable living and to vote in local elections. 592 others made up the lower class, eking out a more difficult livelihood on their small plots of land. Finally, thousands of others held no land, but lived in island towns, such as Bridgetown or Speightstown, filling valuable niches as merchants, artisans, or shopkeepers, and showing that they too maintained an important role on the island.

The island's white inhabitants, however, still faced many struggles in their quest for continued success within the Caribbean. The greatest challenge for many was figuring out how to best navigate the danger and discomfort of a new life in the tropics. This became increasingly difficult by the mid-1680s, as the islanders experienced a dramatic transformation in their climatic patterns that likely led to a

concurrent rise in island epidemics. While some of these diseases were merely discomfiting or limited in their dissemination, others, such as small pox, were both highly contagious and very deadly. The dry bellyache proved to be particularly problematic during this era, as contemporary Barbadians of all races used the toxic metal daily, but had no idea that a correlation existed between it and the debilitating disease that claimed thousands of lives across the island. Many also continued to misunderstand the origins of the other sicknesses that they regularly encountered and instead believed in antiquated humoral and peccatogenic models of health that blamed an imbalance of the humors or the displeasure of God for Barbados' problems. They compounded these issues by favoring European doctors whose approaches to medicine rarely worked and often put their patients at considerable risk.

Yet, by the late 1680s and 1690s, the white Barbadian approach to health began to change, as they looked to gain greater control over their tropical world. The most successful actively focused on solving the problems around them by developing scientific knowledge through experimentation and observation.⁷⁸ Some turned to the island's native flora to find more effective medicines, experimenting with different combinations to find out what worked best, while paying attention to the enslaved Africans, who often had greater experience with life in a tropical environment. This caused many white inhabitants to view concepts such as weather and disease as something truly scientific and that, like population figures and parish registers, could be quantified and controlled. This new approach inevitably led to a reconsideration of island hygiene, in which new approaches to disease, treatment, and cleanliness

⁷⁸ James Cassedy, 'Meteorology and Medicine in Colonial America: Beginnings of the Experimental Approach,' *Journal of the History of Medicine*, (April 1969), 193.

helped to further contribute to a society that was shedding many features of its English past and, in the process, becoming more creolized and 'Barbadian.'

Chapter 3: Barbados and the Movement of Unfree Labor, 1660-1720

In 1675, Governor Jonathon Atkins submitted the first substantial grievance concerning the newly re-chartered Royal African Company's handling of the slave trade to Charles II in the hopes of convincing him to open this branch of commerce to all merchants:

The Royall African Company...doe supply us very scantly with [slaves] and their price is become excessive. Wee are well assured that Your Majesty established that company to enable them to buy cheaper and...sell dearer to Your own Subjects. And doubtless they might afford them much cheaper then can be done in an open Trade, but contrariwise whereas before the Erection of the Royall company the usuall price of able Negroes in this place was about sixteen pounds per head, they are now sold for Twenty and Two, and Twenty, which rates wee can ill afford to give, our land being worne out, our commodities being low, and great dutyes upon them....¹

This petition, however, inspired little real change in the Company's handling of the slave trade, as fifteen years later Littleton's *Groans* focused on a similar series of complaints. Like Atkins, Littleton believed the Company to be harmful to the island's planters and farmers and that the high prices would inevitably lead to ruin: 'we buy *Negroes* at the price of an Engross'd Commodity; the common Rate of a good *Negro* on Ship-board being twenty pounds.' Remembering times past, he further lamented that 'Heretofore we might send to *Guiney* for *Negroes*, when we wanted them. And they stood us in about ten pound a Head. But now we are shut out of this Trade and a Company is put upon us, from whom we must have our *Negroes*, and no other way.'² Atkins and Littleton portrayed the RAC as both unresponsive and unreliable, while also failing to properly supply a growing plantation society

¹ TNA, CO 1/35, 24 November 1675, Grievances.

² Littleton, *Groans*, 7-12.

with enslaved labor and charging prices that were far too high for planters that perennially claimed to be one bad harvest away from ruin.

Most recent historians of the Barbadian slave trade have since argued that both Littleton's and Atkins' depictions of this branch of late-seventeenth century trade were inaccurate and deliberately deceptive. K.G. Davies wrote that while 'there were years of shortage...from 1681 to 1687 supplies were generally good [with] average prices well below 15 pounds' before 'a serious contraction in the supply of enslaved Africans occurred with the onset of the Nine Years War in 1689.'³ Ann Carlos argues that the islanders experienced such a large influx of enslaved labor from the RAC that prices drastically 'fell from 1672-1683,' while Hilary Beckles and David Galenson both determined that a drastic 25-30 percent drop in price occurred by the mid-1670s with supply increasing 'by over 200 percent' during the 1680s.⁴ Finally, Eltis postulates that the RAC was 'probably carrying more slaves from Africa than all other Europeans put together by the 1670s' and that for the Barbadians it was 'during the seventeen years from 1672 to 1688' that 'the RAC monopoly was strongest.'⁵ Yet, while recent work on the slave trade has actively dispelled the Littleton myth, its extent is usually either imprecise or incomplete, and often relies on theoretical conjecture that does not accurately portray labor market conditions on the island between 1680 and the early 1700s.

³ Davies, *RAC*, 303-305.

⁴ Ann Carlos and Jamie Brown Kruse, 'The Decline of the Royal African Company: Fringe Firms and the Role of the Charter,' in *The Economic History Review*, vol. 43, no. 3, (1996), 307, Beckles, *White Servitude*, 228-232 and David Galenson, *Traders, Planters, and Slaves: Market Behavior in early English America* (Cambridge: Cambridge University Press, 1986), 102.

⁵ David Eltis, 'The Transatlantic Slave Trade before 1714: Annual Estimates of Volume and Direction,' in Pacquette, Robert and Stanley Engerman, ed. *The Lesser Antilles in the Age of European Expansion* (Gainesville: University Press of Florida, 1996), 186-188.

Moreover, enslaved Africans were not the only workers utilized by Barbadian planters to power their plantations. To supplement their unfree black workforce, the islanders continued to import and maintain a substantial white indentured servant population until at least the end of the seventeenth century. While the island's labor force had become 95% black by 1683, there were still 2,381 white servants who lived and worked on the island, a number that continued to increase throughout the 1680s and 1690s and that reached nearly 3,000 by the end of the century. Thus, indentured servants remained an integral and growing part of Barbados' social fabric and not the dead or dying form of labor that is often described by the historiography. When this growing population is combined with the large number of enslaved blacks that also arrived during this period, late-seventeenth century Barbadian planters and farmers appear to have lived in a peak moment of labor defined by high supply and low prices that lasted, with a few exceptions due to domestic revolution and two international wars, until at least 1720.

Since much of the historiography underestimates the extent of the unfree labor trade, this chapter offers a more precise assessment of the movement of enslaved Africans and indentured servants into and out of Barbados based on a comprehensive approach to the records of known voyages. This chapter also posits that the four decades following 1680 represented a peak moment in island labor, when the RAC and private/interloping traders combined with the merchants who supplied white indentured servants to effectively meet the island's labor needs. Chapter 3 is divided into three sections. The first looks at the importation of white indentured servants into Barbados during the late-seventeenth century, suggesting that while they were not viewed as the ideal worker, they continued to arrive at

island ports in significant numbers throughout this era and were still considered to be an important laboring force on many plantations. Secondly, by aggregating information from the slave voyages already archived in the *TASTDB* with additional ships from the Naval Office Returns, the RAC's Homeward Invoice Records, and letters sent from island RAC agents, the next section presents an updated insight into the size and scale of the Barbadian slave trade between 1660 and 1720, with an especial concentration on the final two decades of the seventeenth-century. When combined with the inevitable interloper traffic that pervaded Caribbean commerce, this section also posits that a significant labor glut occurred during the 1680s that caused prices to drop to historic lows by the middle of the decade.

The final section further utilizes the RAC's letter book and Homeward Invoice Records to show that the slave trade was anything but a simple bilateral commercial link between the RAC, Barbados, and the African coast. Instead, Barbadian planters and merchants attempted to set up a Caribbean commercial network of their own that utilized both legal and illegal trade with the Spanish in order to meet their own financial goals. While they officially failed in their attempts to secure this trade, they did manage to maintain an illicit relationship with colonial Spain, regardless of the metropole's position on the matter. Thus, overall, this chapter provides a more comprehensive and precise look at Barbados' place as an Atlantic hub for the unfree labor trade during the late-seventeenth and early-eighteenth centuries, while providing some additional insight into the movement of the white servants and enslaved Africans that entered this market.

Part I: Indentured Servitude during the Late-Seventeenth Century

Although Barbadian history has come to be defined by the extensive prevalence of enslaved African labor, the island also represented a traditionally important destination for white indentured servants, especially during the early tobacco and cotton eras (1627-c.1645). The conceptualization of indentured servitude as a labor option was not a colonial creation, but instead stemmed from a corrupted form of agrarian apprenticeship that English society expected of its middle-class farming youth. According to Dunn, ‘for the children of English yeomen, husbandmen, and artisans, there was nothing demeaning about temporary servile status,’ as ‘indentured labor in a stranger’s household was the normal mode of socialization for boys and girls at adolescence.’⁶ This mentality led many youthful men, as well as a few women, who saw little opportunity for fortune and advancement at home, to voluntarily give up their basic freedoms and sign indentures to work as temporary servants in Barbados. They initially poured into the island during the earliest decades of settlement, but continued to arrive even after the planters and farmers had largely switched to the use of enslaved black labor.

According to Table 3.1, 2,922 men and women signed an indenture to serve in Barbados during the fifteen years between 1656 and 1670, placing it as the second most popular English colonial destination overall after the 3,369 laborers that migrated to the tobacco fields of Virginia. Moreover, Table 3.1 also shows the importance of Barbados within England’s Caribbean empire, as the other five English islands combined for a total of only 1,057 indentured servants during the same fifteen year period. However, as these thousands of individuals soon found

⁶ Dunn, *Sugar and Slaves*, 49-58.

Table 3.1: Colonial Destinations of Servants, 1656-1720

Years	Barbados	Jamaica	Leeward Islands	Maryland	Virginia	New England
1656-1660	2,186	0	175	5	859	25
1661-1665	378	13	655	15	1,390	70
1666-1670	358	17	197	18	1,120	33
1671-1675	131	35	276	38	869	24
1676-1680	89	63	92	75	603	22
1681-1685	318	572	66	485	412	8
1686-1690	32	39	3	0	15	4
1691-1695	0	0	0	0	0	0
1696-1700	19	0	3	0	568	44
1701-1705	1	0	3	6	70	0
1706-1710	0	0	0	0	4	0
1711-1715	0	0	0	0	0	0
1716-1720	15	22	1	210	85	0
Totals	3,527	761	1,471	642	5,995	230

Table 3.1: David Galenson, *Traders, Planters, and Slaves: Market Behavior in early English America* (Cambridge: Cambridge University Press, 1986), 219-227.

out, the institution of indentured servitude on Barbados varied greatly from both the system of apprenticeship in England and its counterpart on the English colonial mainland. Without the same combination of mutual obligation and Christian morality that existed in other colonies, the Barbadian version of servitude became excessively capitalistic in its mentality, with the planters viewing their unfree white workers as both pieces of capital and property, while holding little regard for their humanity.⁷

Legally, planters maintained absolute control over the lives of their unfree white workers and implemented a system of labor that rested upon the mass exploitation of this group of individuals. They were ‘taxed as property, alienated in wills, used as currency in mortgage agreements, and attached to land to be sold as

⁷ Beckles, *White Servitude*, 79-80.

movable assets.’⁸ This culminated with Barbados’ government passing the Act for the Ordaining of Rights between Masters and Servants in 1661, an extensive piece of legislation that thoroughly outlined the rights that a servant possessed on Barbados. It limited their movement by requiring them to carry signed passes in order to leave a plantation, prevented them from engaging in any type of independent economic activity, outlined the punishments for those caught either stealing or damaging their owners’ possessions or those caught trying to run away, and even attempted to legislate against their ability to marry or have children.⁹ Moreover, while the law guaranteed servants a basic supply of food and clothing, many quickly realized that there were few mechanisms of enforcement and that their welfare depended on the benevolence of specific planters.

Henry Pitman, an indentured servant from the mid-1680s, complained that his owner, Robert Bishop, ‘would not give us any Clothes’ and that he had to work in near-nakedness, only covered by torn and dirty rags. His food, consisting of little more than basic starches, easily grown vegetables, and occasionally some tough salted beef or partially rotted salt fish, was bland and repetitious and provided little in the way of nourishment.¹⁰ In general, their labor was also difficult and redundant, as they followed the same standard pattern for most of the year, working a total of 10 hours a day, with two five hour shifts separated by a two hour break for lunch.¹¹ This led one visitor to comment that ‘All [servants] are very badly treated’ and that

⁸ Hilary Beckles and Andrew Downes, ‘The Economics of Transition to the Black Labor System in Barbados, 1630-1680,’ *Journal of Interdisciplinary History*, vol. 18, no. 2 (Autumn, 1987), 230.

⁹ William Rawlin, ‘The Laws of Barbados,’ (1699), No. 21, 27 September, 1661.

¹⁰ Pittman, ‘*Strange Adventures*,’ 5.

¹¹ Ligon, *History*, 44.

‘when they work the overseers...act like those in charge of galley slaves.’¹² If a servant survived the four to seven year indenture, the law entitled them to receive ten acres of land, along with 400 pounds of muscovado sugar, and some basic provisions.¹³ In a colony with vast expanses of open space, such as Virginia or Maryland, this system worked and gave many indentured servants the opportunity they lacked in England. For those in Barbados, however, the ten acres promised to them rarely existed, as elite planters had already purchased most of the productive land on the island by the 1660s, only leaving behind rocky outcrops or areas of thin, unproductive soil.

Rumors of these terrible conditions soon reached England and persuaded many to stay away from Barbados and seek work elsewhere, making recruitment perennially harder. Throughout the 1670s, only 220 servants, or about 9.5% of all those indentured to work in America, decided to migrate to Barbados, a paltry sum that contributed to the stagnation and eventual decline of the island’s white population. Barbadian planters soon found themselves in a tenuous situation: while they desired the protection that indentured whites provided as militiamen and the skills that they brought as trained artisans, they disliked the fact that many of the migrant laborers were Catholic and that overall they represented a bad investment, since most had trouble working in the sweltering heat and humidity of the tropics.¹⁴ To counter this, Barbadian planters often wrote home to the English government to request loosening the Navigation Acts so that they could more easily access Scottish

¹² Father Antoine Biet, ‘Visit in Barbados in 1654,’ *Journal of the Barbados Museum and Historical Society*, (Vol. 32), 290.

¹³ Rawlins, ‘Laws,’ No. 21, 27 September, 1661.

¹⁴ Many Barbadians distrusted the Catholic Irish and characterized them as lazy workers who would naturally ally themselves with the French if the opportunity ever presented itself. If Englishmen were not available, the islanders preferred the Scottish, as they were ‘excellent planters and good souldiers,’ as well as Protestant. TNA, CO 1/23, 3 August, 1668, Assembly to the King

workers, who one resident called the ‘Sinews of a Plantation.’¹⁵ Nicholas Blake, a sugar planter, sent home one such letter in 1669, maintaining that those currently working on the island ‘are lazy all the year round and must rely for maintenance on the sweat of other men’s labors.’ His solution was to ‘have a free trade with Scotland,’ as ‘we should from thence be quickly recruited with lusty and able men, which would be a great strengthening to the place, and be better to us than soldiers.’¹⁶

As the metropole refused to comply, the Barbadian Council and Assembly attempted to reinvigorate the trade with their own legislation, passing an act in 1678 that helped to stabilize prices.¹⁷ They followed this with another act in 1682 that guaranteed that the local island government would buy any unsold indentures for £12.10 per head in an effort to encourage the continued transportation of Christian servants and voiced their willingness to reduce the terms of service if it would increase supply.¹⁸ The planters challenged this price as well, forcing the Assembly to pass another law that required the island’s treasurer to buy unsold servants at the decreased rate of £10 per man and £10.10 per woman. These changes, however, failed to alter the situation much, as Barbados’ negative reputation and a planter preference for enslaved African labor continued to push many away. Moreover, colonists in Virginia, Maryland, and eventually Pennsylvania, were willing to pay higher prices for servants and maintained a distinction for being ‘good poormen’ territories. A lack of imported servants also led to substantial price increases on Barbados by the 1690s, rising to between £18 and £20 per person, plus dues, for only

¹⁵ TNA, CO 1/22, 23 January, 1668, Account of English Sugar Plantations.

¹⁶ TNA, CO 1/45, 28 February, 1669, Blake to the King.

¹⁷ Rawlin, ‘Laws,’ No. 284, ND.

¹⁸ Beckles, *White Servitude*, 69-70.

three or four years of service.¹⁹ In 1699, for example, Nicholas Baker sold fifty indentures to the island's treasurer for £990, or an average of £19.16s per head.²⁰

However, even with increasing prices and an altered conception of labor, indentured servants were still owned by many across the island. A sampling of household inventories from late-seventeenth century wills and deeds show that 20% of the island's plantations and farms contained at least one white servant. Overall, they tended to be owned by large land holders, as there was greater need for overseers and slave drivers on big plantations. While Philip Checke had only a single servant for his 240 acre plantation, James Cecil kept 5 on 204 acres, Michael Terrell 5 on 184 acres, John Barwick 3 on 256, and Timothy Mascoll 10 on 200. Anne Searle, owner of the largest plantation in this sampling, with 400 acres of land in Christ Church parish, maintained an indentured servant force of 14.²¹ Thus, as the end of the century approached, the residents of Barbados appeared to have a difficult relationship with indentured white labor. Even though these laborers were expensive, served finite terms, and limited in the type of work they could do, many islanders still sought them out. Yet, most free white Barbadians, especially small farmers, no longer viewed them as the most effective form of island labor, and Barbados' servile population dropped from a high of over 13,000 in the early 1650s to barely 2,000 by 1679.²²

Most of the modern historiography similarly emphasizes the diminishing importance of white servitude in Barbados. Dunn, for example, writes that Barbados had 'gained the reputation of being a hell for the working class,' leaving few laborers

¹⁹ Compare this to the typical cost of £17.18 for an enslaved African that a planter owned for life.

²⁰ TNA, CO 31/5, February 15, 1700, Joint Committee of the Two Houses

²¹ BDA, RB 3/12, 3/13, 3/16, 3/18, 3/20, 6/13, 1680-1695.

²² Beckles, *White Servitude*, 115-125.

Table 3.2: Indentured Servants in the Naval Office Returns, 1680-1700

Year	Number	Location 1	Location 2
1681	20	London	NA
1682	13	Carolina	NA
1684	38	Liverpool	NA
1685	27	Liverpool	NA
1686	104	Inverness (94)	Waterford (10)
1687	130	Scotland (80)	Belfast (42), Waterford (8)
1688	42	London (23)	Dublin (19)
1698	638	Ireland (230)	Scotland (208), London (150), Virginia (50)
1699	195	Ireland	NA
Total	1,207	-	-

Table 3.2: TNA, CO 33/13 and 33/14, 1680-1700

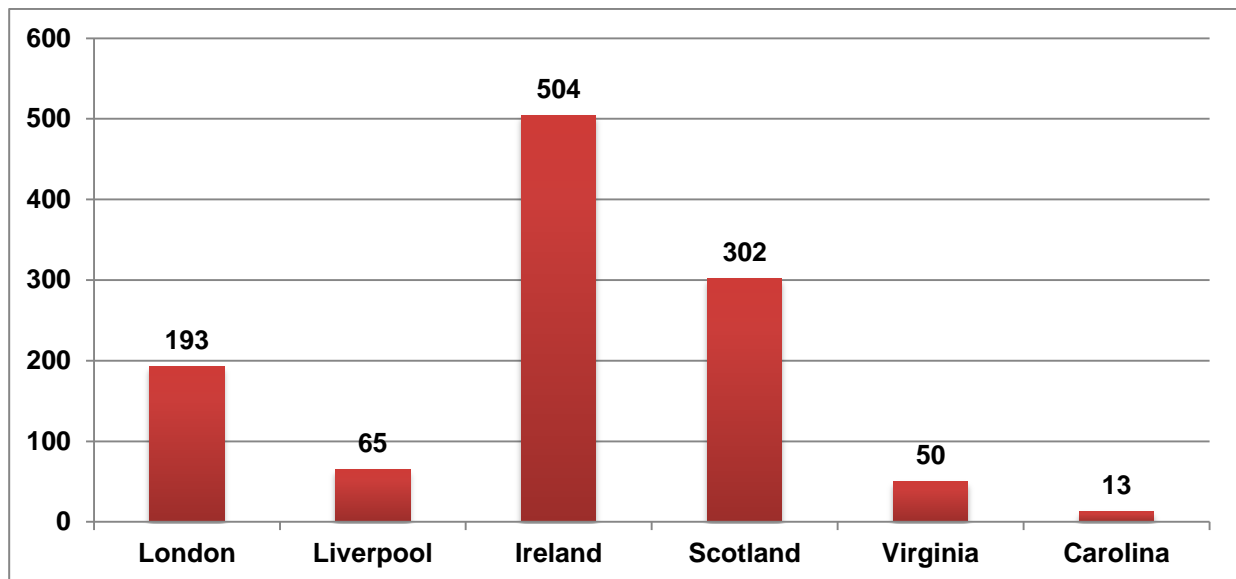
willing to sign an indenture for this location. His limited work on Bristol's servant trade shows that between 1680 and 1686 an average of only 11 indentures arrived each year from this key English port.²³ Beckles, in a similarly limited review of the data, found that only 99 indentured white servants entered the island from London between 1683 and 1686.²⁴ Galenson's more comprehensive calculations support these assertions, as the Barbadians only appear to have bought 369 servants during the 1680s and 1690s, a number considerably behind the totals of 427, 485, and 611 that arrived in Virginia, Maryland, and Jamaica, respectively. The percentage of the trade they commanded never again rose above 20% after 1675, and dropped to only 3% by the 1690s.

The Naval Office Returns, however, reveal a very different portrayal of the legal importation of servants during the last two decades of the seventeenth-century. Barbadian planters saw some value in the institution and actively worked to bring about a brief and moderate resurgence. While Table 3.2 shows that Barbados received slightly more indentured servants in the 1680s than Galenson calculated

²³ Dunn, *Sugar and Slaves*, 67-74.

²⁴ Beckles, *White Servitude*, 45.

Graph 3.1: Origin of Indentured Servants, Naval Office Returns, 1680-1700



Graph 3.1: TNA, CO 33/13 and 33/14, 1680-1700

(374 compared to 350), the 1690s are a different story, with the Barbadians receiving over 800 more during this decade (833 compared to 19). Combined, the Returns show that the islanders received a total of 1,207 white servants during the last twenty years of the century. Thus, Barbados was still an important destination for indentured laborers and received more servants during this period of time than the 956 who arrived in the previous twenty years between 1660 and 1679. Graph 3.1 further shows that while Ireland remained the most important source for white servants, especially after the Nine Years War, Scotland was also able to legally ship considerable numbers of unfree workers to Barbados, sending 94 from Inverness in 1686 and 208 from unnamed ports in 1698 for a total of 302 by 1700.²⁵ The colonists also sent indentured servants between colonies, as Virginia and Carolina both supplied Barbados with a small but meaningful quantity of unfree white workers.

²⁵ Rawlin, 'Laws,' No. 419, ND.

The 1,207 servants mentioned in the Returns, however, only represented one source of the indentures signed during the 1680s and 1690s, as hundreds entered Barbados through other means. A large proportion of these arrived in the winter months of 1686, when the Barbadians welcomed nearly 260 rebels who had supported the Duke of Monmouth during his 1685 rebellion and had been captured and subsequently convicted as traitors to the Crown by the infamous Judge Jeffreys. Sent to the colonies as an act of clemency by King James II, he offered these convicted traitors ‘as servants to the inhabitants of Barbados...to be kept there and continue to serve their masters for the place of ten years at least,’ with each costing the fairly expensive price of £15 each.²⁶ The first two ships, the *Betty* and the *Happy Returne*, arrived on 8 January, 1686 with 169 servants onboard. The elite planters quickly bought them all, with many of the wealthier landowners purchasing large lots for their sugar plantations. Richard Williams, for example, bought 11 servants from the *Happy Returne*, while both John Hothersell and Ralph Lane invested in 6 each.²⁷ The third ship, the *John*, arrived on 3 February with 90 additional servants. These, too, sold quickly and in especially large groups, as planters Walter Scott and Ann Gallop purchased 13 and 11 respectively.²⁸ Overall, the importation of 259 indentured servants proved to be a boon to Barbadian planters and farmers, as they saw their servile population grow by over 10% in less than a single month.

Complementing the steady stream of indentured servants arriving at Carlisle Bay during the early-to-mid 1680s was an illegal trade that had not only survived earlier attempts by the English government to eliminate it but that also appeared to

²⁶ TNA, CO 31/1, 29 December, Council Minutes.

²⁷ TNA, CO 1/59 8 January, 1686, Stede to Lords of Trade and Plantations.

²⁸ Ibid, 3 February, 1686.

have expanded during this prosperous decade.²⁹ Barbadian planters' and merchants' active participation in an illicit servant trade had originally thrived during the early settlement period until the English government showed great alarm over the scale of these operations by 1660 and, through increased regulations and harsh fines, effectively limited this practice. By the 1680s, however, the records suggest that people were again being 'Barbadosed' from the realm's leading ports.³⁰ The available evidence for the continuance of this illegal activity is scanty, but can best be shown through a petition sent to James II concerning the servile trade and a deposition given by a man illegally sent to Barbados as a servant.

In November of 1682, a group of merchants, many of whom did business with Barbadians planters, sent a worried petition to King James II addressing the increased difficulties they were experiencing in legally sending indentured servants to the Caribbean. Instead of promoting this trade, as the islanders often requested, many of the merchants were 'of late prosecuted' by the English government, 'and others threatened for sending [unwilling] servants into the said Plantations.'³¹ They maintained that the illegal trade did exist, as Englishmen and women continued to be 'sduced by bad men, through drinke; and inticed into a servitude whereof when sober [they] repent.' Yet, the merchants claimed that they were legal practitioners and the attacks on the legitimate servant trade was unfair, with some of the petitioners receiving 'great Fines,' which 'hath so terrified all persons concerned in

²⁹ Barbados' law code theoretically protected against forced indentures, as early legislation required 'that such Servant came with his own Consent or Knowledge.' Those illegally signed into servitude could be set free, although powerful planters usually blocked this from happening and continued pursuing illegal importation methods well into the 1680s. Rawlin, 'Laws,' no. 21, 27 September, 1661.

³⁰ Bridenbaugh and Bridenbaugh, *No Peace*, 11-15 and Beckles, *White Servitude*, 49-52.

³¹ This list includes Benjamin Skutt, Peter Colleton, Dalby Thomas, Edward Thornburgh, Thomas Crofts, Benjamin Scot, Christopher Fowler, John Eyles, and James Lucie, all of whom had either owned a plantation on the island or who worked as Barbadian merchants.

the Trade of the said Plantations that none dare send Servants thither,’ resulting in ‘a total stop’ on the trade. The merchants concluded by requesting that King Charles II, ‘appoint such a way for examining whether such persons who bind themselves to goe into the Plantations does it voluntarily and without any force or fraud.’³²

The relevant deposition came from Daniel Manning, a 21 year-old apprentice to a blacksmith and farrier named Walter Upham. Manning was in Taunton when Monmouth marched through, but claimed that officers forced him to join the Duke’s army and fix damaged horseshoes. He later escaped and joined the King’s army instead, but could not fight due to a lack of a weapon. He returned to his master, who refused to take him back, as he did not want to get into trouble for associating with a potential traitor. Manning proceeded to move to London, where he randomly met a man named John Peireson on Tower Hill. This man ‘pretended to help him to an employment, telling of him he should gooe four miles over the River to serve a Gentleman, and being illiterate made him signe to an indenture for four yeares to serve in Barbados.’ Forced onto the *Golden Lion* by Captain William Stretton, Manning joined twenty-three other people on board this ship who had also been tricked into signing indentures and were now being transported to either Barbados or Nevis to work as servants for the next decade.³³

The merchants’ petition and the deposition outlined above suggest that even as late as the 1680s, ‘Spirits’ still existed within English port towns and illegally transported significant numbers of individuals to the colonies to work as indentured servants. Edwin Stede, for example, reported to the Lords of Trade and Plantations that Barbados had received over 400 kidnapped individuals in a six month period

³² TNA, CO 1/50, 3 November, 1682, Petition to the King

³³ TNA, CO 1/59, 25 January, 1686, Deposition from Manning to Stede.

between June and November of 1685 from ‘Spirits’ who claimed that the white men and women they sent were willing servants and had forged contracts in order to prove it.³⁴ In another case from 1685, a court found the mayor of Bristol guilty for partaking in the illegal servant trade and had made substantial profits by helping local merchants and ship captains kidnap and transport the town’s troublesome residents to Barbados.³⁵ The English government discovered that it could do little to limit the sale of these unfortunate people once they left England’s coast and replied to a concerned letter from Stede by stating that they remain as servants because they had technically signed a contract and ‘in being kept to a strict performance of their duty they will in all probability live more peacefully than they did before.’³⁶ Thus, with the aid of merchants, ‘Spirits,’ and other local accomplices, Barbados’ planters received hundreds of white laborers who had unwillingly signed the indentures that turned them into temporary servants subjected to years of hard work with little to no reward for those that managed to survive.

While the 1680s proved to be a decade of growth for the indentured servant trade, the 1690s at first represented a period of significant decline. With the onset of the Nine Years War, it had become increasingly difficult to both encourage laborers to come to the island and to safely transport them across the Atlantic. In fact, the Returns show that no servants legally arrived at the island during the conflict. Other contemporary records also attest to the lack of new indentured servants. William Bridges and Edward Littleton, for example, sent the English government a dispatch in 1692 that pointed out ‘the difficulty of getting white servants in peace and the

³⁴ TNA, CO 29/3, 10 October, 1686, Stede to Lords of Trade and Plantation.

³⁵ Beckles, *White Servitude*, 46-52.

³⁶ TNA, CO 29/3, 15 July, 1687, Lords of Trade and Plantation to Stede.

impossibility of getting them in war,’ and that this was problematic, as the ‘Island cannot furnish a militia’ because ‘the proportion of men formerly sent by a parish is now greater than the whole number of white men in the parish.’³⁷ An anonymous letter, written in 1697, described ‘the diminution of the number of white men,’ especially white servants, as one of ‘the two great evils from which Barbados suffers,’ while the island’s agents calculated that ‘there are about two thousand wanting to supply the militia of the Island according to the present establishment.’³⁸ Furthermore, Barbadian planters and farmers had a hard time keeping servants on the island, as the English navy would consistently impress their white laborers and carry them off ‘to the great prejudice of the inhabitants,’ to serve on ‘his Majesty’s Ships of War,’ without offering replacements, compensation, or a promise to return them at the war’s end.³⁹ When England finally did attempt to help Barbados out by offering to send 50 women convicts to serve on the island in July of 1697, the Barbadian government refused to accept them, as the island’s agents believed that they were ‘altogether useless’ since ‘no English women are there put to work in the field, and the people will not be willing to take such as those into their houses.’⁴⁰ Thus, the 1690s represented an era of decline for the indentured servant on Barbados, as the Nine Years War discouraged potential migration, while the Royal Navy’s impressment tactics removed many who were already present on the island.

With the war ending in 1697, the servant trade rebounded and large numbers were again legally transported to Barbados. The totals from the Returns of 1698 and the first quarter of 1699, for example, show that 833 indentured servants arrived at

³⁷ TNA, CO 29/4, 7 September, 1692, ‘The present state of Barbados.’

³⁸ TNA, CO 28/3, 2 November, 1697, Agents to Council of Trade and Plantations and 19 November, 1697, Anonymous letter to Agents.

³⁹ TNA, CO 31/3, 2 January, 1694, Assembly Minutes

⁴⁰ TNA, CO 323/3, 21 July, 1697, Agents to Council of Trade and Plantations.

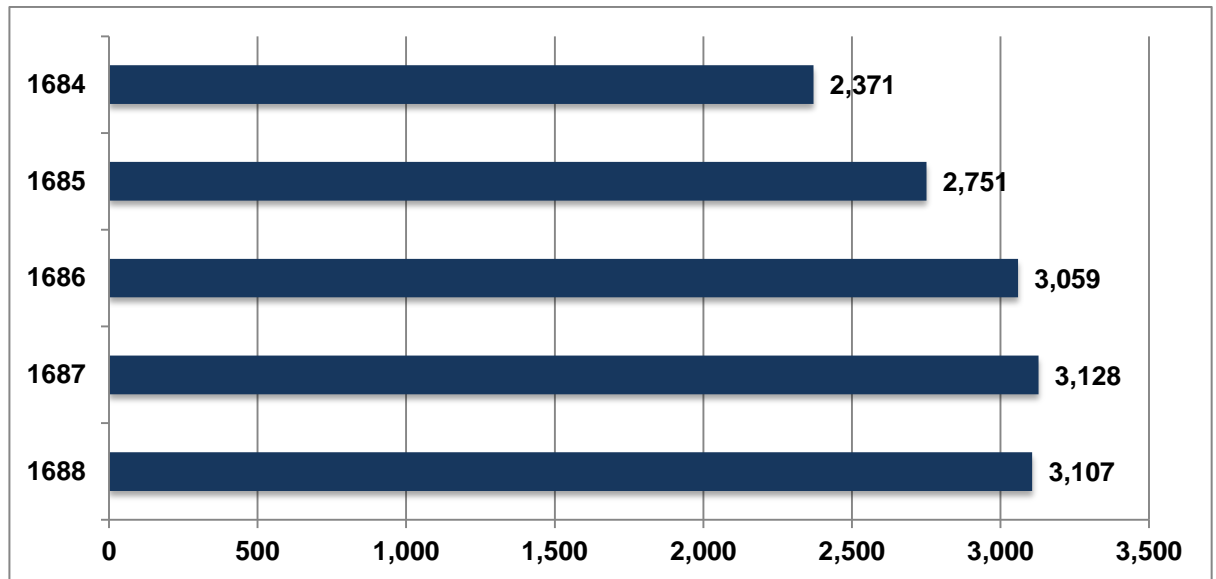
island ports in a little over a year, quickly replenishing the depleted ranks. While this rebirth was temporary in nature, with the outbreak of another international war in 1701 once again resulting in ‘the impossibility of getting servants...from England or Scotland upon any terms,’ it shows that Barbadian planters and farmers still desired unfree white laborers during periods of peace and that they were also readily available.⁴¹ Overall, however, it is difficult to assess how many servants were on the island at any one time and whether the population was actually expanding during this period, as import data is missing for too many years during the 1690s to make a meaningful hypothesis.

The records do, however, allow for a reasonably accurate guess at the changing indentured population during the 1680s. While the 1684 census shows that there were 2,381 unfree white workers living on the island, it has also been posited earlier in this chapter that 341 servants legally entered the island after 1683. When combined with the 259 convicted traitors Judge Jeffreys sent over in 1685 and the 400 illegal servants that Stede claimed arrived later that year, neither of which were listed in either the Returns or Galenson’s calculations, this total reaches 1,000. When added to the 2,381 already living on the island and balanced with a mortality rate of 2% applied across the entire decade, as shown for years 1684 through 1688 in Graph 3.2, the island’s total reaches 3,107 by the beginning of the Nine Years War’s in 1689.⁴² As mentioned previously, wartime figures are too difficult to calculate, as it is impossible to properly gauge how many indentured servants the Royal Navy

⁴¹ TNA, CO 28/38, ND, 1704, Planters to the Queen.

⁴² A 2% mortality rate was used for these experimental calculations because it mirrors the more precise hypothetical rate for the contemporary enslaved African population, as both groups lived in similarly squalid conditions and often performed high levels of intense physical labor. This is especially true of the condemned ‘traitors’ that arrived in early 1686, as few Barbadian planters felt sympathy for those who committed such a serious offense.

Graph 3.2: The White Servant Population at 2% Mortality Rate, 1684-1688



Graph 3.2: TNA, CO 33/13 and 33/14, 1684-1688, CO 29/3, 10 October, 1686, Stede to Lords of Trade CO 1/59 8 January, 1686 and CO 1/59, 3 February, 1686, Stede to Lords of Trade

impressed or the Barbadian government drafted into the army, or how many died from privation. Even if the indentured population declined by a third and no other servants arrived during the course of the war, the 833 new laborers that did land in 1698 and 1699 would push the total back up to 2,845, an aggregate increase of almost 500 despite the many tumultuous years that separated the 1684 census from the end of the century.⁴³

While labor changed drastically over the course of the 73 years between 1627 and 1700, especially with the massive expansion of enslaved blacks across the island after 1650, white indentured servitude still maintained an important place within Barbadian society. This section proves that late-seventeenth century planters regularly desired and purchased a significant number of white servants during

⁴³ The best contemporary estimate as to the servant population comes from a letter penned to Queen Anne in 1704, in which planters claimed that unfree white laborers ‘lessened [by] two thirds... within the last twenty years,’ leaving the island with just over 800. Like most planter estimates, however, this example was likely hyperbole, as the letter requested a variety of favours from Anne. TNA, CO 28/38, ND, 1704, Planters to Queen.

periods of general peace during the 1680s and late 1690s. They arrived in a variety of ways, some willingly choosing to try their luck in the distant Caribbean colony, while others had little say in the matter as a corrupt judicial system forced them abroad as traitors or allowed unscrupulous merchants and crooked planters to trick unwitting youths into signing illegal indentures. This led to Barbadian planters and farmers importing at least 1,466 (and possibly as high as 2,000) white servants, a total that easily challenged and likely eclipsed both the 1,480 sent to the Chesapeake colonies of Virginia and Maryland and the 611 that arrived in Jamaica during the same period. Thus, no matter how antiquated, unprofitable, or marginalized the historiography depicts late-seventeenth century indentured servitude, many white Barbadians, in actuality, desired to maintain a significant servant population well into the 1700s.

Part II: The Barbadian Slave Trade

Section I: Barbados' Place within the Trade Compared to other Nations

The practice of slavery on Barbados went as far back as the island's initial settlement in 1627, as ten Africans, likely seized from a Portuguese prize ship, arrived with the first ninety settlers onboard the *Olive*. For most of the pre-sugar era (1627-c.1645), planters viewed enslaved blacks as a supplement to the work force that they had built around indentured white servants, since the costs of importing laborers from Africa were too high and the initial investment too risky. As late as 1644, Barbadians owned as few as 800 enslaved Africans, while employing thousands of white workers. This labor demographic quickly changed, however, with the introduction of sugar in the mid-1640s. The planting, harvesting, and processing of sugarcane into granulated sugar required great quantities of cheap labor

and the mass importation of enslaved Africans offered one way for the planters to maximize the numbers in their workforce, while minimizing the costs needed to buy and maintain them. This cruel mentality accelerated the replacement of the majority of white servants that had previously worked on the island's tobacco and cotton farms with black enslaved Africans designated for the island's new sugar plantations.

The change made sense for the island's planters, as most calculated that a fairly priced African bought as a perpetual bondsman was significantly cheaper than continually purchasing new indentured servants every four to seven years. Galenson posits, for example, that the price of an indentured servant rose as high as £10.5 to £11.5 in the 1680s, without including the costs required for food, shelter, clothing, and freedom dues, while an enslaved African barely exceeded £16 or £17.⁴⁴ The planters also felt that the physiological disposition of the two races favored the Africans, since climatic conditions in the Caribbean bore a greater resemblance to those in Africa than to the temperate climes of northern Europe. This led to the belief that enslaved Africans could work harder and for a longer period of time, had immunities to many of the deadly diseases that ravaged the white European populations, and required less rest and nourishment to produce the same quality of labor.⁴⁵ Moreover, there was a growing reluctance of potential indentures to immigrate to a land that offered little reward for their risk and sacrifice and that had become notorious for the deleterious way in which many planters treated their servants. With few other options, the planters decided that black labor was the island's future and began to purchase enslaved Africans at a tremendous rate, causing

⁴⁴ Galenson, *Traders*, 68.

⁴⁵ Rugemer, 'Mastery and Race', 448-450.

the black population of Barbados to soar from 1,000 in 1645 to over 33,000 by the early 1670s.⁴⁶

England's merchants initially played a minor role in providing Barbados with its black labor. From 1640 until 1660, the English, distracted by civil war, lacked the capacity to regularly supply its American and Caribbean colonies, giving the islanders an opportunity to trade on their own terms. As such, Barbadian planters and farmers relied heavily on Dutch ships for most necessary imports, including enslaved Africans, although Cromwell's Act of Trade curtailed this commerce slightly after 1652. With the Restoration of Charles II in 1660, the new king took an active interest in colonial affairs, scheming up plans of centralization and control through his London ministers in the hopes of deriving a steady stream of income from his wealthy colonies. The slave trade formed an important centerpiece to this planned consolidation, with Charles II granting a charter in 1660 that formally established the Company of Royal Adventurers into Africa. This Company initially struggled to turn a profit, as it was poorly financed, haphazardly run, and could not overcome its early focus on finding African gold. In January 1663, the English government granted the Company of Royal Adventurers a new charter under the leadership of Charles II's brother, James, then Duke of York. This document showed that the members of the Company had learned from some of their previous mistakes, as they incorporated greater knowledge of African trade, introduced better methods of raising money, and, most importantly, centered its activity on the slave trade, although it still sought gold, ivory, malaguetta, dyewood, hides, and wax for import. While white Barbadian worried that a monopoly on the African trade would

⁴⁶ Dunn, *Sugar and Slaves*, 87 and Bridenbaugh and Bridenbaugh, *No Peace*, 226-227.

Table 3.3: The Slave Trade to Barbados, 1664-1669

Year	Total Ships	Comp. of Royal Adventurers	Inter	Enslaved: Embarked	Enslaved: Arrival	Sold in Barbados	% Sold in Barbados
1664	6	4	2	1,561	1,139	1,139	100.00%
1665	9	8	1	2,166	1,624	1,624	100.00%
1666	7	7	0	1,672	1,160	1,160	100.00%
1667	1	1	0	272	207	207	100.00%
1668	3	0	3	790	595	595	100.00%
1669	1	0	1	251	174	174	100.00%
Totals: CRA	-	20	-	5,482	4,045	4,045	100.00%
Totals: Interlopers	-	-	7	2,026	1,485	1,485	100.00%
Overall	27	20	7	6,712	4,899	4,899	100.00%

Table 3.3: Eltis et al., *TASTDB*, 1664-1669. These numbers only represent the legal slave trade between England and Barbados. Dutch interlopers continued to trade with the Barbadians throughout this period.

result in a smaller and more expensive supply of enslaved Africans, the Duke of York guaranteed the islanders that they would receive at least 3,000 per year at an average rate of £17 per head and offered company membership to any planter who wished to join.⁴⁷

The Royal Adventurers at first showed considerable promise, as they funded and built forts and depots at James Island in Gambia, Sherbro in Sierra Leone, and Kormantin on the Gold Coast. Furthermore, the Company was able to meet their end of the deal by sending over 3,000 Africans to Barbados in a short seven-month period in 1663. This rate, however, proved to be unsustainable, and this version of the Company also struggled financially, maintaining almost no power to consistently collect its debts. The Company also struggled with a poorly organized governing body run by aristocratic Englishmen that had little experience in commercial matters. They attempted to take on the successful Dutch merchants by signing an ambitious

⁴⁷ George Frederick Zook, *The Company of Royal Adventurers Trading into Africa* (Lancaster: New Era Printing Company, 1919), 73-80 and TNA, CO 1/11, 18 December, 1662, Council Minutes.

asiento to supply enslaved Africans to the Spanish in 1663 at a rate that it could not possibly fulfill and, in the process, neglected the needs of other English colonies.⁴⁸

The Second Anglo-Dutch War (1665-1667) further complicated the trade, as the English struggled severely after de Ruyter's dramatic raid on the Medway in 1667 shattered much of the English navy and merchant marine.

After the war ended in English defeat, trade with Africa showed little initial improvement for Barbadian planters and farmers, as inter-tribal conflict placed great limitations on commerce. Thomas Pearson, chief agent on the Gold Coast admitted that the slave trade was 'a very dead trade at present, owing to an [inter-tribal] war in Arcanji.'⁴⁹ The general relationship between the Company and most white Barbadians also appeared to have reached its nadir, as a frustrated Sir Ellis Leighton bristled at the planters' suggestion that they be allowed to trade freely with Africa:

'That open markets and free trade are best for those that desire them is certain, and so it is to buy cheap and sell dear, and most of all to have commodities for nothing, and if all his Majesty's dominions and plantations were made only for Barbadoes, it might be expedient ; but since it is conceived that his Majesty will have regard to what may preserve the trade of the nation, and not only to what will gratify Barbadoes, they think their desire of free trade will prove as impracticable and pernicious to themselves as destructive to all other public interests.... They never pay for the negroes they have...and as it was testified they had so great a glut of negroes that they would hardly give them their victuals for their labor, and multitudes died upon the Company's hands.'⁵⁰

Leighton's assessment of the island's market as glutted, however, appeared to be inaccurate, as the records show that most of the enslaved Africans that did arrive at Barbados were promptly shipped off to Spanish colonies instead of entering local markets, a trend that irked many across the island. After receiving only a single

⁴⁸ Two prominent Barbadians, John Colleton and Thomas Modiford, arranged this contract and hoped to utilize both Jamaica and Barbados to supply Spain. TNA, T 70/75, 20 June 1664.

⁴⁹ TNA, CO 1/23, 3 July, 1668, Pearson to Royal Adventurers.

⁵⁰ TNA, CO 1/22, 23 January, 1668, Leighton's response to a Barbadian petition

Company ship between 1667 and 1669, Simon Lambert, the Speaker of Barbados' Assembly, penned a letter to Governor William Willoughby in order to 'complain of the Royal Company, who have not complied with their proclamation to furnish negroes at £17 or 2,400 lb. sugar per head, but have sold the best to the Spaniard, and the refuse here at near double that sum.'⁵¹ While Leighton responded that the Company 'never desired more than 17*l.* per head for negroes in times of peace,' he admitted that the lingering effects of war did indeed cause the prices of enslaved Africans to rise.⁵² To counter these struggles, the Royal Adventurers began selling licenses to individual merchants who agreed to trade within the limits of the established monopoly, ushering in a short five-year period in which private traders handled the majority of commerce.⁵³ This, however, brought little satisfaction to Barbadian planters, and they continued to campaign for an 'open market' and a 'free trade with the Coast of Guiney for Negro Slaves,' since this approach inevitably 'renders the most plenty' and 'the best Comodity.'⁵⁴

The Crown responded by re-chartering a third joint-stock venture, the Royal African Company, in 1672.⁵⁵ The primary investors of the RAC experienced greater initial success, as they looked to focus primarily on the slave trade, with gold and ivory representing secondary items of import. Moreover, the continuation of the Dutch War against France distracted rival middlemen and potential foreign

⁵¹ TNA, CO 31/2, 17 November 1670, Lambert to Willoughby.

⁵² TNA, CO 1/21, 5 September, 1667, Petition to the King, CO 1/22, 23 January, 1668, Leighton to Barbados.

⁵³ Davies, *RAC*, 40-46, Dunn, *Sugar and Slaves*, 229-238, and Eltis et al., *TASTDB*.

⁵⁴ TNA, CO 1/23, 3 August 1668, Assembly to the King

⁵⁵ TNA, T 70/75, 18 October 1672, General Court of the Company. The RAC had important connections with Barbados from its inception, as a number of its original investors were either Barbadian planters (Peter Colleton, Ferdinando Gorges, John Searle, and Benjamin Skutt), or merchants who traded to the island (Jacob Lucie, Josiah Childe, Thomas Povey, and John Gardiner). Cecil Carr, *Select Charters of Trading Companies, A.D. 1530-1707* (London: Selden Society, 1913), 186-192.

Table 3.4: The Slave Trade to Barbados, 1674-1679

Year	Ships	RAC	Inter.	Enslaved: Embarked	Enslaved: Arrival	Sold: Barbados	% Sold: Barbados	Avg. Cost
1674	3	1	2	939	826	826	100.00%	22.93 (1)
1675	6	4	2	1,670	1,271	1,271	100.00%	18.86 (3)
1676	6	6	0	2,094	1,828	1,828	100.00%	19.32 (6)
1677	7	3	4	2,057	1,639	1,639	100.00%	17.44 (3)
1678	7	7	0	3,072	2,402	2,393	99.63%	18.98 (7)
1679	8	5	3	2,233	1,501	1,489	99.20%	16.76 (4)
Totals: RAC	26	26	-	9,244	7,322	7,301	99.71%	18.84 (24)
Totals: Inter.	11	-	11	2,821	2,145	2,145	100.00%	NA
Overall	37	26	11	12,065	9,467	9,446	99.78%	18.84 (24)

Table 3.4: Eltis et al., *TASTDB*, 1674-1679. Only a handful of the illegal private traders are represented in the above table. Davies, taking the interloping trade into account, hypothesizes that over 4,000 enslaved Africans were annually arriving at the island by the end of the 1670s. Davies, *RAC*, 45-46 and 363.

interlopers from interfering with the Caribbean slave trade, especially after 1674.

This allowed the RAC to land ships in Barbados more consistently, as 26 arrived in the six-year period between 1674 and 1679, inevitably resulting in the increasing availability and decreasing prices that the planters had requested from the previous Companies. Table 3.4 shows that the RAC went from selling 826 enslaved Africans during its first year in 1674 to over 2,393 by 1678, with prices decreasing from an £22.93 to £16.76 by the end of the decade.⁵⁶ Within such a market, the RAC had unquestionably helped to expand the unfree labor force in Barbados, with the number of enslaved living on the island rising from about 30,000 in 1670 to 37,315 by 1679.

The success experienced during the late 1670s solidified England's premier place within the Caribbean slave trade, situating it at the head of a group of participating European countries that included France, the Netherlands, Denmark, and Spain, by the beginning of the next decade. The Spanish maintained the most

⁵⁶ Davies, *RAC*, 45-46 and 363.

interesting relationship within this commercial enterprise, as they operated strictly as buyers. Spain possessed no territory in Africa as a result of the Treaty of Tordesillas in 1494, an agreement brokered by Pope Alexander VI that gave Spain all colonies west of the 46° longitudinal line and Portugal those to the east. Since Africa fell into Portugal's portion, the Spaniards could not settle on that continent and therefore did not import enslaved Africans directly to its colonies. Instead, Spanish merchants had to grant contracts known as *asientos de negros* to foreigners who would then subcontract their obligations to other merchants. These contracts paid well and became prized commodities within the Atlantic community. Aside from the Spanish and English, the other two nations to figure prominently in the Caribbean during this time were France, whose planters were just establishing themselves on Martinique, Guadeloupe, and Saint-Domingue, and the Dutch Republic, active merchants and planters in the area since well before the English arrived. The Dutch maintained colonial settlements on a series of islands, most notably Saint Eustatius, Aruba, Bonaire, and Curaçao, and at Suriname, Essequibo, and Berbice on the South American coast. While they cultivated some sugar, their involvement in the slave trade mirrored their role as the middlemen of the Atlantic economy. Generally selling to any interested buyer, the Dutch were major suppliers to the Spanish and had held a coveted *asiento* contract since 1662 that called for the *West-Indische Compagnie* to provide 4,800 enslaved Africans a year.⁵⁷

Within the congested waters of the Caribbean, however, the RAC emerged as the most successful dealer of enslaved Africans and Barbados, with its valuable market in Bridgetown, became the region's commercial focal point for the slave

⁵⁷ While falling short of its contractual goals, the Dutch did manage to transport almost 100,000 slaves to Spanish America between 1658 and 1729. Rik Van Welie, 'Slave Trading and Slavery in the Dutch Colonial Empire: A Global Comparison,' *New West Indian Guide*, vol. 82, no. 1 (2008), 60-63.

trade throughout the 1680s and 1690s. Importantly, the increased efficiency of the RAC coincided with a distinct transformation in the way that many planters organized their enslaved labor force for the production of sugar. Initially employing a task system, built around the handling of specific jobs, planters across the island favored the developing gang system, in which each enslaved African worked as a single part of a larger group under heavy supervision by 1680. This approach further dehumanized black laborers by stripping them of their individuality and turning them into separate cogs of a great machine that worked from sun-up to sun-down each day. A driver, armed with a whip, doled out physical punishment to any part of this ‘machine’ that failed to keep up with the rest of the group, as the planters believed that even a single slow worker could jeopardize the speed and efficiency that they strove to maintain.⁵⁸ Thus, since Barbados was the first location to widely adopt a system of labor that required such huge numbers of unfree workers, the RAC and Barbadian planters, merchants, and farmers engaged in a mutually beneficial relationship that took advantage of a peaceful Atlantic to move a consistently large number of captive Africans from West Africa to the small Caribbean island.

Table 3.5 reveals that Barbados, with at least 220 ships and 51,582 enslaved blacks arriving at the island over this twenty-one year period, represented 39.64% and 34.61% of the Caribbean-wide trade respectively. In comparison, the French and Danish mercantilist companies combined for a mere 4.86% of the ships and 5.12% of the enslaved Africans involved in the trade. The Dutch merchants posed the only real challenge to Barbadian supremacy, as they landed 47,168 Africans in only 117

⁵⁸ Menard, *Sweet Negotiations*, 98-99.

Table 3.5: The Caribbean Slave Trade, 1680-1700

Island	Slave Ships	Enslaved: Embarked	Enslaved: Arrival	Avg. Ship	Enslaved: Sold	% Sold: Initial Stop	Cost Per Slave (n)
Barbados	220	64,077	51,582	234.46	49,301	95.58%	20.50 (71)
Jamaica	134	42,319	32,774	244.58	31,476	96.04%	19.73 (43)
Leewards	57	12,956	10,059	176.47	9,546	94.90%	24.75 (14)
Dutch	117	53,619	47,168	403.15	47,159	99.98%	NA
French	24	7,856	6,114	254.75	6,114	100.00%	NA
Danish	3	1,475	1,324	441.33	1,256	94.86%	NA
Totals	555	182,302	149,021	268.51	144,852	97.20%	20.71(128)
% Barbados	39.64	35.15	34.61	234.46	34.04	95.58	NA

Table 3.5: Eltis, *TASTDB*, TNA, CO 33/13 and 33/14, T 70/938-T 70/949, 1680-1700, and T 70/10-70/12. The figures in parenthesis in the final column represent the number of auctions that went into the calculation of each average.

ships, numbers that accounted for 25.87% and 21.08% of the trade respectively.⁵⁹

Thus, Barbados, as a single island market, received a significantly larger number of enslaved Africans than the Dutch were able to supply to all of their Caribbean contacts over the same period, proving the immense size and scale of the trade in Bridgetown.

Viewed through a more national lens, Barbados also functioned as the preferred destination for the RAC within the English Caribbean, receiving 86 more ships and over 18,808 more enslaved blacks than Jamaica, a larger island with fresher and more productive soil, between 1680 and 1700. This disparity between the two island colonies is particularly surprising, as Jamaica sold enslaved Africans to the *asiento* for much of this period, and the subcontracting agent, Nicholas Porcio,

⁵⁹ The number of enslaved Africans carried by the Dutch should be accepted with caution, as the calculated mortality rate for Africans on Dutch ships is an impossibly low 12.03%. Excluding the limited sample size of the Danish, this percentage is almost ten percent lower than the next best rate of 21.37% for English ships sailing to Barbados. The total becomes even more unlikely when one looks at the records from each ship of the *West-Indische Compagnie*. Most trips possess mortality rates either around 9.0% or between 15.6-15.8%. These numbers occur 76 times within the 117 entries, far too frequently to be a coincidence, and could have been doctored by the captains to meet an expected rate.

conducted most of his business from this location.⁶⁰ The Leeward Islands, still in the process of converting an increasing number of resources over to sugar production, remained on the margins of the English Caribbean world, and received a negligible number of enslaved Africans in comparison, with the four Leeward Islands receiving only 57 ships and 10,059 enslaved Africans in total. When these figures are combined with those from Jamaica, the five English islands still trailed Barbados' totals by almost 30 ships and well over 8,000 enslaved blacks. Thus, Bridgetown was unequivocally the leading Caribbean market for the slave trade during the late seventeenth century and Barbados emerged from this period as the best supplied location in the colonial world.

Section II: A Yearly Breakdown of the Barbadian Slave Trade, 1680-1700

The Barbadian slave trade, when broken down and analyzed on a yearly basis, shows a cyclical pattern highlighted by rapid expansion during the 1680s followed by a brief period of inevitable decline caused by the Nine Years War. As seen in Table 3.6, the first boom phase runs from 1680 to 1688 and coincides with both an era of peace within the English Caribbean and large sugarcane hauls that led to historically low prices. During this nine-year period, 118 ships, carrying 28,367 Africans, landed at Bridgetown, from which the islanders purchased 27,099 (95.53%). This breaks down to annual averages of over 12 ships and nearly 2,710 enslaved Africans. In particularly profitable years, such as 1681 and 1683, white

⁶⁰ The Spanish had agreed to allow their ships to travel to Jamaica and participate in the slave trade starting in 1677. This coincided with the ending phases of the Dutch War and a disruption of supply at Curaçao. Curtis Nettels, 'England and the Spanish-American Trade, 1680-1715,' *Journal of Modern History*, vol. 3, no. 1 (March, 1931), 2-3 and Nuala Zahedieh, 'The Merchants of Port Royal, Jamaica, and the Spanish Contraband Trade, 1655-1692,' *William and Mary Quarterly*, vol. 43, no. 4 (Oct., 1986), 589-591.

Table 3.6: The Importation of Enslaved Africans into Barbados, 1680-1700

Year	Number Ships	Enslaved: Embarked	Enslaved: Arrival	Enslaved: Barbados	% Traded to Barbados	Average Cost in £ (n)
1680	8	3,013	2,367	2,207	93.00%	17.18 (7)
1681	18	5,256	3,892	3,866	99.30%	17.09 (10)
1682	11	3,540	2,835	2,505	88.40%	17.08 (16)
1683	21	5,484	4,212	4,188	99.40%	15.60 (1)
1684	16	4,252	3,585	3,451	96.26%	16.99 (4)
1685	8	2,324	1,997	1,975	98.89%	NA
1686	15	4,083	3,104	2,604	83.89%	18.40 (7)
1687	8	2,459	1,902	1,886	99.20%	NA
1688	6	2,611	2,194	2,174	99.10%	18.05 (4)
1689	7	2,788	2,279	2,243	98.40%	20.16 (3)
1690	1	381	331	331	100.00%	NA
1691	5	1,644	1,340	1,319	98.43%	20.39 (4)
1692	4	1,893	1,556	1,528	98.20%	19.47 (2)
1693	2	972	488	488	100.00%	23.05 (1)
1694	3	2,020	1,551	1,543	99.50%	22.39 (3)
1695	6	2,049	1,877	1,877	100.00%	26.54 (2)
1696	13	2,821	2,407	2,382	98.96%	32.18 (1)
1697	16	3,853	3,510	3,238	92.25%	25.47 (2)
1698	19	3,830	3,172	2,944	92.81%	22.26 (5)
1699	13	3,978	3,068	2,871	93.58%	23.19 (2)
1700	19	4,826	3,915	3,671	93.80%	25.45 (7)
RAC	155	48,151	39,589	37,612	95.01%	21.43 (71)
Inter.	65	15,926	11,993	11,689	97.47%	NA
Overall	220	64,077	51,582	49,301	95.58%	21.43 (71)

Table 3.6: Eltis et al., *TASTDB*, TNA, CO 33/13 and 33/14, 1680-1700, TNA, T 70/938-T 70/949, 1680-1700, and T 70/10-70/12. There were also large numbers of enslaved Africans legally bought by the Barbadians on a 'contract system.' Usually working as syndicates based in England, merchants would agree in advance with the RAC to buy black laborers at a fixed price and then resell them on the open market. Davies believed that the RAC supplied nearly 10,000 enslaved Africans at an average price of £15 per head through this system in the eighteen years between 1672 and 1689. Davies, *RAC*, 294-299, 'The Origins of the Commission System in the West India Trade' *Transactions of the Royal Historical Society*, vol. 2 (Jan. 1952), 89-107, Anon., 'That the Trade to Affrica, is only Manageable by an Incorporated Company and a Joynt Stock,' (1690), TNA, T 70/10, 12 May 1681, 9 November 1681, 2 March 1682, and T 70/12, 20 August 1685, 18 September 1683, 17 December 1683, 19 February 1684, 20 August 1685, and 31 August 1688.

Barbadians could see these numbers increase by as much as 150%. Importantly for the island's planters, with such a large number of new arrivals, the average price for enslaved blacks stayed consistently low throughout the era, ranging from £15.6 to

£18.4 between 1680 and 1688, proving that costs per head remained considerably lower than the £20 Littleton quoted as being typical of the 1680s.

The subsequent bust period ran from 1689 to 1696, and occurred during a time of both great transition in the RAC and increased violence throughout the Atlantic. As a joint-stock company with an official charter from a Stuart monarch and headed by the deposed James II, its position declined precipitously after the Revolution of 1688. Furthermore, England had entered an international war and quickly lost control of both the Atlantic and the Caribbean during the initial stages of the conflict and, after a series of French attacks on English forts in Africa, failed to maintain a steady export trade from this continent. When combined, these struggles greatly affected the ability of the Company to reach its previous levels of trade, as the records show that only 28 ships and 9,422 enslaved Africans completed the voyage between Africa and Barbados during the seven years between 1689 and 1695, representing annual averages of only 4 ships and 1,346 enslaved blacks. This was a disappointingly low total for the island's planters and one that, as will be shown, resulted in a substantial decline in the enslaved population on the island.

As Graph 3.3 shows, the price for an average enslaved African, consequently, began to rise—slowly at first, as it hovered around £20 per head for the first four years of this period (1689-1692). After a large jump in 1693 to £23.05 and a small decrease in 1694 to £22.39, the increase was rapid and peaked at £32.18 by 1696. With an average price per head of £23.16 during the first six years of fighting, each enslaved individual cost at least four pounds more than during the previous decade. As Graph 3.3 further shows, the rising cost of enslaved Africans coincides with the increasing price of sugar after 1688, surging from 10s 10d per cwt in 1690 to 21s 1d

Graph 3.3: Prices of Enslaved vs. Prices of Sugar on Barbados, 1684-1700

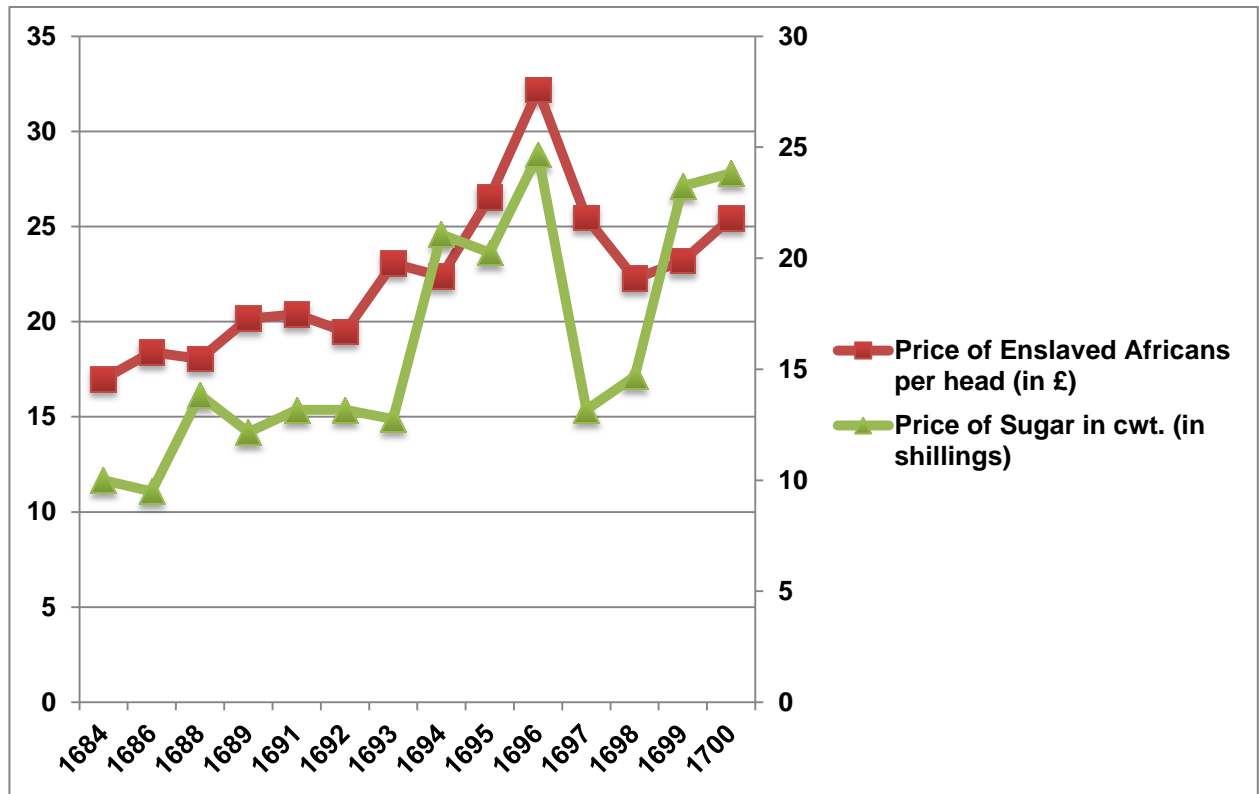


Table 3.3: Eltis et al., *TASTDB* and TNA, T 70/938-T 70/949, 1684-1700. The sugar included in this table represents the amounts specifically sold to the RAC and the prices that the Company paid for it. Therefore, it does not include any additional costs, such as freight. The enslaved are priced in pounds sterling, while sugar is in shillings and pence.

by 1694 and a period high of 24s 8d in 1696, possibly demonstrating a combination of the effects of a depleted workforce on the planters' ability to produce the valuable cash crop and the inflated price of freight in the wartime Atlantic.⁶¹ Thus, the trends of rising prices for both the enslaved imported into the island and sugar exports shows how dramatic the burden of the Nine Years War could be for the Caribbean colonists, especially during what Graph 3.3 shows to be the war's peak years between 1693 and 1696.

⁶¹ This is not reflected in the amounts of sugar that the Barbadians traded to the RAC, as the 376.06 tons sold to them in 1694 is not a particularly low sum, especially when compared to the figures from the 1680s, and the 701.73 tons from 1695 represents the second largest haul during this period.

The second boom phase occurred between 1696 and 1700 and corresponds with both the English reestablishing consistent control over the trans-Atlantic waterways and the opening of the slave trade to private merchants after 1698. During this short period, the slave trade quickly recovered from its wartime limitations and expanded beyond the averages of Barbados' peak moment in the early and mid-1680s, as merchants successfully landed over 15,100 enslaved Africans on 70 separate voyages for annual averages of 3,021 and 14 respectively. Both of these totals exceeded the mean quantities established during the two earlier periods and allowed the islanders to rapidly replenish their depleted stocks to such an extent that a labor surplus occurred by the end of the century. Table 3.6 demonstrates, for example, that planters only bought 94% of the enslaved Africans that reached Bridgetown during this phase, a figure lower than both the 99.20% rate that had existed during the war and the 95.53% rate from the prewar era. While individual years never fell into the 80% range as in the first boom phase, the Barbadians received enough enslaved Africans to comfortably send 941 to other markets between 1697 and 1700.

The prices per head, however, mimicked the rising cost of sugar and surprisingly continued to increase after the war ended, surging from £22.16 in 1698 to £25.45 in 1700. This general price increase likely resulted from a variety of factors, including required fees for free traders, labor scarcity resulting from the war, and high freight costs. Regardless of these obstacles, though, Barbadian planters and farmers witnessed a rejuvenation of the slave trade during the final five years of the seventeenth century, with the Royal Navy reestablishing its dominance in the Atlantic and securing the vital waterways that both RAC merchants and private

traders relied upon for safe and speedy movement between the island and the African coast. This, along with a planter elite that maintained its huge appetite for enslaved labor, resulted in merchants soon selling over 3,000 Africans per year to white Barbadians and helped to reestablish the island as the most important slave market in the Caribbean

Section III: The Effects of the Slave Trade on Barbados' Enslaved Population

Unfortunately, pure importation numbers, as displayed in Table 3.6, provide minimal insight into the changing nature of Barbados' black population. Moreover, the table only hints at the island's demand compared to the supply and does not adequately address whether or not the Barbadians met their theoretical labor requirements. To do this, mortality rates must be taken into account and compared against the known importation figures before relatively accurate population numbers can be tabulated. While it is understood that unfree black laborers suffered from abnormally high mortality rates due to the squalid conditions and difficult work that the white planters forced upon them, the percentage itself is difficult to predict, especially since numerous different estimates exist that place it anywhere between 2% and 25%.⁶²

It is also necessary to account for the fact that conditions on the island during the peaceful 1680s were probably much different than those of the conflict-ridden 1690s. As such, a series of experimental calculations show that a varying mortality rate of 2% from 1680 to 1689, 7% from 1690 to 1697, and 2% from 1698 to 1700 matches up reasonably well with the reported census totals of 46,602 enslaved

⁶² Thomas Tryon, a planter and merchant, exaggeratingly claimed that between one-fifth and one-quarter of the black population died annually. Tryon's numbers, however, are not realistic, and serve to emphasize his anti-slavery beliefs. Tryon, *Friendly Advice*, 144.

Table 3.7: Slave Population Adjusted for Mortality Rates, 1680-1700

Year	Deaths	Enslaved Bought by Year	Total
1680	746	2,207	38,776
1681	776	3,866	41,866
1682	837	2,505	43,534
1683	871	4,188	46,851
1684	937	3,451	49,365
1685	987	1,975	50,353
1686	1,007	2,604	51,950
1687	1,039	1,886	52,797
1688	1,056	2,174	53,915
1689	1,078	2,243	55,080
1690	3,856	331	51,555
1691	3,609	1,319	49,265
1692	3,449	1,528	47,344
1693	3,314	488	44,607
1694	3,122	1,543	43,028
1695	3,012	1,877	41,893
1696	2,933	2,382	41,342
1697	2,894	3,238	41,686
1698	834	2,944	43,796
1699	876	2,871	45,791
1700	916	3,671	48,546

Table 3.7: BDA, BS 19, 1680 Census, Eltis et al., *TASTDB*, and TNA, CO 33/13 and 33/14, 1680-1700. While this exercise has been conducted in the past by historians such as Richard Sheridan and Ann Carlos, this version includes updated totals from the slave trade and a varying mortality rate. Thus, its results provide an enslaved population much closer to the aforementioned known totals and a more accurate overall snapshot of the effects of the slave trade on island population.

Africans in 1683 and 42,000 in 1696. This simulation also does not include island births within the enslaved population, as these rates are notoriously difficult to predict and no useful estimates exist for the seventeenth-century.⁶³ Using the 1680 census total of 37,315 as a baseline population, Table 3.7 shows the results of this simulation. With a 2% mortality rate, the enslaved population increased rapidly

⁶³ There must have been a substantial enslaved creole population, as there were enough to plan a revolt against the island's planter class in 1692. Anon., 'A Brief, but most True Relation Of the late Barbarous and Bloody Plot of the Negros in the Island of Barbados (1693).

throughout the 1680s, surging past 50,000 in 1685 and reaching a peak of 55,080 in 1689. As expected, the war wreaked havoc on both the black population and the slave trade, as the latter could not keep up with the 7% island mortality rate, causing the enslaved community to dramatically decline over the next eight years. By 1696, for example, this population had bottomed out at 41,342 before rebounding during the war's final year. Over the course of the next three years, the slave trade returned to its earlier prominence, supplying a combined 9,486 enslaved Africans to the island. Thus, by the beginning of the eighteenth century, Barbados' black population stood at well over 48,500.

To complete this simulation, the enslaved African population needs to be examined against the island's arable acreage in order to discern whether the Barbadian sugar planters bought enough laborers to adequately sustain production. The 1680 census provides a baseline for this too, as the document states that the island consisted of 87,579 productive acres of land. As planters stressed that the ideal ratio of workers to land for sugar production was 1:2, the island would theoretically require a total enslaved population of approximately 43,790 to cover its labor needs.⁶⁴ Table 3.7 suggests that the Barbadians approached this minimum by 1682 and exceeded it until 1694, when the privations of war left them with just 43,028. After the conflict ended in 1697, the enslaved African population quickly expanded, passing 43,790 again by the next year. Thus, even at its lowest, the total number of enslaved laborers on the island was never too far below the 43,790 threshold and the depressed figures of the war were only temporary, increasing

⁶⁴ Menard, *Sweet Negotiations*, 94-95. Not all of this land would have been planted with cane, as planters set aside a significant portion for provisions, secondary cash crops, or just to lie fallow. While these still required the use of enslaved workers, the numbers were far less than those needed for cane cultivation. There were also numerous enslaved individuals who worked as domestics or in an urban setting.

quickly once the conflict ended. Thus, after allowing for a mortality rate of 2% during the 1680s and 7% for most of the 1690s, the deliveries of enslaved Africans proved sufficient to maintain the desired ratio of one black worker for every two acres for most of the twenty-one year period examined and the island would have even experienced a significant labor surplus for many of the non-war years before 1689 and after 1698, matching up well with the conclusions drawn from Table 3.7.

Overall, the data from both Table 3.6 and 3.7 prove that Littleton's description of an island starving for cheap labor was inaccurate and did not represent the true nature of the late-seventeenth century slave trade in Barbados. In fact, many contemporary sources reported that the island actually experienced a saturated market by the early 1680s. In 1684, for example, the island's RAC factors noticed a 'glutt of negroes' and that any resulting auction made 'for a bad sale.'⁶⁵ Edwin Stede, a former factor, spoke in more general terms of an expansive slave trade that frequently left island planters oversupplied, which forced merchants to seek other destinations to vend their human cargo:

During the time of my being in Barbados, which wanted but few weeks of twenty yeares...there was for the most part of the time a very considerable number of negros yearly imported...and sometimes such numbers more then that island then seamed to want...& have been forced to retaile them to the Marchants & others that sold them againe or shiped them to forraigne parts.⁶⁶

According to Table 3.7, merchants frequently searched for alternate markets, as they sold less than 95% of the Africans they carried to Barbados in seven different years between 1680 and 1700, and less than 90% in two. In 1684, for example, Captain William Deeron, an interloper from Madagascar, arrived in Carlisle Bay to glutted market conditions. After selling only 70 of his 101 enslaved Africans, he left

⁶⁵ TNA, T 70/12, 21 April 1684.

⁶⁶ Davies, *RAC*, 307.

Barbados and, after briefly stopping at the Leeward Islands, headed back to Africa, where he attempted to return the remaining enslaved captives and obtain a refund.⁶⁷ With many merchant captains experiencing similar situations and forced to attempt to peddle unsold enslaved Africans to mainland colonies such as Virginia and Carolina, or to try to penetrate into the well-protected fortress towns of Spanish America, the records depict a Barbados plentifully supplied with enslaved Africans at low prices throughout the 1680s and 1690s, and a white population that bought more black workers than any other country or colony in the Caribbean.

Section IV: The Unrecorded Interloping Trade

At first glance, Table 3.6 portrays a ten-year period between 1680 and 1689 in which the RAC was at the height of its powers, organizing 99 of the 118 ships (83.90%) that are known to have arrived in Bridgetown during the decade. The numbers, however, hide the commercial reality, as they do not include the ‘hidden’ illicit trade that often occurred on Barbados. Much of this illegal commerce resulted from planter resentment towards the monopolistic Company. Even as the RAC supplied the island’s planters and merchants with large numbers of enslaved Africans at cheap prices, many elite Barbadians continued to vigorously maintain their complaints of ‘the insupportable injuries done to the island’ by the RAC taking advantage of high local demand.⁶⁸ Others critiqued the levels of supply, as Edward Thornburgh, an RAC agent, pointed out that the islanders ‘complain for want,’ and that they claimed that ‘they have not had above 600 [enslaved Africans] in 12 months.’⁶⁹ These feelings of resentment for high costs and low supply, when

⁶⁷ Eltis et al., *TASTDB* and TNA, CO 33/13 and 33/14, 1680-1698.

⁶⁸ TNA, CO 29/4, 18 February, 1675, Council and Assembly to his Excellency.

⁶⁹ TNA, T 70/10, 23 December, 1679.

combined with a general contempt for governmentally-controlled trade, resulted in many islanders continuing to support illegal interlopers and free trade throughout much of this period.

During the late 1670s and the first half of the 1680s, the illicit importation of enslaved Africans was common across the island, as private merchants were able to take advantage of the Barbadian planters' 'design of prejudice to the Company' and were quickly welcomed by elites looking for the lowest prices and greatest supply.⁷⁰

While it is impossible to accurately estimate the size of the illegal trade, Carlos suggests that interloper penetration approached 35% within the first year of the RAC's operation, but quickly rose to 46% by the end of the 1670s and 50% by 1683.⁷¹ Eltis, however, tempers Carlos' claim and posits that interlopers were responsible for clandestinely transporting a more reasonable 22% of enslaved Africans to the island.⁷²

The most important reason for such success centered on the inability of the English government to effectively monitor those it empowered to enforce its will on Barbados. The two factors selected to locally represent the RAC held almost no actual power on the island and could never adequately assert their authority, while the Commissioner of Customs, who benefitted little from enforcing the monopoly, could often make extra money by either turning a blind eye to illegal commerce or by participating in it, as well. Furthermore, the two governors in charge of the island during the RAC's early years, Jonathon Atkins (1674-79) and, to a lesser extent, Richard Dutton (1680-85), both sided with the planters and welcomed many varieties

⁷⁰ Nuala Zahedieh, Regulation, Rent-Seeking, and the Glorious Revolution in the English Atlantic Economy, ' *Economic History Review* vol. 63, no. 4 (2010), 873-877.

⁷¹ Carlos and Kruse, 'Decline,' 303-310.

⁷² Eltis, 'Transatlantic Slave Trade,' 188-195.

of illegal trade. In 1677, John Stanfast, a wealthy planter, reported to Stephen Gascoigne, an RAC factor, of the ‘arrival of an interloper belonging to Colonel William Sharpe, Chief Judge John Worsam, and Major John Hallet.’ The ship successfully transported 98 enslaved Africans who were ‘landed and carried to Colonel Richard Bailey’s plantation, close to the landing place, about an hour before the factors got there.’ As these four wealthy planters were in league with both Roger Cowley, the island’s Commissioner of Customs, and Governor Atkins, they were not punished for this breach of the rules, leaving Gascoigne to worry that this act would give ‘great encouragement to other people to take this liberty, seeing those that sit in great places and live by the King’s Commissions act as they do.’⁷³ Three weeks later another ship owned by two other elite planters and part-time interlopers, Arthur Middleton and Richard Bates, managed to land 120 enslaved laborers on the island’s western Caribbean coast while the factors were busy working an auction in Bridgetown. When officials did eventually try to prevent Bates and Middleton’s venture, a small hired mob attacked the factors and left them ‘beaten and wounded without any cause given.’ When the factors complained to the governor, Atkins refused to act against either planter.⁷⁴

Richard Dutton took the same lackadaisical approach to protecting the prerogative of the RAC as his predecessor, welcoming interloper participation in the slave trade from the very beginning of his governorship in 1680. The oft-exasperated RAC factors, Edwyn Stede and Stephen Gascoigne, voiced their frustration with Dutton’s lack of support in a series of letters that cover most of the early 1680s. In November of 1681, for example, they reported that ‘two interlopers

⁷³ TNA, CO 1/40, 24 May 1677, Factors to the Company.

⁷⁴ Ibid., 16 June 1677

have lately landed their negroes at the usual point to leeward; one carried ninety, the other a hundred and ten,' and maintained that 'we could not prevent it,' as 'no one will help us now the man-of-war is gone.'⁷⁵ The factors were equally appalled that the leading Barbadian planters remained at the forefront of the illicit trade, as the governor again refused to take any action against them. Two wealthy planters and government officials, James Carter and Thomas Hothersall, openly helped the illegal traders by supplying them with free provisions during their illicit sales, causing the factors to plead that 'unless the King support the Company and discountenance those in places of trust who ought to support his rights, but instead thereof not only are breaker thereof themselves but encourage others, we shall never see the Company established in full enjoyment of its grant.'⁷⁶ They further insisted that powerful planters, such as Henry Drax, John Peers, Christopher and John Codrington, and Samuel Husbands, frequently engaged in the interloper trade with Dutton's aid, and that the King would be wise to 'displace them from the honour and trust which they so much abuse.'⁷⁷

Stede and Gascoigne continued their attack on Dutton's performance throughout the early 1680s. In May of 1681, they reported the successful landing of an interloper, 'which they cannot prevent because of the Governour's slack,' and followed this by recording in June that they continued to receive 'noe assistance from the Governour against the Interlopers.'⁷⁸ When specifically questioned about it, the two factors maintained that Dutton 'pretend he hath noe particular Order about Interlopers,' and that he would not 'give orders...to meddle with Interlopers till he

⁷⁵ TNA, CO 1/47, 29 November 1681, Letters to the RAC.

⁷⁶ TNA, T 70/10, 10 February 1681.

⁷⁷ TNA, CO 31/2, 30 May 1681, Factors to the Company.

⁷⁸ TNA, T 70/10, 30 March 1681 and 15 June 1681.

hath further orders from his Majestie.’⁷⁹ In 1683, the factors sent home another letter that explained that the ‘pride of the interlopers makes them troublesome to the Government,’ but its members made no effort to ‘divert them from their endeavors,’ and that nothing could really be done unless either the Company supplied them with a frigate to monitor the Barbadian coastline, or they forced Dutton to take some sort of stand against illegal trade.⁸⁰ By 1685, the factors effectively gave up and concluded that ‘Sir Richard Dutton [is] no friend to the Company.’⁸¹

The English government eventually responded by sending a ship to monitor the Barbadian coastline, but this only pushed the interlopers into finding more elaborate methods of avoiding detection and landing their enslaved Africans illicitly on the island. In one common scenario, for example, black captives were ‘delivered by the Interlopers at the Leeward Islands [or Tobago] and from there fetched up’ by the planters themselves. The Barbadian elite also regularly imported the enslaved from rival colonies, such as Dutch Curaçao and St. Eustace, allowing foreign competitors to handle the risk of transporting them across the Middle Passage.⁸² Another typical ploy was for captains to hide most of their captives while the RAC’s factors boarded the ship and took stock of the cargo. When questioned, the captains would blame disease or rebellion for the few survivors. The captain and the crew then kept the hidden enslaved men and women to sell for their own profit. On 12 September 1684, for example, the *Allepine*, with an original total of 410 captives, arrived in Barbados claiming only 60 or 70. Stede and Gascoigne became particularly suspicious when the captain refused to allow a search of his ship. Under

⁷⁹ Ibid., 9 April 1681. Dutton’s instructions contain very specific commands that prohibited Barbados from doing business with interlopers. TNA, CO 29/3, 30 October 1681.

⁸⁰ TNA, T 70/12, 17 December 1683.

⁸¹ Ibid., 19 October 1685.

⁸² Eltis, ‘Transatlantic,’ 195.

pressure, the captain finally relented and the Company found 150 Africans hidden in the ship's hold.⁸³

As the 1680s wore on, the interlopers grew bolder and more organized, creating increasingly complex plans in order to cheat the Company. Stede and Gascoigne recounted one clever ruse in which a group of slave traders pretended to masquerade their ship as a sloop of Governor Dutton's to avoid detection.⁸⁴ In another elaborate scheme, the crew from the *Combination* 'imbezled the Brandy and Provisions for Negroes and gave them Mallagetta and water, which was the cause of their Mortality,' sold the ship's gunpowder for profit after replacing it with more malaguetta, stole 550 chests of corn and eight marks of gold, and sold ten enslaved Africans on their own account without proper authorization.⁸⁵ Other interlopers carried enslaved Africans from the eastern coast of Africa and Madagascar, both of which lay outside the RAC's jurisdiction. 14 entries from Madagascar appear in Barbados' records between 1680 and 1687, supplying the island with 2,216 additional enslaved Africans.⁸⁶

By the end of 1685, however, the sheer volume of interloping activity began to decline, as James II replaced his deceased brother as King earlier that year. As the leader of the RAC, James II desired to encourage greater organization within the trade and to keep it free from illegalities. One of his earliest steps to ensure this on Barbados was to replace the corrupt Dutton with Edwin Stede, the former RAC factor who had consistently acted as one of its strongest local proponents. With

⁸³ TNA, T 70/12, 7 October 1684.

⁸⁴ Ibid., 17 December 1683

⁸⁵ Ibid., 2 February 1686.

⁸⁶ TNA, CO 33/13 and 33/14, 1680-1687. The above total only counts the number of recorded arrivals from Madagascar. There are likely many other cases in which ships from Madagascar illegally unloaded their enslaved Africans along the Barbadian coast.

Stede in charge, the Company ‘dramatically curtailed the level of fringe penetration’ between 1685 and 1689.⁸⁷ According to statistics gleaned from the *TASTDB*, the RAC increased its proportion of the slave trade from 82.90% between 1680 and 1685 to 85.71% between 1686 and 1690.⁸⁸ Moreover, the references to interlopers dramatically declined in agent letters, shifting from what had been a regular feature of most reports in the early 1680s to a rarity after 1685.⁸⁹ To some extent, these local improvements resulted from Stede’s personal ambition and desire to capture and punish any interloper that appeared off the Barbadian coast. Upon being elevated to the governorship in June of 1685, he declared that he would ‘endeavor to suppress Interlopers.’⁹⁰ He promptly captured two within days of the announcement and continued this trend throughout his time in power. In May of 1686, for example, his men caught two Dutch interlopers off the coast of Barbados, while also capturing an Irish and a Dutch interloper in December.⁹¹ Furthermore, he was also effective at catching illegal traders who had already landed and limited the number of enslaved Africans that others could get ashore. On 16 May, 1687, Stede sent Captain Robert Hooper, a Barbadian sugar planter and militia officer, to seize an interloper who had just arrived on the island’s western shore, a quick action that resulted in the capture of both the ship and a number of disembarked Africans.⁹²

⁸⁷ Stede was so effective at limiting the activities of interlopers that by 1686 the Company’s market share had improved from 46% at the start of the decade to 86%, nearly eliminating the illegal trade between Africa and Barbados. This shows how useful a cooperative governor could be for the success of the RAC. Pettigrew, ‘Free to Enslave,’ 11.

⁸⁸ It is likely that this decline in the interloping trade was at least partially responsible for increases in the average prices for enslaved blacks, surging from £15.6 in 1683 to £18.05 by 1688. Eltis et al., *TASTDB*, 1680-1690.

⁸⁹ TNA, T 70/12-14, 1680-1700.

⁹⁰ *Ibid.*, 5 June 1685.

⁹¹ *Ibid.*, 7 May 1686 and 31 December 1686.

⁹² *Ibid.*, 16 May 1687.

Unfortunately, Stede's progress only resulted in a temporary improvement, as he lost his lieutenant-governorship in the aftermath of the Revolution of 1688. William III instead replaced him with a series of planter-friendly local leaders that included James Kendall (1690-94), Francis Russell (1694-96), and Ralph Grey (1697-1701). These three governors looked to maintain strong ties with the planter and merchant elite in Barbados and consequently did little to maintain the vigilance Stede displayed against illegal trade during the late 1680s. Between 1689 and 1697, for example, the island's Customs Commissioner registered 30 of the 57 ships (52.63%) that arrived from Africa as private traders. These ships became particularly prevalent after 1695, accounting for 74.28% of the trade, as the English Navy's victories over the French had reopened Atlantic and Caribbean waterways. After the Treaty of Ryswick ended the war in 1697, a victorious William III could now turn his attention to colonial administration and started by denouncing the RAC's monopoly and declaring trade with Africa both open and free. In July of 1698, the Barbadian Council and Assembly received word from England that the African Bill had been passed by the House of Commons and that the slave trade would no longer be legally dominated by a chartered Company.⁹³ Any trader could now freely buy, sell, and transport the enslaved from English factories in Africa to the Caribbean on payment of a 10% duty on all African exports to support the costs of forts and other infrastructure in Africa.

Initially, this was a great triumph for the elite Barbadians, as they believed that they could finally expand the slave trade, while pushing down costs, and achieve their decades-long dream of a seemingly endless supply of cheap labor. As

⁹³ TNA, CO 31/5, 6 August 1698, Council Minutes.

Table 3.8: The Slave Trade in Barbados, 1701-1720

Year	Number	RAC	Private Traders	Enslaved	Average Price (n)
1701	36	2	34	5,469	25.16 (8)
1702	36	2	34	7,487	22.21 (11)
1703	7	2	5	1,767	29.34 (2)
1704	13	4	9	3,141	32.54 (6)
1705	5	3	2	1,442	26.98 (2)
1706	10	6	4	3,081	27.42 (6)
1707	5	2	3	972	20.74 (5)
1708	7	4	3	1,531	25.07 (3)
1709	3	2	2	683	26.12 (2)
1710	8	2	4	1,170	23.27 (2)
1711	5	2	3	1,319	28.10 (1)
1712	14	3	11	3,321	NA
1713	21	1	20	4,467	NA
1714	37	7 (3 SSC)	30	6,364	NA
1715	37	2 (1 SSC)	35	5,792	24.15 (1)
1716	25	0	25	4,084	NA
1717	38	1	37	5,534	NA
1718	40	3 (3 SSC)	37	7,767	NA
1719	29	6 (4 SSC)	23	5,289	18.3 (1)
1720	9	0	9	1,192	NA
RAC/SSC	-	54	-	14,851	26.43 (20)
Private	-	-	300	57,021	24.43 (30)
Totals	354	54	300	71,872	25.45 (50)

Table 3.8: Eltis et al., *TASTD* and TNA, CO 33/15, 1708-1720. The only important difference between this table and the previous pre-1700 versions is the enslaved Africans brought over by the South Sea Company (abbreviated as SSC). Created in 1711, the South Sea Company was a short-lived joint-stock venture that was meant to manage all trade between Great Britain and South America. This Company was never profitable and was, in many ways, little more than a scam for its initial investors to make money off of the consolidation of the British national debt. The SSC's bubble burst in 1720 and ruined many who had invested in it.

Table 3.8 shows, 36 ships, 94.44% of which were captained by private traders, arrived at the island in both 1701 and 1702, carrying 5,369 and 7,285 enslaved Africans respectively. They also sold for decreasing prices, as the cost of an enslaved African dropped by almost £3.25 pounds between 1700 and 1702. While most private traders originated in London, many Barbadians also actively participated in the slave trade. Chart 3.1 demonstrates that they represented nearly

Chart 3.1: The Origins of Private Traders, 1708-1720

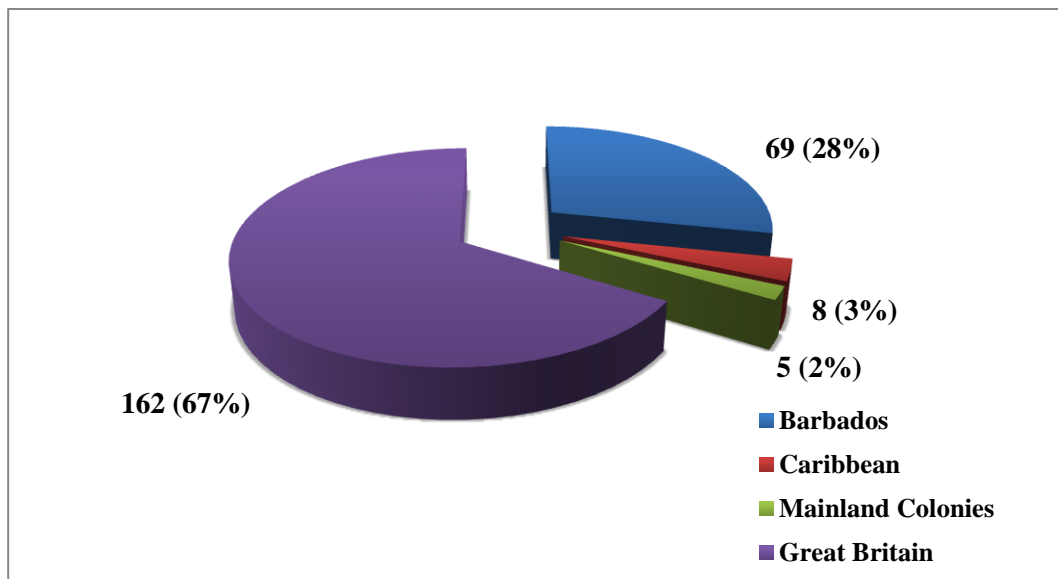


Chart 3.1: Eltis et al, *TASTDB*, 1708-1720

30% of all private traders, second only to England (67%) as a port of origin. Planters and merchants, such as James Colleton, John Mills, George Andrews, George Peers, Benjamin Scott, Edward Searle, William and Melatiah Holder, and the Lascelles family all appear in the records as merchants who actively participated in the slave trade, many by sending their own boats to do business along the African coast. In 1702, for example, James Colleton sent *The Lark* to Africa and sold the 191 enslaved Africans that he transported across the Atlantic at Bridgetown for a total of £4,234. Melatiah Holder purchased a quarter-share of the *Hanover* during that same year and received over £1,050 for his investment.⁹⁴ Thus, for wealthy planters such as Holder and Colleton, the opening of the slave trade represented yet another business opportunity that allowed the elite to diversify their income while maintaining access to cheap, unfree labor.

⁹⁴ Eltis et al., *TASTDB*, 1702.

This rapid expansion of the slave trade, however, was short-lived and abruptly contracted in 1703, two years after Louis XIV's initial attempts to put a Bourbon monarch on Spain's throne launched Europe into yet another international war. Like the Nine Years War from the previous decade, the War of the Spanish Succession (1701-1713) initially limited Barbados' access to all branches of trade, including its commercial relationship with Africa. Table 3.8 shows that between 1705 and 1711, the islanders received an average of only six ships and 1,028 enslaved Africans per year. With such reduced numbers, the price of enslaved labor inevitably increased after 1702 and remained high for the duration of the war, peaking at £32.54 in 1704. After the Treaty of Utrecht formally ended the war in 1713, English merchants, taking advantage of the typical postwar commercial boom, revitalized the slave trade and maintained it at an elevated level for the rest of the decade, welcoming 236 slave ships (almost 30 per year) and 40,489 enslaved Africans (an average of 5,061) to the island over the course of these seven years. By 1719, prices had also dropped, finally dipping below £20 for the first time since the 1680s.

Overall, Table 3.8 depicts a two-decade period between 1701 and 1720 that reflects and mimics the slave trading trends of the previous twenty years, with the island experiencing another cyclical pattern of peacetime expansion and wartime constriction, followed by a rapid and unparalleled level of growth in the immediate postwar years. In total, this second twenty-year period resulted in the arrival of an additional 354 ships and 71,872 enslaved Africans between 1701 and 1720, leading to a well-supplied island and a black population that likely reached at least 60,000 by 1720. Furthermore, it was private merchants that pushed this branch of island

commerce to new heights, as both the RAC and SSC maintained a very limited role in the slave trade during this era. According to a report from the Council of Trade and Plantations, private traders transported 160,950 enslaved Africans to the English Caribbean in the twelve years between 1698 and 1709, and accounted for about 80-85% of the ships and black laborers that entered Barbados during the first two decades of the eighteenth century.⁹⁵

Yet, ambitious Barbadian planters and merchants still could not find satisfaction in this expansive trade, as by 1709 they were again sending complaints back to England. Still fixating on supply and prices, elite planters now condemned the private traders and requested that the RAC's exclusive trading monopoly be reinstituted:

‘that unless the Trade of Africa be carried on by a Company of sufficient Joint-Stock, We have not the least ground to expect that we shall have either a sufficient Number of Slaves imported here; And...that the late high Prices given for Negroes has risen from no other Cause but the Liberty given to Separate Traders.’⁹⁶

The unhappiness with both the Company and private traders vividly displayed the fickle and impetuous nature of the elite Barbadians, as temporary difficulties due to wartime adversity caused them to see the entire slave trade as fundamentally broken, even though it quickly got back on track as the conflict raced towards a resolution in 1712. While they never convinced the English government to overturn its decision to open the slave trade, the islanders continued to look for other ways in which they could generate profit from this branch of commerce. One such project focused on a renewed effort at capturing a part of the Spanish slave trade, with many Barbadians

⁹⁵ Ibid. and TNA, CO 389/20, 27 January 1709, Council to House of Commons. Based on the available records, Barbados had 35,059 enslaved Africans arrive between 1698 and 1709, or 21.78% of the 160,950 that the Council claimed had been shipped to the English Caribbean. The actual total is probably much larger and likely includes numerous interlopers that have gone unrecorded.

⁹⁶ BDA, X10/22, ‘A Joint Letter from the Most Considerable Proprietors,’ 1709.

siding with a rising belief that with ‘trade to Africa laid open, and Ships permitted to go, we should certainly furnish the Spaniards with Negroes.’⁹⁷

Part III: Barbados and the Anglo-Spanish Slave Trade

The privilege of supplying Spain’s colonies with enslaved Africans represented one of the great prizes of the early-modern Caribbean world. Willing to pay inflated prices and offering to deal in bullion payable upfront, the Spaniards were an ideal commercial partner for the mercantilist empires of Europe. While the Portuguese and Dutch initially controlled the flow of labor into Spain’s colonies, their constant wars allowed others the opportunity to find a niche within this trade to exploit. It was under these conditions that the Barbadian elite first attempted to establish and maintain a mercantile relationship with the Spanish Main. In 1662, two Spaniards arrived at Barbados to begin discussing a strategy to supply enslaved Africans for transport to Peru in return for large amounts of bullion.⁹⁸ On 26 February, 1662, another Spanish ship on a similar errand ‘arrived and filled our island with money; 125 to 140 pieces of eight per head given for negroes. The Spaniards bought 400 blacks and intend to make them 800.’ This initial encounter was beneficial to both sides involved and caused the islanders to believe that ‘if assured of free trade in Barbados, the Spaniards would undertake to bring commodities to the value of five million pieces of eight yearly,’ and would be willing to ‘pay ten per cent customs’ to trade enslaved Africans to ‘Peru where their market price was 1,000 pieces of eight per head.’⁹⁹

⁹⁷ Anon., *Considerations Concerning the African-Companies Petition*, (1698)

⁹⁸ Zook, *Royal Adventurers*, 89-90.

⁹⁹ TNA, CO 1/17, 26 February 1663, Letter from Modyford. The ratio of pieces of eight (the peso) to the English pound sterling was 4:1. Therefore, a market price of 1,000 pieces of eight per head would

These early forays into Spanish markets fit nicely within the trading schemes of Charles II and James, Duke of York, both of whom had dreamed of establishing important economic relationships with the great Spanish fortress towns of Cartagena and Portobello. They hoped that English merchants could find buyers in these locations for surplus provisions, clothing, and luxuries, in addition to enslaved Africans, as they were traditionally undersupplied by their own metropole.¹⁰⁰ To further promote this goal, the Royal Adventurers, with the aid of Richard White, a Spanish agent in England, obtained a subcontract for the *asiento* through Ambrosio Lemolini and Domingo Grillo, two Genoese merchants charged with delivering enslaved Africans to Spain's colonies. The Royal Adventurers agreed to send 3,500 enslaved Africans for seven years to Cartagena, Portobello, and Vera Cruz, formally approving the deal in June 1664. In preparation, Charles II lifted the Navigation Acts, granted the Spaniards permission to come to Jamaica or Barbados to buy enslaved Africans, and demanded an end to English privateering against Spain's ships. Sir Ellis Leighton also obtained permission for 'the agents of Signor Grillo' to reside in both Barbados and Jamaica 'with the same liberty as the King's subjects.'¹⁰¹

Initially, the subcontract appeared to be satisfactory to both sides, with trade between Barbadian and Spaniard merchants quickly expanding. The English government saw the elite Barbadian planters and merchants as a valuable part of a larger trading community with the Spanish. They believed that the Spaniards could

mean that the Spaniards were paying £250 pounds per slave or over ten times the amount paid in the English Caribbean.

¹⁰⁰ The Spanish were notorious for undersupplying its own colonies, lacking the naval infrastructure to regularly do so. Between 1660 and 1700, for example, there was on average one *flota* (sent to collect Mexican silver from Vera Cruz) every two years and a *galeones* (sent to Portobello to collect Peruvian silver) every three. Nuala Zahediah, 'Commerce and conflict: Jamaica and the War of the Spanish Succession,' in. Leonard and Pretel, *The Caribbean and the Atlantic World Economy: Circuits of trade, money and knowledge, 1650–1914* (London: Palgrave Macmillan, 2015), 69-71.

¹⁰¹ TNA, CO 1/17, ND, 1663, Memorial to Duke of York and TNA, T 70/75, 27 June, 1664, General Court of Royal Adventurers.

receive ‘two-thirds [of their enslaved Africans] at Jamaica and one-third at Barbadoes...From Jamaica negroes may be easily transported to Sta. Martha, and so to all the ports leeward as far as La Vera Cruz, and from Barbadoes to all the windward parts of the Continent.’¹⁰² This strategy gave Barbadian merchants the task of supplying the Spaniards living in the eastern Caribbean and especially in modern-day Venezuela, while the Jamaicans would serve as an ideal market for the western half. With these parameters set, England planned to reap a bounty of ‘86,000*l* in Spanish silver per annum,’ while the Barbadian merchants hoped that Bridgetown would emerge as the primary hub for Anglo-Spanish trade.¹⁰³ Moreover, elite merchants and sugar planters, such as John Reid, also hoped to participate in private trade that would result in them selling enslaved Africans to areas like Porto Bello, Cartagena, and even as far afield as Cadiz and Tenerife.¹⁰⁴ Eltis claims that this early approach was quite successful, as by 1667, 15% of all enslaved captives arriving at Barbados left the island on Spanish ships.¹⁰⁵

The trade never developed for Barbados as expected, however, and the planters, fearing that the best enslaved Africans would be sent to Spanish colonies, quickly grew to dislike the arrangement. Furthermore, the Anglo-Dutch War greatly limited the Company’s ability to send ships across the Atlantic. As such, Barbadian

¹⁰² BL, Egerton 2395, 2 February 1675, ‘Spaniards Buying Negroes of the English Royal Company.’ The geography of the Caribbean greatly influenced England’s mentality towards trading with Spain. Jamaica was ideally situated to reach most Spanish markets, with Cuba 500 miles away, Portobello 600, and Cartagena 550. Barbadian merchants hoped to cover the important Spanish possessions east of Jamaica, such as Venezuela and Puerto Rico, since the Jamaicans found it difficult to tack against the strong currents in large ships.

¹⁰³ TNA, CO 1/19, ND, 1665, ‘Narrative of the condition of the RAC, T 70/75, 20 June 1664.

¹⁰⁴ Stephen Fortune, *Merchants and Jews: The Struggle for British West Indian Commerce 1650-1750* (Gainesville: University of Florida, 1984) 105-112 and TNA, T 70/75, 20 June 1664. The records show influential Barbadians, such as Thomas Modyford, Francis Willoughby, and Humphrey Walrond, vying for control of the Spanish trade.

¹⁰⁵ Alex Borucki, David Eltis, and David Wheat, ‘Atlantic History and the Slave Trade to Spanish America,’ *American Historical Review*, vol. 120, no. 2, (2015), 444.

merchants sold few enslaved Africans to the Spaniards under the *asiento*, especially after 1665. Zook found, for example, that only a single Spanish ship legally arrived at Barbados during the subcontract. Even this voyage was a disappointment, as the Spanish captain desired to secure 1,000 Africans, but island agents could only gather 800 to sell.¹⁰⁶ By 1667, the Royal Adventurers realized that they could never fulfill their agreement with Grillo and Lamolini and, claiming that the contract had been broken by the unscrupulous brokers, were no longer liable to its terms. In private, however, they admitted their failure, and acknowledged that no more than 1,200 enslaved Africans had actually been delivered to Grillo's and Lamolini's agents.¹⁰⁷ As such, the Royal Adventurers were not able to control the Anglo-Spanish slave trade as they had initially intended and struggled to produce a profit as a monopolistic company.¹⁰⁸ While the signing of the Treaty of Madrid (1670) inspired the English with some hope of reviving trade between the two countries, and likely formed one reason why the king granted another charter to the RAC in 1671-72, a general lack of available enslaved labor caused few Spaniards to visit Barbados in the early 1670s.

By 1675, the RAC showed interest in reestablishing a supply of enslaved Africans to the Spanish, but decided that it would only be profitable if Barbados had no real role in the trade.¹⁰⁹ In 1677, however, the Barbadian government rejected the Company's decision and made their own effort to establish a commercial relationship with Spain, as Governor Atkins wrote to London informing the Committee of Trade and Plantations that it would benefit the island 'to make a Trade with Cades,' and

¹⁰⁶ Zook, *Royal Adventurers*, 93-94.

¹⁰⁷ Ibid.

¹⁰⁸ TNA, CO 1/19, ND, 1665, 'Present condition of the RAC.'

¹⁰⁹ Colin Palmer, *Human Cargoes: The British Slave Trade to Spanish Americas, 1700-1739* (Urbana, University of Illinois Press, 1981), 7-9.

that the RAC 'will thereby be furnish'd with money that they may pay their Debts the better and rid themselves at good rates of their refractory, dangerous and bad Negros.' Furthermore, 'the island by this Trade will increase in wealth, and...may grow to be so considerable that a duty of some advantage may accrue to His Majestie.' Atkins further emphasized to the Lords that the Spanish strongly desired this trade as well: 'Arrival of a Spanish ship from Cadiz desirous to trade for negroes....There will be always a stock ready upon the island for the Spaniard to come and buy within ten or twelve days sail of Havanna, where they carry them all.' To conclude, Atkins assured the Committee in a post-script that the trade was lawful and fit within the established Navigation Acts: 'When I speak of the Spaniard Trading here, tis only for Negros and for ready mony, they do not bring one peny worth of goods.'¹¹⁰

While the trade took a few years to solidify, Spanish merchants had reappeared in the RAC's records by 1679 as occasional visitors to Barbadian slave markets.¹¹¹ One of the more unique cases was that of Captain Thomas Crocker. Crocker, captaining a small ship for the Company of Seville, had received a license from the Spanish government allowing him to engage in the Caribbean slave trade for two years. He planned to buy hundreds of enslaved Africans in Barbados and transport them to Cartagena, where he could sell them to the Spaniards stationed there for a large profit. He first appears in the records on 11 March 1680, as Gascoigne and Stede noted 'Mr. Thomas Crocker whoe lately arrived here in a Tartan from Cadiz to buy about 200 Slave hath brought about £4,000 to pay for

¹¹⁰ BL, ADD MS 38714, 13 May 1677, Atkins to Lords of Trade and Plantations.

¹¹¹ The timing of the Spanish government's attempts at integrating into the English slave trade through Barbados was no coincidence, as the Dutch on Curaçao had their *asiento* revoked in 1679.

them.¹¹² He returned to the island to participate in another auction only two weeks later, when, on 23 March 1680, he bought forty-nine men, twenty-three women, four boys, and two girls for £1,732.10s in ready money from the *Samuell*.¹¹³ He appeared again in the spring of 1681, when he bought '188 choice negroes' and finished out his contract with a fourth and final trip in January of 1682 that resulted in him carrying away 870 newly-arrived Africans.¹¹⁴ Crocker, however, was not the only slave merchant sponsored by the Spanish to participate in the trade. A month earlier, Señor Diego De Pamplona bought thirty-seven enslaved Africans for £865 from the *Charles*.¹¹⁵ In the same year, an anonymous merchant from Vera Cruz purchased 600 more Africans in ready money.¹¹⁶ The combined efforts of these three merchants netted the Spaniards at least 1,936 enslaved Africans from Barbados in only a year and a half. Yet, much to the chagrin of Barbadian planters and merchants, the Spanish slave trade shifted west after 1682. By that time, Spain's government had instructed its governors of Havana, Porto Bello, and Cartagena to send to Jamaica for enslaved Africans, and Spanish merchants unsurprisingly came to prefer the benefits of the island's more centralized location.¹¹⁷ There were still opportunities for the Barbadian merchants trading south to the Spanish cocoa producers working in Venezuela, but these were infrequent and less than ideal, as Caracas, the only town of note, was a difficult-to-access regional capital.

For the rest of the decade, trade with the Spaniards endured, but was inconsistent and unpredictable. A single huge sale, for example, took place in 1683,

¹¹² TNA, T 70/15, 9 April 1681

¹¹³ TNA, T 70/939, 23 March 1680.

¹¹⁴ TNA, T 70/10, 11 June 1681 and T 70/10, 27 January 1682.

¹¹⁵ TNA, T 70/939, 18 February 1680.

¹¹⁶ TNA, T 70/10, 8 December 1681.

¹¹⁷ Nettels, 'Spanish-American Trade,' 2-3.

during which ‘the King having given a Spanish ship leave to trade and buy negroes in Barbados, the Governor exacted six pounds a head for every one of a thousand negroes sold,’ but proved to be a singular moment instead of a burgeoning trend.¹¹⁸ This, however, was not through a lack of effort by the Barbadian government, as its members regularly schemed to redirect Spanish slave merchants back to their island. In 1684, for example, they proposed a new trade with the Spaniards, who continued to show ‘many interests in our Shipps Negroes.’¹¹⁹ In 1686, the RAC factors further reported that the Barbadian government was sending out missives to Spain with the hope of ‘inviting the Spaniard to Trade thither.’¹²⁰ The arrival of Sir James Castillo, a former agent for Nicholas Porcio, at Barbados in 1690 sparked a new confidence amongst island merchants, as he purchased dozens of enslaved blacks to trade to Spanish markets and left promising to buy more in the future, although he instead returned to Jamaica in 1691.¹²¹ While William III attempted to make it easier to trade with the Spaniards by passing legislation in 1692 that guaranteed that ‘the said Subjects of the King of *Spain* may have free liberty of trading to this Place for Negroes...and that no Tax or Duty shall be laid upon or required from them,’ they continued to look elsewhere for their labor supplies.¹²²

Jamaica remained as Spain’s main base of operation within the English Caribbean; accordingly, Sir James Castillo and Don Francisco Portio contracted with local merchants to deliver 86,014 pieces of eight worth of enslaved Africans to both

¹¹⁸ TNA, CO 1/51, 23 November 1683.

¹¹⁹ TNA, T 70/12, 21 April 1684.

¹²⁰ Ibid., 28 May 1686.

¹²¹ Ibid., 24 April 1690. With Spanish activity in Port Royal increasing after 1680, Spain placed their own agent, James Castillo, in the town to act for Porcio. Appointed General-Administrator of the *Asiento* for all the Spanish Indies in 1688, he left Jamaica for Cuba, where he was eventually jailed for incorrectly reporting sale totals. Once freed, he secured an *asiento* for Jamaica in 1689 and returned to the island by 1691.

¹²² Rawlin, ‘Laws,’ No. 394, 2 August 1692.

Porto Bello and Cartagena without applying to Barbados for any help or support.¹²³ Furthermore, the Spaniards preferred trading with the Danish in St. Thomas and the Dutch in Curaçao for their eastern Caribbean needs, as the merchants in these islands had a reputation of being easier to bargain with than the English.¹²⁴ The Spanish had also become increasingly suspicious of England towards the end of the century, since they saw Whitehall's role in the failed Darien scheme 'as a mark of little friendship' and used it to justify 'a rupture of the alliance between the two Crowns.'¹²⁵ Thus, as the Spaniards began to look to Barbados' colonial rivals to satisfy their labor needs, most Barbadian merchants found themselves without a consistent niche in the valuable Spanish slave trade.

This lack of trust and obvious preference for other locations, however, did not prevent Barbadian merchants from taking matters into their own hands and finding other ways to trade with Spain's colonial fortress towns. In 1698, for example, Thomas Piles landed in Barbados after a long and trying journey during which the original captain, Charles Cotterill, drowned in the Middle Passage. After failing to sell all 131 Africans who had survived the trip, Piles decided to 'proceed to Cartagena' to take advantage of the labor-hungry population that resided within that important colonial center.¹²⁶ Moreover, in 1700, Thomas Brewster and John Baty traveled from Barbados to Portobello to illicitly trade 108 enslaved Africans directly with the Spaniards. In 1701, Solomon Merrett, another merchant, admitted that many English in the Caribbean 'traded with Spain last war all the war, and were admitted into Port only on carrying Neutral Colours, altho' the Spaniards well knew

¹²³ TNA, CO 137/8, 23 May 1709, Petition of Onslow, Broughton, Way and Bernard to the Queen.

¹²⁴ TNA, T 70/12, 19 July 1695.

¹²⁵ TNA, CO 323/4, 22 May 1699, Memorial to Spanish Ambassador.

¹²⁶ TNA, T 70/12, 24 August 1698.

the ships and the Commander to be English, and we may well expect the same Trade now.’¹²⁷ Spanish and Portuguese ships likewise illegally accessed English ports by pretending that all ‘have English owners, but as they make foreign ports their place of clearance at every voyage, by paying off their men there, and laying out all the expenses of their voyage there.’ There is little reason to think that a similar strategy did not occur in Barbados.¹²⁸ Regardless of where they conducted their trade, Barbadian merchants still managed to profit from this relationship throughout the seventeenth century, as Eltis calculated that they sold 32,000 enslaved Africans to the Spanish between 1668 and 1700, for an average of at least 1,000 per year.¹²⁹

In 1701, however, the English seemed to suffer a significant setback when the French *Compagnie des Indes Occidentales* received the *asiento* to annually supply 4,800 *piezas de Indies* for a ten year period effective in 1702. The incensed English had worried that this would happen, as Peter Beckford, Jamaica’s governor, admitted that the ‘French have prevailed wonderfully with the Spaniard both in amity and trade for these 12 months past, for all their ports have been open to them and...have had particular orders for a Free Trade.’ In order to stifle this trade, the English considered adopting dramatic arrangements, such as the stationing of armed ships near Cartagena and Porto Bello to intercept foreign slave traders, effectively cutting the French off from the Spanish Main.¹³⁰ These plans never materialized and, instead, the English countered the French by continuing to find ways to enter Spanish-American ports. Furthermore, it also became clear that France could not meet its contractual obligations, as Lewis Galdy, a RAC agent in Jamaica, claimed

¹²⁷ TNA, CO 194/2, 2 January 1702, Merrett to Board of Trade.

¹²⁸ TNA, CO 194/1, 18 November 1698, Answers to Council of Trade.

¹²⁹ Eltis ‘Spanish America,’ 444.

¹³⁰ TNA, CO 137/45, 15 May, 1702.

that the French were ‘short 7,000 slaves in their deliveries to the Spaniards,’ and that the time was ideal for English merchants to call at Porto Bello.¹³¹ Thus, according to Palmer, England’s merchants were able to successfully challenge France’s control of the Spanish slave trade and managed to carry between 1,500 and 3,000 enslaved Africans annually to Spain’s colonies.¹³²

With France struggling to meet contractual requirements, Barbadian merchants again attempted to reestablish a relationship with the Spaniards, this time, however, with the English monarch’s full support. In 1707, Queen Anne sponsored the settlement of Manuel Menasses Guilligan, a merchant who had previously participated in the Spanish trade on St. Thomas and Curaçao, in Barbados with the belief that ‘he may be usefull in promoting the Trade of our subjects with those of the Spanish West Indys.’¹³³ Guilligan’s residency on the island paid off almost immediately. Thomas Pinder, president of the RAC, reported in June of 1708 that ‘by the interest and influence of Gilligan, a considerable merchant of New Spain hath been at Barbadoes to purchase negroes, etc., and made offers of settling and promoting the Assiento Trade in that Island,’ in return for ‘sufficient quantities of bullion and pieces of eight.’¹³⁴ Governor Milford Crowe recalled another visit from the Spanish: ‘Some days since a Spanyard came up in one of our trading sloops from Curracco with passports from the Agents of the Spanish Assento for two sloops with negros, if the merchts here would send any to Carthageen at £35 per head.’ Crowe saw this as a great opportunity and ‘encouraged the Traders to make an adventure,

¹³¹ TNA, T 70/8, November, 1712.

¹³² Robert Louis Stein, *The French Slave Trade in the Eighteenth Century: An Old Regime Business* (Madison: University of Wisconsin Press, 1979), 10-12, Nuala Zahedieh, ‘Commerce and conflict,’ 74-76, and Palmer, *Human Cargoes*, 7-15.

¹³³ TNA, CO 5/210, 22 February 1707, Queen Anne to Crowe.

¹³⁴ TNA, CO 28/11, 14 September 1708, Pindar to Queen Anne.

soe soone as they can procure the vessels, in hopes of a more advantageous trade.’¹³⁵ Rowland Tryon, a Barbadian merchant, shared Crowe’s opinion, admitting in a letter that ‘Barbados is well scituated for all the trade in those parts of the Spanish West Indies that lye from the River Amasones to Rio [De la Hache]...for generally we can go and come between those coasts and Barbados upon a stretch with a Trade wind.’¹³⁶ This would have effectively given Barbadian merchants control over the slave trade to the Spanish Main from just beyond the modern-day border between Colombia and Venezuela in the west to Suriname in the east.

The Council of Trade and Plantations initially responded positively to Crowe, maintaining that he would ‘do well to give all the encouragement possible to the Negroe trade with the Spaniards, having due regard to the Acts of Trade and Navigation.’¹³⁷ They also believed that it was logistically necessary to add Barbados to the trade in order to maintain a good relationship with Spain. Based on the Council’s calculations, Spanish colonies demanded nearly 12,000 enslaved Africans per year, a number far in excess of what the Jamaicans could provide alone.¹³⁸ The Council was far less effusive to Queen Anne, however. On the one hand, they admitted that ‘promoting and settling the Assiento trade in Barbadoes as proposed by the petitioner may be of such advantage to this Kingdom and to your Majesty’s Plantations that under the present state of affairs, we shou’d not object to your Majesty’s granting the passes desired.’¹³⁹ Yet, the Council also argued that the trade would be illegal unless the Queen made special dispensations to the Navigation Acts: ‘since the trade cannot be carried on in the manner proposed by the petitioner

¹³⁵ Ibid., 27 June 1708, Crowe to Council of Trade and Plantations.

¹³⁶ TNA, CO 28/12, 25 May 1709, Rowland Tryon.

¹³⁷ TNA, CO 29/11, 25 November 1708, Council of Trade and Plantations to Crowe.

¹³⁸ TNA, CO 389/20, 27 January 1709, Ibid. to the House of Commons.

¹³⁹ TNA, CO 29/11, 3 December 1708, Ibid. to the Queen.

without dispensing with the Act of Navigation...we are humbly of opinion that it is not adviseable for your Majesty to grant the passes desired.'¹⁴⁰ Without the Council's support, Queen Anne's ardor also waned and the English government dropped their consideration of legally including Barbados in the commerce between the two nations.

The Anglo-Spanish relationship underwent a final significant shift in the aftermath of the War of the Spanish Succession. The Treaty of Utrecht, formally signed in April of 1713, granted the *asiento* to the English South Sea Company at 4,800 *piezas de Indias* for the next 30 years.¹⁴¹ To more easily maintain the contracted numbers of enslaved Africans, the SSC established two supply agencies, one in Jamaica and the other in Barbados. At these two locations, the SSC purchased enslaved Africans from both private traders and the RAC, as well as from additional markets in the Leeward Islands, Curaçao, and St. Eustatius and sent them to their factories in Cartagena, Buenos Aires, Vera Cruz, Havana, Santiago de Cuba, Porto Bello, and Panama. At first, the SSC regarded Barbados as an equal part of the *asiento*, and responsible for trade to the eastern half of the Spanish Main. Yet, over the next five years, Barbadian merchants saw their role decline, as the predominance of Jamaica, who handled around 70% of the trade and served as an organizational base and refreshment depot for ships heading to Spanish colonial towns, minimized the need for a second, more remote outpost on another island.¹⁴² Moreover, Portuguese, Dutch, and French interlopers continued to sustain high levels of illicit

¹⁴⁰ Ibid.

¹⁴¹ Spain also conceded to allow English merchants to supply a single annual ship of 500 tons filled with tax-free manufactured goods in order to vend their wares at the fairs that coincided with the arrival of the *flotas* or *galleons*. Zahedieh, 'Commerce and conflict,' 79.

¹⁴² Palmer, *Human Cargos*, 55-60 and 83-89, Zahedieh, 'Commerce and Conflict,' 76-82, Stein, *French*, 8-12.

trade throughout the decade, as the Spanish showed little hesitation in taking advantage of the cheaper prices and the willingness to supply distant markets offered by many foreign traders. Thus, as long as Jamaica continued to function as a base of operations and foreign interlopers retained their ability to reach Spanish fortress towns, Barbados maintained no significant place within this trade.

Barbadian merchants made one last attempt at convincing the Council of Trade and Plantations to filter Spanish trade through their island when Governor Robert Lowther wrote to them that ‘It has always been thought prudent to connive at a trade from Jamaica to the Spanish coast. The merchants agree that a like trade from Barbados would be advantageous.’¹⁴³ When this proposal also met with failure, most island merchants realized that they lacked the necessary domestic support and gave up on their attempts to secure an *asiento* contract, forcing them to resume their illegal trade with the Spaniards. They were successful to a point, as the Council admitted that it was ‘apparent...that an illegal trade is carry’d on’ between Spanish and Barbadian merchants,’ but the practice became increasingly difficult and limited in its scope and Barbados was progressively phased out of this trade.¹⁴⁴ The English government, now with greater enforcement mechanisms in place, kept their eyes open for those who attempted to continue to trade illegally and disciplined those it caught. Governor Lowther, for example, faced punishment for allowing a single Spanish sloop to dock in Bridgetown to sell its wares and stock up on local goods, ‘chiefly of flower and other eatables,’ a series of actions that were ‘a plain breach of the Acts of Trade and Navigation.’¹⁴⁵ Wedded to a mercantilist ideal, the English

¹⁴³ TNA, CO 28/15, 3 February 1720, Agents to Council and CO 388/17, 17 October 1714, de Pontchartrain to D'Iberville.

¹⁴⁴ TNA, CO 29/14, 25 February 1720, Council of Trade and Plantations to Craggs.

¹⁴⁵ TNA, CO 28/15, 3 February 1720, Agents to Council of Trade and Plantations.

government of the post-Utrecht era maintained greater control over its Caribbean colonies and consistently refused to relax the laws and regulations that defined the nation's commercial Empire. Thus, while all sides recognized the benefits that existed through an open trade with colonial Spain, the English government forced Barbadian merchants to watch as their Jamaican rivals attained considerable wealth by selling a variety of goods, including enslaved Africans, to their Spanish neighbors.

Conclusion

In 1689, Edward Littleton complained of the perceived evils of the RAC's slave trade monopoly: 'Of all the things we have occasion for, *Negroes* are the most necessary, and the most valuable. And therefore to have them under a Company, and under a Monopoly, whereby their Prices are doubled; cannot but be most grievous to us.'¹⁴⁶ Littleton's infamous pamphlet was characteristic of the thirty-year debate on the validity of mercantilist control over the slave trade, as elite planters frequently petitioned the English government for open commerce in the hope that it would lead to lower prices and greater supply. Yet, the petitions, pamphlets, and letters sent to England did not accurately reflect the overall state of Barbados between 1660 and 1720.

A statistical analysis based on a variety of sources more accurately portrays a bustling, and oftentimes glutted, Barbadian market that stood at the very heart of the Caribbean slave trade. In fact, the islanders received at least 638 ships and 135,518 enslaved Africans between 1660 and 1720, totals that break down to minimum averages of 11 ships and 2,222 enslaved Africans per year for 61 years. This meant

¹⁴⁶ Littleton, *Groans*, 6-7.

that the island was well supplied with cheap labor, with Barbadian planters and farmers welcoming more slave ships from Africa between 1680 and 1700 than all of the non-English Caribbean colonies combined. Moreover, in contradiction to the historiography, this same period also saw the reinvigoration of both the legal and illegal trade in indentured servants. At least 1,866 arrived at the island during these years, pheirushing the unfree white population to nearly 3,000 by the end of the century. Thus, Barbados emerged from this period as the best supplied labor market within the Caribbean world.

The key, however, to the islanders' success in the unfree labor trade derived from the fact that they had figured out by the late 1670s and early 1680s how to best operate within a commercial world defined by archaic mercantilist theory and impractical legislation passed by a distant and uninformed Parliament. They realized that the most successful path was often the one with the least resistance. In the early-to-mid 1680s, for example, they took advantage of both a peaceful Caribbean and planter-friendly governors to trade on their own terms. They had no problem relying on the RAC when it offered large supplies of enslaved Africans at low prices. Yet, they also did not hesitate to buy from illegal traders if the opportunity came their way, as they knew that there were few significant consequences for doing so. Moreover, some Barbadian planters supported and even sponsored the illegal capture, indenture, and transportation of innocent and free English, Scottish, and Irish youths to live in a servile state on the farms and plantations of Barbados.

Others imported enslaved Africans as commodities that could be bought, transported, and sold at a whim throughout the Caribbean, including to nearby Dutch colonies or the fortress-towns along the Spanish Main, oftentimes in violation of the

Navigation Acts. Several elite planters and merchants even maintained small fleets of their own that would illegally sail to Africa and trade rum and sugar for black laborers, who were then often sold again within the Caribbean for inflated prices. Those without their own ships could sometimes be found helping arrange shelter and provisions for the many interlopers that frequented the small cays and inlets along Barbados' Leeward Coast. The labor-hungry Spaniards also voyaged to Barbados in order to buy enslaved Africans, frequenting Bridgetown's markets in the early 1680s and offering ready bullion for their large purchases. Their periodic arrivals continually wetted an elite Barbadian appetite for an expanded Anglo-Spanish trade and led to a fifty year conflict between the island and the home government over making it both official and legal. This relatively free and open branch of commerce, that incorporated the best elements from both a legal trade featuring the RAC and an illegal one that relied on interlopers, caused Barbadian planters and farmers to experience a peak moment in their early unfree labor history, with supply reaching a contemporary high while prices dropped to an all-time low.

The Nine Years War, however, caused the islanders to revert back to a relatively open and free slave trade. With the French Navy establishing early control of the main Caribbean and African waterways, it became increasingly difficult for most Barbadian agriculturalists to meet their labor needs solely through the limited trade they maintained with the RAC, especially since the enslaved Africans that did arrive sold for very high prices. Instead, they supplemented those that they received legally with additional black laborers acquired illegally. By the 1690s, the island's interloping networks were extensive and included the Dutch in Suriname, Curaçao, and St. Eustatius, the Danish in St. Thomas, and even neighboring English colonies,

such as the Leeward Islands. Trade went in both directions, however, as Barbadian merchants would often send any surplus enslaved labor to other islands, as well. The Duffields, a Barbadian merchant family, exemplified this trans-national approach to Atlantic commerce by openly trading and buying surplus black labor from colonies owned by a variety of countries, including Portugal, Spain, France, and the Dutch.¹⁴⁷

This open approach caused the labor supply to steadily increase until it returned to normal levels by 1696 and remained especially high once William III opened the slave trade to all merchants in 1698. With the legal addition of private traders, this branch of trade flourished over the course of the next three years, until another international war resulted in the return of significant limitations. Thus, Barbadian planters, farmers, and merchants regularly attempted to manipulate and control both the indentured servant and slave trade for their own best interests, using their Atlantic-wide relationships to create a system that they could mold to best support their own idealized notion of an effective slave-society and that left them with the most labor rich island in the colonial world.

¹⁴⁷ TNA, T 70/14, 8 June 1704.

Chapter 4: Barbadian Import and Export Trade, 1680-1700

Edward Littleton, in his *Groans of the Plantations*, offered a description of the economic conditions of Barbados that portrayed the island as financially unstable and under-supplied due to the Stuarts' strict adherence to the Navigation Acts. He writes: 'In former times we accounted our selves a part of England and the Trade and Entercourse was open accordingly so that Commodities came [to England] as freely from the Sugar Plantations, as from the Isles of Wight or Anglesey. But upon the King's Restuaration we were in effect made Forrainers and Aliens.' This greatly affected Barbadian planters' and merchants' patterns of trade, as 'Heretofore we might send our Commodities to any part of the World...any Port, or Bay, or Creek; and at any time, either by day or by night.' Yet, 'now we must send them to England and to no place else,' which, according to Littleton, 'hath gone a great way in destroying the trade.' The Acts also had a similar impact on the importation of goods to Barbados: 'Before the things we wanted were brought to us from the Places where they might best be had. But now we must have them from *England*.' Littleton concluded his grievances by channeling his fellow planters' bewilderment and disdain for the lack of free trade, owning that it was 'a Right, not a Priviledge,' and that the idea that 'English ships and English Men should not be permitted to trade to their best convenience and profit, is a thing we simply cannot understand.'¹

While Littleton's account reflected the opinions of many on Barbados, it does not accurately portray the island's commercial situation as it existed during the late-seventeenth century. Many historians have also struggled to properly ascertain the manner in which the islanders pursued their commercial ends. The older

¹ Littleton, *Groans*, 1-5.

historiography tends to describe Barbados from a pure mercantilist perspective and, as David Hancock points out, depicts the island with ‘a one-center, England-dominant model of influence in mind,’ with some seeing this as ‘the only way to formulate an Atlantic history that does justice to both British and colonial history.’² Other works offer similar descriptions that unimaginatively place the island into a conventional mercantilist model with the metropolitan center profiting at the expense of a dependent periphery. These perspectives have continued to inform much of the historiography and have led to an image of Barbados as an obedient and complacent dependency that thrived specifically because of its willingness to participate within an ‘integrated empire, united by trade networks, commercial policies, and an imperial vision.’³ They further posit that white Barbadians must have profoundly understood their role within England’s mercantilist system and prospered specifically because they operated within the regulations and expectation set by Parliament.

Another group of historians, however, view ‘mercantilism’ as a contentious term that holds little meaning and does not accurately describe the movement of trade throughout the English colonial world. Instead, they depict Barbados’ economy as open, free, and flexible. Christian Koots, for example, describes Barbados’ imperial relationship with England as ‘colonial-centric,’ and insists that the elite planters and merchants, maintaining a sense of their own power, operated

² David Hancock, ‘A World of Business to Do: William Freeman and the Foundations of England’s Commercial Empire, 1645-1707,’ *William and Mary Quarterly*, vol. 57, no. 1 (January, 2000), 3-5 and Steve Pincus, ‘Rethinking Mercantilism: Political Economy, the British Empire, and the Atlantic World in the Seventeenth and Eighteenth Centuries,’ *William and Mary Quarterly*, vol. 69, no. 1 (Jan., 2012), 34.

³ Carla Gardina Pestana, *The English Atlantic in an Age of Revolution, 1640-1661* (Cambridge: Harvard University Press, 2004), 220. For more on this older point of view, see the aforementioned works from Harper, Puckrein, Gragg, Pares, Harlow, Beer, Dunn, Sheridan, and the Bridenbaughs.

under the assumption that ‘before there could be a successful empire, there must be successful colonies.’ They used this logic to ‘pursue viable trade regardless of imperial boundaries’ and functioned as a central market for an ‘ad hoc cooperative reality’ within a collaborative and multi-ethnic Atlantic world. Susan Amussen similarly claims that ‘it is difficult to escape the judgement that those in London did in fact believe that the colonies ought to serve their [own] interests,’ and consequently allowed them to act freely within the Caribbean.⁴ Jonathon Barth agrees, as he argues that it is anachronistic to ‘pit empire against periphery,’ since ‘British mercantilists permitted a relatively open market for intercolonial trade.’⁵ Hancock echoes Koots by suggesting that Barbados was both ‘decentralized’ and ‘opportunistic,’ and that its commercial system evolved specifically ‘through the efforts of individual adventurers and entrepreneurs.’ Finally, Eltis shows that London’s ‘relative position’ declined significantly in the last quarter of the seventeenth century in favor of neighboring, and oftentimes foreign, Caribbean and mainland colonies, thereby keeping Barbadian trade surprisingly flexible and responsive to prevailing commercial conditions in the aftermath of the island’s initial sugar boom.⁶ Overall, this newer group of ‘free trade’ historians argues that the Barbadians purposefully neglected the Navigation Acts and engaged in an Atlantic commercial community in which self-interest and increased profits trumped nationality and empire.

⁴ Susan Amussen, ‘Political Economy and Imperial Practice,’ *William and Mary Quarterly*, vol. 69, no. 1 (Jan. 2012), 49-50.

⁵ Jonathon Barth, ‘Reconstructing Mercantilism: Consensus and Conflict in British Imperial Economy in the Seventeenth and Eighteenth Centuries,’ *William and Mary Quarterly*, vol. 73, no. 2 (April 2016), 257-260.

⁶ Koots, *Periphery*, 4-9, 224-227, Hancock, ‘Business,’ 4-5, and Eltis, ‘New Estimates,’ 641-45.

Neither of these two interpretations, however, accurately represents the nuance involved in the realities of late-seventeenth century commerce in Barbados. This chapter argues that Barbadian planters and merchants took a pragmatic approach to trade that allowed for the flexibility to comfortably choose between the confines of England's regulated mercantilist system and a largely open trade that relied on market conditions to dictate the movement of goods. They utilized both 'formal and informal negotiations' to reach a general consensus with the metropole, but also showed no hesitation to act on their own volition and for their own benefit.⁷ Operating more like capitalists, who actively followed patterns of supply and demand, Barbadian planters and merchants were quick to take advantage of the protection, high prices, and guaranteed markets of the Navigation Acts when it benefitted their own agenda and profit-lines, as it did for a little over a decade after 1675. Yet, they were also willing to minimize this relationship and encourage illicit trade if Caribbean or Atlantic conditions made it sensible to do so. They loathed the raw power that the central government represented and feared its implementation, whether through militaristic force or economic regulation. Instead, they preferred a balanced and flexible commercial system governed by pragmatic choice. Within the organizational network that emerged, the metropole represented a single option, one of many that planters and merchants had when trading throughout the Atlantic world. Thus, the elite Barbadians' ability to avoid the restrictions of a single economic creed became one of their greatest economic strengths during the last two decades of the seventeenth century and led to an economic pragmatism that took advantage of a

⁷ Koots, *Periphery*, 4-9 and Barth, 'Reconstructing,' 257-260.

variety of often competing commercial visions to meet the import and export standards necessary to survive and prosper in the Caribbean.

This chapter analyzes the Barbadian planters' and merchants' pragmatic approach to trade during the late-seventeenth century and, through an analysis of the Naval Office Returns from 1680 to 1700, depicts how they altered their various economic relationships with both England and the rest of the Atlantic world in order to take advantage of the changing commercial conditions of the era. This transformation is best represented by two particularly interesting historical moments: a peak period of early growth and expansion followed by one of wartime decline and depression. In order to more effectively do this, the following chapter is divided into three sections. The first offers a brief examination of the economic relationship between England and Barbados and the island's place within the metropole's regulated economy during the latter-half of the seventeenth century. The purpose of this section is to provide a brief overview of how Barbadian planters and merchants reacted to the English government's increasing oversight and how these opinions changed over time. The second part examines Barbadian commerce between 1680 and 1688, and discusses how the islanders' obedience to the Navigation Acts helped to cause both imports and exports to rapidly expand during this peak moment in their early history. The final section examines the effects of the Nine Years War on Barbadian trade and how the resulting limitations altered the island's commercial networks. It also considers how elite Barbadians responded to the wartime restrictions that they encountered with a brief examination of their increasing reliance on illicit trade and the development of the convoy system, both of which helped to maintain improved levels of imports and exports throughout this turbulent

era. This chapter concludes with the island's resumption of prewar trading patterns following peace in 1697 and contemplates how Barbadian commerce evolved from this point.

Part I: Caribbean Mercantilism and the Navigation Acts

Initially founded as a proprietary colony by Sir William Courteen, a London merchant, English settlement of the island was mercantilist in nature, but represented a newer approach to this economic philosophy. For many contemporary economists, the core theory behind England's mercantilism had shifted away from the collection of bullion when it appeared increasingly unlikely that English settlers would find untapped gold and silver mines. Instead, it came to center on land and the production of valuable cash crops, as these added a 'perpetual Addition' to a country's wealth, compared to the eventual depletion of all mines.⁸ John Cary, a seventeenth-century economist, posited, for example, 'that Land and Trade are the vitals of a nation' with the corresponding production and export of specific valuable agricultural goods as 'central to the new economic order.'⁹ The West Indian colonies smoothly fit within this updated vision of mercantilism, becoming great centers of cash crop production, and, as Cary maintained, were 'the most profitable of any we drive.' English merchants believed that a successful settlement in the Caribbean held many benefits for the nation, including an ability to 'supply [England] with Commodities which may be either wrought up here, or Exported again, or prevent fetching things of the same Nature from other Princes for our home Consumption, imploy our Poor, and encourage our Navigation.' Moreover, these islands were simultaneously limited in

⁸ Barth, 'Reconstructing,' 266-268 and Wood, *Survey*, 332-333.

⁹ Joyce Oldham Appleby, *Economic Thought and Ideology in Seventeenth Century England* (Princeton: Princeton University Press, 1980) 45-51, and John Cary, *An Essay on the State of England in Relation to its trade, its Poor, and its Taxes* (1695), 1-2.

size and resources, leaving them as dependencies ‘to take off our Product and Manufactures’ including necessary provisions, clothing, and supplies.¹⁰

In order to properly reap the benefits of the West Indies, trade, according to economist Charles Davenant, must become a ‘Matter of State,’ and needed leadership from a group of experts who properly understood matters of production and could regulate the commerce of an increasingly complex empire.¹¹ State intervention, according to Barth, ‘entailed a host of miscellaneous schemes’ that included creating and monitoring ‘prohibitive duties on foreign imports, subsidies for domestic industry, restrictions on foreign shipping, and the creation of a general ‘regulatory policy’ for the colonies. Once a strong state bureaucracy was in place, economists projected that ‘England would become the Center of Trade,’ and stand ‘like the Sun in the midst of its Plantations,’ where it would ‘not only refresh them, but also draw Profits from them.’¹² Thus, the English government came to understand its role in the developing colonial trade as a vital one, and that only through their expert guidance could both the metropole and periphery hope to prosper.

Most white Barbadians, however, never saw themselves as a part of the ‘new mercantilism’ being promoted by English economists. Instead, they preferred to take a more capitalistic approach that centered on free trade and their abilities to make complex commercial decisions on their own, especially after the island-wide switch to sugarcane agriculture in the late 1640s. Importantly, early white Barbadian settlers experienced great prosperity during an era of relatively open trade, as

¹⁰ Cary, *State of England*, 15-16.

¹¹ Istvan Holt, *Jealousy of Trade: International Competition and the Nation-State in Historical Perspective* (Cambridge: Harvard University Press, 2005), 212.

¹² Cary, *State of England*, 15-17.

England maintained an under-developed and unreliable fleet that was often distracted by domestic disputes and civil war throughout the 1630s and 40s. The Dutch, consequently, ended up supplying the islanders with most of their needs, with as many as fifteen ships arriving annually by the late 1640s. These foreign merchants provided the Barbadians with cheap provisions and supplies, while taking away the planters' and farmers' cash crops such as cotton, indigo, ginger, tobacco, and, especially, sugar.¹³ Thus, as Harlow writes, it was England's lack of interest during 'these eventful years' that led the island to 'virtually become an independent state, owning the direct control of neither King nor Parliament.'¹⁴

Cromwell's Rump Parliament represented the first group to take a strong and aggressive stance against the free and open trade between Barbadian planters and their Dutch neighbors. The government initially struck in September 1650 with economic legislation that forbade all ships 'to come to, or Trade in, or Trafique with' any of England's colonies in America without a license, effectively outlawing Dutch trade within the English Caribbean. Parliament followed this piece of economic legislation by imposing the first Act of Trade and Navigation in October of 1651. Focusing only on importations, it again specifically challenged the Dutch by proclaiming that goods must be carried either in ships from the country of origin or first shipment, or in English ships. Hence, no commodities from English colonies in Asia, Africa, or America could be imported in foreign ships. Moreover, while the colonists could still legally trade with foreign merchants, they could not deal with middle-men, like the Dutch, who operated from an entrepot and specialized in the

¹³ Ibid, 54-57.

¹⁴ Harlow, *History*, 32-36 and 82.

carrying trade.¹⁵ They accompanied this by sending a successful military expedition force under George Ayscue to both enforce the new legislation and to require the island's submission to Parliament.

The thirty-three members of the Barbadian Council and Assembly disapproved of this level of government interference and, along with Governor Francis Willoughby, drafted a pamphlet to better communicate their views. In it, the Barbadians acknowledged the benevolence of the Dutch and their role in supplying the islanders during their first two decades of settlement: 'We will never be so ungratefull to the *Dutch*...as to deny them or any other Nation the freedome of our *Ports* and *Protection* of our *Lawes* whereby they may still embrace a free *Trade* and *Commerce* with us.' They also wrote of their strong belief in their right to free trade as English settlers: 'We will not be wanting to use all the *honest, honorable, and moderate* meanes we can for the continuance of a *free trade*...so on the other side we will not so much degenerate from the ancient candour of true *Englishmen* as to prostitute those *Liberties* and *Fredomes* to the will and pleasure of any.'¹⁶ Luckily, the planters benefitted from England's still ineffective navy and merchant marine, and continued to trade with foreign rivals such as the Dutch throughout the Protectorate.

The Restoration of Charles II in 1660, however, made the relationship between the metropole and periphery more complex, as the new monarch and his officials viewed their nation's colonial possessions as a 'Spring of Wealth' for an

¹⁵ Harper, *Navigation*, 38-42, Pestana, *English Atlantic*, 171-177, and Koots, *Periphery*, 58-60.

¹⁶ Anon., 'A Declaration Set Forth by the *Lord* Lieutenant Generall, the Gentlemen of the Councill and Assembly.,' (1651) The use of italics is as appears in the document. This work is also interesting in the fact that it first addresses the complaint of no taxation without direct representation in the nation's Parliament.

administration in desperate need of funds.¹⁷ By working to increase their control over England's various colonies, the Restoration government hoped to maximize its ability to profit from them, whether through restrictions placed on the carrying trade or a more scrupulous approach to the collection of duties and taxes. To this end, Charles revoked Cromwell's Navigation legislation and Parliament proceeded to pass an updated version of its own in 1660, with complimentary Acts enacted in 1663 and 1673 to close existing loopholes and strengthen their enforceability. The initial 1660 Act allowed for the unrestricted importation of all goods except those specifically enumerated, in which case they had to be either carried on an English-built ship that had an English master and a crew that was at least three-quarters English or Irish, or on a registered foreign-built vessel that had paid the proper duties. No sugar, tobacco, cotton, indigo, or dyeing wood produced in the plantations could be carried to any port except those in England or its colonies under penalty of forfeiture. Parliament also enhanced the mechanisms of enforcement, requiring all naval officers to capture any ship violating the Act and required all colonial governors to take a solemn oath to effectively implement the updated regulations.¹⁸

The Staple Act of 1663 required all vessels carrying European goods intended for sale in the colonies to go through an English port first, where it would be unloaded, inspected, assessed a duty, approved, and reloaded for final shipment on an English boat. Furthermore, the Master and two-thirds of the crew had to be English. The 1673 Act added duties on certain commodities when shipped from one plantation to another, while also appointing an official Naval Officer. In compensation for the imposed restrictions, colonial planters and merchants gained a

¹⁷ William Wood, *The Great advantages of our Colonies and Plantations in Great Britain*, (1728), 91.

¹⁸ Harper, *Navigation Laws*, 50-60 and Zahedieh, *Capital and the Colonies*, 36-40.

protected domestic market, support from the Royal Navy, and a nearly complete refund on re-exported goods.¹⁹

This left the merchant-planter elite stuck under an economic system that they neither supported nor wanted, while filling the government's coffers with money that many islanders believed it did not rightfully earn. Elite Barbadians responded almost immediately by sending a steady stream of petitions and letters to London voicing their complaints against the limitations and exclusivity promoted by the Navigation Acts. In 1666, Governor Willoughby, tired of merchants sending 'no goods to Barbadoes, but only empty ships to take away the sugar,' appealed directly to Charles II regarding the ills of the Navigation Acts:

Free trade is the life of all colonies, but such is the condition of the Caribbee Islands, that they have not clothes sufficient to hide their nakedness, or food to fill their bellies. Whoever he be that advised his Majesty to restrain and tie up his colonies in point of trade is more a merchant than a good subject....The people are much discontented, especially Barbadoes, who as they have merited much expect much to be done for them, especially a full supply of shipping.

Willoughby concluded that 'if your Majesty gives not an ample and speedy redress' to this issue 'you will lose famous Barbadoes.'²⁰ Two further letters from the Assembly and Council, both sent in 1668, carried a similar message, claiming that the English government's heavy-handed regulations and high duties left the island in 'inconceivable poverty,' with the typical planter reduced 'to a very meane Estate, his Courage brought low, his Labour Fruiteless,' and his household 'Most Impoverished.'²¹

¹⁹ Ibid.

²⁰ TNA, CO 1/15, 10 July, 1661, Council to Nicholas and CO 1/20, 12 May 1666, Willoughby to Charles II.

²¹ BL, Egerton 2395, 'An Account of the English Sugar Plantations,' 1668 and TNA, CO 1/23, 3 August, 1668, Assembly to the King.

Charles II and his government largely ignored the petitions and letters that arrived from Barbados and looked for ways to increasingly enforce England's commercial laws on the island. While the Anglo-Dutch wars of 1665-1667 and 1672-1674 allowed many Barbadian planters and merchant the opportunity to again pursue inter-imperial trade on their own terms, the latter conflict represented the last significant moment of free trade on the island.²² With new enforcement policies put into place by the Naval Officers after 1673 and an uninterrupted period of national peace between 1674 and 1689, the English were able to provide unprecedented levels of control over its command and organization of its colonies, especially in Barbados. The success varied by the specific officials in charge, but England's heightened ability to enforce legislation across great distances compelled Barbadian planters and merchants to adjust their commercial approach to fit within a new economic reality. Many welcomed this cooperation to some degree, as they sought greater acknowledgement from the metropole and hoped that their obedience would result in beneficial legislation, a reductions in duties, and a more open trade. Thus, they forged a new, pragmatic commercial identity that was flexible enough to follow most of the regulations imposed by an increasingly organized metropole during the 1680s, while still building a series of relationships with foreign merchants and illicit traders that would prove to be important throughout the next decade.

Part II: The Barbadian Economy: Imported/Exported Goods, 1680-1688

Initially, the complaints that emanated from late-seventeenth century planters such as Littleton appeared to be justified, as both contemporary residents and modern historians have defined the 1680s as an era of declining fertility, falling sugar prices,

²² BL, Egerton MSS 2395, 8 April, 1672, Willoughby's Proposals Concerning the West Indies.

inconsistent trade, and unprofitable plantations. In 1685, for example, the Barbadian government claimed that the aforementioned conditions resulted in island plantations costing more to operate than they could expect to earn, as a ‘moderate calculation’ proved that ‘the profits are short by over two hundred pounds of the expenses.’²³ Littleton describes a similar situation in his *Groans*: ‘We find that what we pay yearly in Duties, is much more then the whole Rent of our Lands.’²⁴ Yet, the raw macroeconomic data from the Returns suggest that the 1680s were a flourishing era of robust and expanding trade that resulted in a peak commercial moment for most Barbadian planters, farmers, and merchants, as they were importing and exporting more goods during this time than in any previous decade. The Returns further show that the most substantial gains occurred in the island’s import trade. Governor Jonathon Atkins estimated that in 1676, ‘about 150 sail come to the Island every year’ with ships ranging in size ‘from 20 to 300 tons.’²⁵ By 1681, however, 234 ships sailed into Carlisle Bay, with the numbers rapidly growing to over 300 the next year and over 400 by 1686. Unsurprisingly, the total tonnage of these ships also increased, rising from an estimated 10,176 tons in 1676 to 20,657 tons by 1682, and peaking at well over 27,200 tons in 1686.²⁶ This large and rapid expansion in trade made Barbados the second busiest port in the English world, easily surpassing the 240 ships and 19,878 tons that Bristol, England’s largest outpost, received during this time.²⁷

²³ TNA, CO 31/1, 16 September, 1685, Council, and Assembly to Lords of Trade and Plantations.

²⁴ Littleton, *Groans*, 1-3 and 10.

²⁵ TNA, CO 29/2, 14 June 1676 and CO 1/37, 4 July 1676, Atkins to Lords of Trade and Plantations.

²⁶ The approximate value of 10,176 tons came from applying the period’s average tonnage of 67.84 tons, as indicated in Table 1, to the 150 ships that Atkins claimed arrived at Barbados in 1676.

²⁷ Zahedieh, *Capital*, 144.

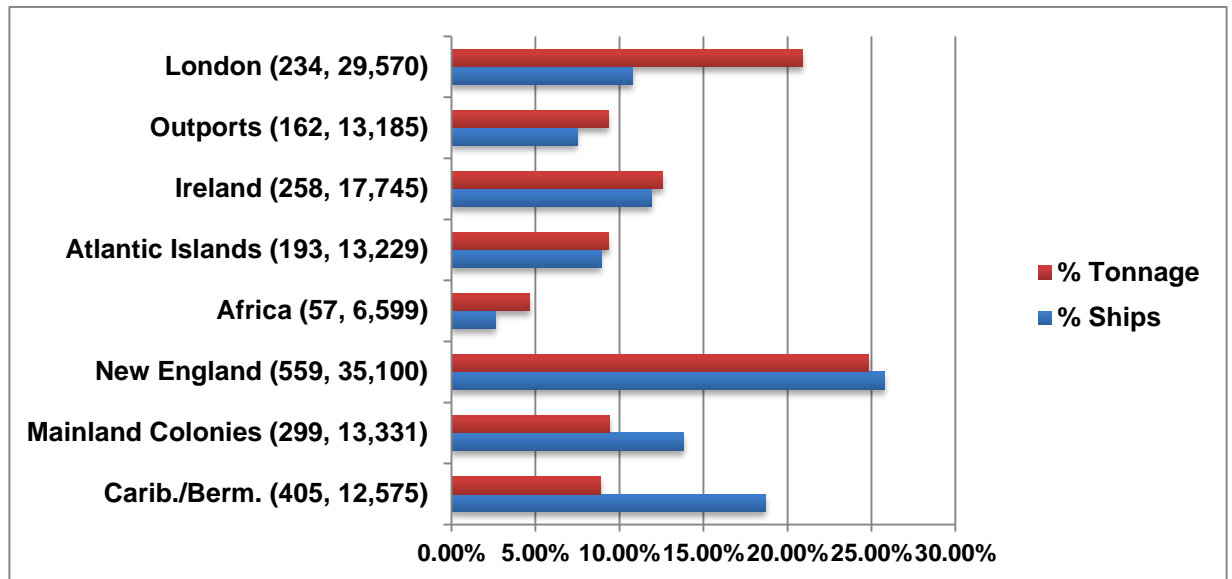
Table 4.1: Quantity of Trade in Barbados, 1682-1688

Year	%: Data	Arrivals	Tonnage	Per Ship	% Ships: England	% Ships: Colonies	% Ton.: England	% Ton.: Colonies
1682	100	356	23,904	67.2	43.8	56.2	57.4	42.6
1683	100	338	25,774	76.3	40.0	60.0	55.0	45.0
1684	100	308	21,307	69.1	41.6	58.4	51.2	48.8
1685	100	384	24,263	63.0	39.1	60.9	57.3	42.7
1686	100	423	27,262	64.4	40.0	60.0	58.7	41.3
1687	80	371	23,723	63.4	42.2	57.8	60.6	39.4
1688	75	311	17,578	56.5	37.6	62.4	54.6	45.4
Avg.	-	356	23,401	65.7	40.1	59.9	57.1	42.9

Table 4.1: TNA, CO 33/13 and 33/14, 1682-1688. The heading ‘% ships: England’ represents all ships that had originated in England and includes vessels carrying goods from London, the outports, Ireland, Scotland, Madeira and Cape de Verde. Tonnage throughout this chapter represents the cargo-carrying capacity of a ship. As ships often sailed without reaching full freight, the numbers presented are only approximations and describe the maximum capabilities of trade. 1681 is not included in this table because the Naval Officer did not begin to record the tonnage of shipping until June of that year.

A look at the compiled statistics from the Returns for 1682 through 1688 suggests that the islanders greatly benefitted from a near-decade long period of prosperity and commercial growth. As Table 4.1 reveals, 2,491 trading vessels, with a carrying capacity of 163,807 tons, arrived in Barbados over the course of this period. This meant that on average 356 ships, with a tonnage of 23,401 tons, participated in Barbadian trade each year between 1682 and 1688. The Returns also depict a Barbadian market filled with goods originating from a variety of locations throughout the Atlantic world. The intra-colonial trade was of the utmost importance to the island, with approximately 1,190 ships and 60,210 tons of goods (59.5% and 42.9% respectively overall) coming from local sources (i.e. Caribbean and American mainland) over the course of the seven years. In fact, Barbadian trade appeared to flourish most when the islanders maintained consistent ratios of 1.5:1 for colonial to English ships and 1:1.5 for tonnage, making this trade essential to prolonged success.

Graph 4.1: Origin for Ships and Tonnage Imported at Barbados, 1680s



Graph 4.1: TNA, CO 33/13 and 33/14, 1682-1688. The numbers listed from Africa do not match up with those from last chapter, as this graph only includes voyages recorded in the Returns. The numbers in parenthesis represent the total number of ships and quantity of tonnage that reached the island from each location.

Some colonies, such as Virginia, Maryland, and the Carolinas, had relationships that went back to at least the 1660s. The Carolinas supplied the island with timber, firewood, and small amounts of rice, while the Chesapeake colonies of Maryland and Virginia sent significant quantities of timber, basic ground provisions, meat, and most importantly, tobacco.²⁸ As Map 4.1 shows, the Chesapeake colonies of Virginia and Maryland combined to send 22 ships and up to 1,032 tons of imports to Barbados in 1684, a quantity that easily exceeded those from the other middle and southern colonies of New York, Pennsylvania, and Carolina. Moreover, the Barbadian trade in Chesapeake tobacco appears to have expanded greatly over the decade, as the crop became increasingly important on Barbados. In 1684, for example, Barbadian merchants imported 145 hogsheads worth of tobacco, but increased this to over 1,000 hogsheads by 1688. Finally, Pennsylvania, founded in

²⁸ TNA, CO 5/1308, 22 April 1697, Andros to Council of Trade and Plantations.

the early 1680s, had just started supplying Barbados with goods by 1684, but came to play a growing role in future trade. One official reported to the Commissioners of Customs that early Pennsylvanian farmers had ‘improved tillage to the degree that they have made bread and flour and beer a drug in all the markets in the West Indies.’²⁹

New England, however, represented the single most important colonial market for Barbados, with a relationship that dated back to the early settlement period. During that era, New England formed a valuable secondary supply source for those on Barbados when English ships could not regularly reach the Caribbean. The many coastal towns strewn along New England’s Atlantic coastline shipped the Barbadians a tremendous array of goods necessary for survival in a plantation society, making up 25.80% (559) of the ships and 24.83% (35,100) of the tonnage sent to the island during the 1680s. They delivered thousands of barrels of ‘refuse cod’ each year, which formed the basis of the enslaved population’s diet, while the northern port of Piscataqua sent more expensive fish for the island’s wealthier settlers, such as ‘hake, hadock, and polock, and some mackrell, which are much larger than...in England.’³⁰ The fisheries of New England, according to one contemporary author, were more valuable ‘than the golden mines of the Spanish Indies.’³¹

They also offered Barbadian planters and farmers other much-needed basic staples, such as beer, bread, flour, peas, and small quantities of meat, while the wealthy also frequently sent ‘small ships and barks that go to New England for

²⁹ TNA, CO 323/3, 6 March 1700, Quarry to Commissioners of Customs.

³⁰ TNA, CO 5/1045, 28 November 1700, Bellomont to Council of Trade and Plantation.

³¹ Barth, ‘Mercantilism,’ 269.

provisions.³² Boston and Rhode Island supplied large quantities of ‘horses and lumber to Barbados,’ while other local markets sent ‘linen and woolen cloth, shoes, hats, peltry...cider, boards, [and] pipestaves.’³³ Finally, New England also delivered a variety of naval stores, since there was ‘good tar, pitch, and iron made in the country’ and ‘hemp and flax also grow well.’³⁴ Contemporary planters realized how dependent they were on New England for their survival and success within the Caribbean. A 1678 deposition, for example, claimed that New England was ‘the key of the Indies, without which Jamaica, Barbados, and the Caribbee Islands are not able to subsist,’ as they received ‘many thousand tons of provisions, as beef, pork, peas, biscuit, butter, fish,’ from this region.³⁵ Josiah Child also pointed out the ‘almost incredible supplies’ that the West Indian plantations received from New England.³⁶

The surrounding Caribbean also played a significant role in the Barbadian import trade, accounting for 18.69% of the ships (405) and 8.90% of the tonnage (12,575) received during the 1680s.³⁷ These numbers suggest that the ships involved in local Caribbean trade were generally small, quick, cheap to operate, and highly maneuverable, with the average ship size ranging between 18 and 28 tons, while smaller vessels often carried as little as 6 or 8 tons. Most of the imports received

³² Cary, ‘State of England,’ 17, Child, ‘New Discourses,’ 206, and CO 1/47, 11 June 1681, Dutton's answers to heads of inquiry.

³³ TNA, CO 1/47, 11 June 1681, Dutton's answers to heads of inquiry.

³⁴ TNA, CO 1/44, 18 May 1680, Dutton's answers to 27 inquiries.

³⁵ TNA, CO 1/42, 17 October 1678, Deposition of Captain Breedon.

³⁶ Child, ‘New Discourse,’ 207.

³⁷ The numbers from the Returns in regard to Caribbean shipping are likely deceiving, as they list only a small portion of the vessels involved and mask the overall importance of this branch of commerce. Many wealthy planters owned small personal sloops that they used to stealthily move a variety of different goods from the small bays and unguarded inlets of nearby islands back to their plantations in an attempt to either avoid paying duties or to trade illicitly. Since these ships did not move between established ports, they generally went unrecorded. The Returns also underreport those sloops that traded through proper legal channels, with many never officially registering, as it was ‘so very intricate and troublesome’ to record them all. TNA, CO 152/6, 24 May, 1705, Johnson to Council.

from the Caribbean came from Bermuda and the Leeward Islands, especially Antigua, with Jamaica, Saltertudas, Tobago, and Suriname, a Dutch colony located on the South American coast, also contributing. The materials that arrived from the inter-island trade was often of great value, as cargos from Saltertudas contained large amounts of salt, which the islanders used to preserve food, while those from St. Lucia, Tobago, or St. Vincent's consisted of timber and fuelwoods.³⁸ Bermuda supplied Barbados with livestock and some additional wood, and Suriname illegally sent rollers, the wooden mechanisms used to crush and extract the juices from the sugar cane.³⁹ Thus, while the Returns suggest that only moderate amounts of trade took place between Barbados and the surrounding Caribbean, it played an important complementary role in supplying many of the natural resources planters needed to run their sugar plantations.

Even though local colonial markets supplied the island with an array of needed goods, trade with England, and especially London, formed a critical component of a healthy economy and represented the single most important late-seventeenth century trans-Atlantic commercial relationship for Barbados. While London and the outports combined to send only 18.28% of the ships involved in Barbados' import trade, they provided almost one-third of the tonnage (42,735 tons overall). According to Littleton, the English offered the islanders essential manufactured goods and provisions, including 'an infinite Quantity of Iron Wares ready wrought, tin-ware, earthen-ware, and Wooden-ware, *English* cloth, hats, shoes,

³⁸ See Chapter Five for more on how the Barbadians used St. Lucia, St. Vincent's, and Tobago.

³⁹ In 1684, for example, Thomas Dell brought 87 rollers from Surinam to Barbados aboard the *John and William*. Merchants also brought five rollers from Surinam in 1686, and another six in 1691. This also shows that considerable mill construction was taking place at this time. TNA, CO 33/13 and CO 33/13, 1684-1691.

horses, saddles, bridles, bread, flour, beer, cheese, and butter.⁴⁰ London furnished the luxuries that the island's wealthy sugar planters regularly requested, as well as the useful household goods that benefitted all parts of the white population. For the island's planters, London was also especially important for the pragmatic reason that its ships carried many of the bulkier, high freight items that were necessary components of sugar production. In 1684, for example, Barbadians imported three worm casks, six ovens, eight coolers, 24 sheets and 2,500 pounds of lead, 40 coppers and stills, 111 rollers, 142 chaldrons of coal, 2,700 pots and drips, and tens of thousands of different pieces of wood specifically designed for the construction of wagons, barrels, and boats, all of which were essential components of the sugar production process.⁴¹

Furthermore, English ships were also responsible for carrying goods from the Atlantic islands, which provided 'wine from the Maderas and Horses, Cattle, Assinegos, from the Island of Cape Verde,' both of which featured prominently in the records, and enslaved labor from the African littoral to Barbados.⁴² The trade from the Atlantic Islands was particularly prolific, with Madeira, Faial, and Cape de Verde combining to send more shipping and tonnage than all of England's outports, as the wine and livestock found on the three islands were highly coveted by wealthy planters.

The Barbadians also relied heavily on their commercial relationship with Ireland, which supplied 12.56% of the island's overall tonnage throughout the 1680s, most of which consisted of salted provisions and beer. During this era, Ireland

⁴⁰ Littleton, *Groans*, 24.

⁴¹ TNA, CO 33/14, 1684.

⁴² TNA, CO 29/2, 14 June 1676, Atkins to Council of Trade and Plantations.

emerged as ‘the home to a provisioning industry that grew into the largest exporter of packaged foodstuffs’ within Europe and its ‘salted beef, pork, butter, and a variety of specialty goods, such as spiced salmon and pickled tongue, set the standard for quality and longevity in the Atlantic market.’⁴³ The fifteen years of general peace and the resulting expansion of England’s merchant marine allowed the Barbadians to consistently benefit from the vast quantities of animal proteins that Ireland produced after the mid-1670s. One visitor to Barbados noted that ‘the inhabitants are not able to subsist’ without ‘their bread, clothing, malt, flesh, and pease from Ireland.’⁴⁴ Edward Littleton also emphasized the scale of this trade by exclaiming that ‘we take thousands of Barrels of *Irish Beef*’ each year.⁴⁵ As R.C. Nash shows, Ireland sent approximately £27,000 worth of salted meat to Barbados in the five years between 1683 and 1687, with the value rising over 150% to £42,000 between 1698 and 1702. In 1684, for example, the Barbadians imported almost 14,500 barrels of beef and 2,000 barrels of pork from this single location.⁴⁶ Butter and cheese also arrived in considerable quantities, with the islanders importing between £3,000-£6,000 and £2,000-£5,000 worth of these two foods respectively.⁴⁷

Thus, Table 4.1, Map 4.1, and Graph 4.1 combine to provide insight into three important trends relating to Barbados’ late-seventeenth century trading networks. First, the table shows how rapidly legal trade expanded in Barbados during the 1680s, growing from 303 ships and 20,657 tons in 1682 to a projected 464 ships and 29,654 tons by 1687. Since the Barbadians could access such a large

⁴³ Thomas Truxes, ‘Ireland, New York, and the Eighteenth-Century Atlantic World,’ *American Journal of Irish Studies*, vol. 8 (2011), 11-13.

⁴⁴ TNA, CO 1/43, 15 September 1679, Talbot to Southwell.

⁴⁵ Littleton, *Groans*, 23.

⁴⁶ TNA, CO 33/14, 1684.

⁴⁷ R.C. Nash, ‘Irish Atlantic Trade in the Seventeenth and Eighteenth Centuries,’ *William and Mary Quarterly*, vol. 42, no. 3 (July 1985), 332.

supply of goods by legally trading within the established regulations of the Navigation Acts, most had little reason to resort to illicitly conducting business with foreign merchants and generally avoided doing so, as the practice was often risky, expensive, and ultimately not worth the hazards involved. Secondly, the table and graph also provide a basic representation of the legal trading networks utilized by late-seventeenth century Barbadian planters and merchants and how they opportunistically incorporated both trans-Atlantic and colonial trade into a single commercial system, while Map 4.1 adds a pictorial depiction of the movement of these goods. Finally, the table, map, and graph all show that island trade appeared to function most effectively when approximately 40% of shipping and 60% of the tonnage originated in England, and 60% of ships and 40% of tonnage came from the colonies.

Trade in Barbados, however, traveled in two directions, as the island's primary role within English mercantilist theory was to supply the metropole and its colonies with valuable raw materials. While the historiography generally portrays the 1680s as a time of declining fertility and depressed agricultural yields, the Returns instead suggest that the Barbadians participated in a robust export trade that showed signs of having expanded dramatically during the 1680s. While most historians consider the island a cash-crop monoculture, the Barbadians actually exported a surprisingly diverse array of goods. Governor Atkins claimed that besides sugar 'the natural product and Commodities of the Country exported to other parts is Ginger, Indigo, Cotton, Wool, Tobacco, Logwood, Fustick, [and] Lignum Vitae.'⁴⁸ Table 4.2, a list of select goods sent from Barbados to London and the

⁴⁸ TNA, CO 29/2, 14 June 1676, Atkins, Account of Barbados.

Table 4.2: A Sample of Exports to England from Barbados

Product	Quantity (lbs., except when noted)
Berries	10.5
Coconuts	30,691
Chocolate	170
Aloes	5,479
Ginger Green	1,711
Ginger Dry	1,583,582
Sugar Muscovado	23,125,256
Sugar White	974,805
Sugar Loaf	958
Molasses	398,492
Lemon Juice	244 (gal.)
Indigo	1,281
Lime Juice	2,148 (gal.)
Oranges	1,000
Potatoes	224
Rum	89 (gal.)
Shruff	16,296
Succads	1,913
Tortoise Shell	588
Tobacco	42,095
Braziletto	36,092
Fustick	504
Cotton	1,522.5 (bags)

Table 4.2: TNA, Cust. 2/1, Barbados, 1696. This table represents a sampling of the more important goods produced in Barbados and sent to England within a standard year. Importantly, the Customs Books only record trade shipped back to London and the English outports, and does not include any commercial activity to the colonial mainland. Therefore, Barbadian merchants traded much greater quantities of many listed goods, especially rum and molasses. Most weights are in pounds (lbs.), but liquids are marked in gallons (gal.) and cotton in bags. To ease comparison, the three categories of sugar combine to add up to 20,084 hogsheads or 12,050 tons.

English outports in 1696, highlights the variety of fruits, woods, plants, and other natural products that made up the island's export trade. Most of Barbados' commerce, however, centered on three products: sugar, the most valuable colonial agricultural commodity, molasses, the waste product left over after the crystallization of cane juice into sugar, and rum, the liquor distilled from it.

The latter two goods were becoming an increasingly important element of island commerce during this era, as Eltis estimates that the Barbadians shipped five times more rum and ten times more molasses by 1700 than they had thirty years before.⁴⁹ Out of a small sample of 40 inventories from deeds and wills signed by individuals of various social backgrounds between 1682 and 1696, 23 of them (58%) had at least one still and a separate still house in which they produced rum and all sugar planters produced molasses.⁵⁰ Especially large volumes of molasses went to New England, Philadelphia, New York, and, to a lesser extent, South Carolina, where refineries distilled the dark, sticky syrup into cheap rum for the local populations. Higher quality Barbadian rum went to Virginia.⁵¹ Barbadian farmers, predominately from St. Lucy's parish, also maintained a small, but traditionally important, trade out of Speightstown in a variety of secondary items that included cotton, ginger, and tobacco. In 1696, for example, this port exported approximately 450,000 pounds of cotton, 1,585,293 pounds of ginger, and 42,000 pounds of tobacco.⁵²

Sugar, however, remained at the heart of Barbados' export trade, as the valuable cash-crop made 'this little Spot of Ground,' according to John Oldmixon, 'as good as a Mine of Silver or Gold.'⁵³ The planters of Barbados exported numerous grades of sugar, ranging from natural muscovado and semi-white clayed to

⁴⁹ Eltis, 'New Estimates,' 640-641.

⁵⁰ DAB, RB 3/12, 3/13, 3/16, 3/18, 3/20, 6/13, 1682-1696.

⁵¹ John McCusker and Russell Menard, *The Economy of British America 1607-1789* (Chapel Hill: University of North Carolina Press, 1986), 290-291.

⁵² TNA, CO 33/13, 1696. Importantly, this represented only a small percentage of the Barbadian cotton crop, as the majority of it would have passed into a cottage industry in which the islanders made dimity, a coarse cotton cloth used as clothing around the island.

⁵³ Oldmixon, *British Empire*, 162.

Table 4.3: Exports from Barbados, 1681-1683, 1688

Year	Year	Sugar (t)	Rum (gal.)	Molasses (gal.)	Cotton (bags)	Ginger (bags)	Lime Juice
1681	100	7,350	306,700	370,626	671	2,694	50
1682	100	11,301	242,467	388,258	1,196	5,792	5
1683	50	7,057	38,285	159,907	993	5,408	33
1688	75	c. 1,928	218,829	133,802	NA	NA	NA
Avg.	-	8,503	248,086	323,875	1,144	5,558	35

Table 4.3: BL, ADD MS 38714 (1681-1683) and TNA, CO 33/13, 1688. The Returns for 1684-1687 are missing because exports were not officially recorded until 1688. Lime juice is measured in barrels.

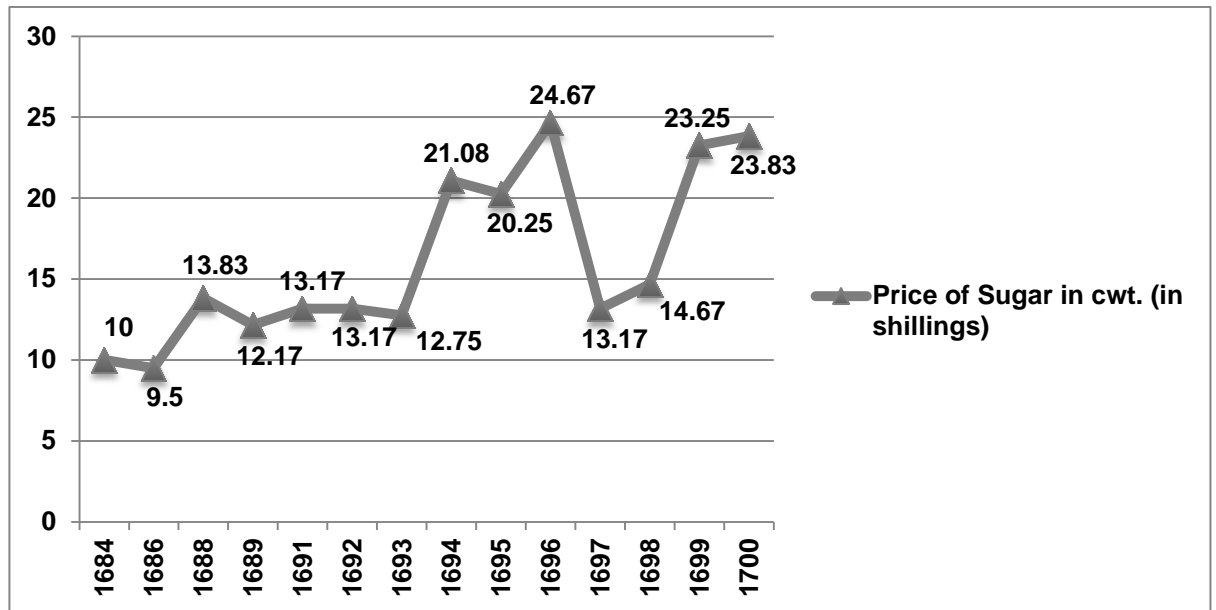
‘refined, which is the standard of their trade Sugar and support of the island.’⁵⁴ Some muscovado sugar went to the colonies, as a small number of refineries, primarily located in Boston, Philadelphia, and New York, turned the cheap raw product into fine white sugar. The majority, however, was sent across the ocean to the markets and refineries in London and to a few of the important outports, such as Bristol and Liverpool.⁵⁵

Table 4.3 depicts just how central sugar and its two waste products were to the Barbadian export trade when compared to cotton, ginger, and lime juice for four years in the 1680s. On average, the planters on Barbados legally sent a projected total of 10,922 tons (21,843,333 pounds) of sugar and a combined 568,145 gallons of rum and molasses to various ports across the Atlantic during the early years of the decade. By comparison, they exported an annual average of only 1,284 bags of cotton (346,815 pounds), 6,434 bags of ginger (643,400), and 40 barrels of lime juice. Furthermore, the export totals from the early 1680s support the notion that the era represented a peak commercial moment in early Barbadian history, as sugar exports appear to have stayed high until 1688. The 22 million pounds of sugar

⁵⁴ TNA, CO 29/2, 14 June 1676, Atkins, ‘Account of Barbados’

⁵⁵ McCusker and Menard, *Economy*, 292-293.

Graph 4.2: Price of Sugar (cwt.) in Shillings for Various Years, 1684-1700



Graph 4.2 : TNA, T 70/938-T 70/949, 1684-1700.

exported in 1682, for example, with at least as much likely being sent again in 1683, easily surpasses the 14,352,000 pounds from 1663 and 19,050,000 from 1669, while nearly approaching the earlier peak total of 24,000,000 pounds from 1665.⁵⁶

Importantly, though, the high totals from the 1660s would have only included a fraction of the molasses and rum being exported by the 1680s and, thus, represented a narrower and less diverse trade overall, even if sugar exports were occasionally higher.

The local price for sugar, as depicted in Graph 4.2, also suggests vast increases in supply, as it steadily declined throughout the early-to-mid 1680s. A hogshead of sugar, for example, cost 10 shillings in 1684, but had dropped to 9.5 shillings in 1686 before jumping back up to 13.83 shillings in 1688, with the threat of revolution and the onset of shipping limitations. Thus, the evidence of declining prices between 1684 and 1687 suggest that Barbados continued to produce

⁵⁶ Davies, *RAC*, 361, Puckrein, *Little England*, 60, Eltis, 'Total Product, 322.

Chart 4.1: Destination of Barbadian Exports, 1688

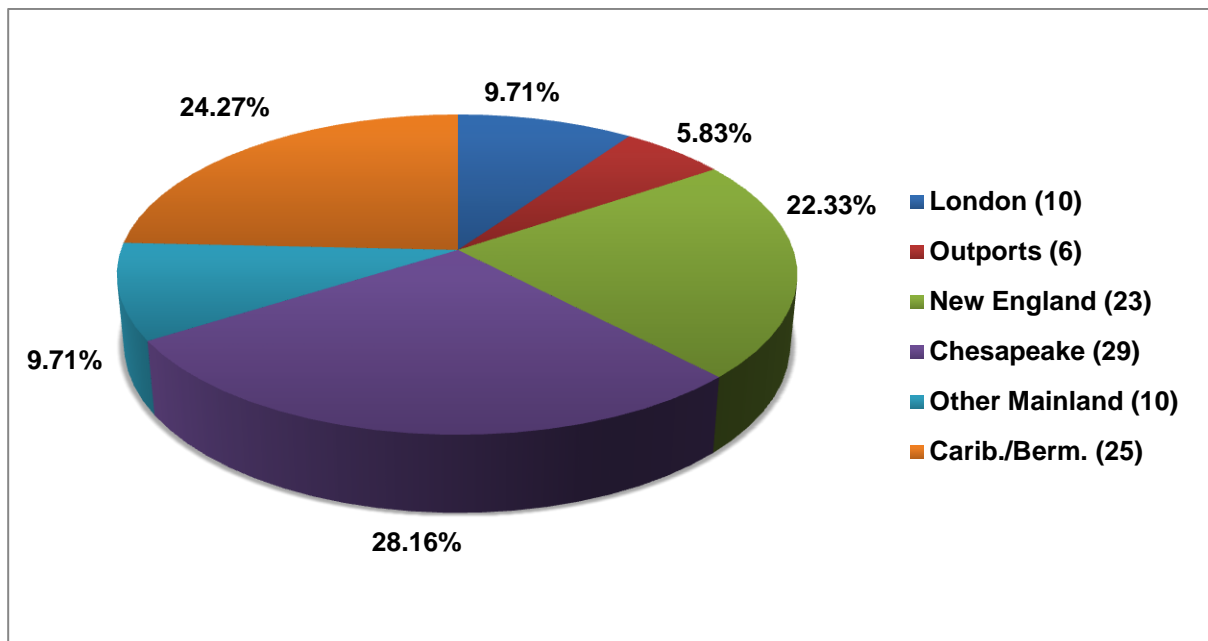


Chart 4.1: TNA, CO 33/13, 1688. The numbers in parenthesis represent the total number of ships that exported goods to each region.

consistently large amounts of sugar, regardless of soil conditions, until national domestic disputes in 1688 resulted in fewer exports reaching London's markets.

The movement of Barbadian exports throughout the Atlantic world often mirrored the previously described import trade, with the majority of participating vessels either sailing for the colonial mainland or to neighboring Caribbean islands. However, when a single year is broken down, as Chart 4.1 does for 1688, a few surprising differences occur that suggest the flexibility of trade within the Atlantic world. New England, easily the most important destination for Barbadian imports, played a significant, but much reduced role in the export trade. While it still represented 22.33% of all ships, it was only the third most frequented colonial group, as the New Englanders were generally only interested in cheap molasses. Instead, the Chesapeake colonies and local Caribbean islands both proved to have a substantially more significant role in Barbados' export trade. Virginia and Maryland

served as the most frequent buyer of Barbadian goods, with the colony's merchants accounting for over 28% of all ships, as planters in these two locations bought considerable quantities of cheap rum and molasses to give to the enslaved African workers present throughout the region. The Caribbean also figured heavily, with 24.27% of the merchant vessels that left Barbados arriving at another island. Bermuda, located far to the north and outside of the Tropics, singlehandedly received 18.44% of the entire export trade, welcoming considerable quantities of both Barbadian rum and molasses, which they likely re-exported to the nearby colonial mainland. Overall, more than 60% of the ships involved in island exports came from the mainland, with another 24.27% from the Caribbean and Bermuda, meaning that five out of every six ships left Barbados for another English colony.

Yet, even though the distant trans-oceanic ports accounted for just over 15% of the ships involved, they still played a more important role, as they moved the majority of the island's sugar across the Atlantic. Utilizing high tonnage vessels that could carry a disproportionate percentage of the agricultural wealth generated by the island, merchants from London and the surrounding English outports transported the island's sugar to either local refineries and markets in England or re-exported it to other European destinations. As Barbados' fame rested on the size and quality of its sugar production, and the consequent wealth that it generated, this branch of the island's trade network stood out as particularly important if the plantations hoped to thrive.

Thus, the data in this section depicts Barbados at the nexus of a complex and expansive trade network that incorporated the entire Atlantic world into a single commercial unit. By taking a pragmatic and opportunistic approach to commerce,

Barbadian planters and merchants instituted a three-pronged economic system that connected the island to various markets in both England and the colonies and took advantage of this strategy during an extended stretch of peace to turn itself into the second busiest port in the English world. The planters and merchants of this era realized that it was in their own best interests to maximize their trade with England and to operate within the confines of the Navigation Acts, as London represented a guaranteed and protected market with higher sugar prices than its chief rival, Amsterdam. It furthermore allowed the planters access to a variety of provisions, as well as many of the manufactured products, luxuries, and plantation necessities that were desired by the isolated white colonists.

Yet, they also continued to incorporate a variety of colonial markets into their networks, taking advantage of the additional imports these local ports offered, while using them as a secondary market for island goods, especially molasses and rum. Importantly, though, these colonies were English possessions and conveniently fit within the regulations of the Navigation Acts. As such, the Barbadian planters and merchants of the 1680s did not partake in the same open and free economic system that their ancestors did twenty years earlier. Instead, they largely consigned themselves to England's commercial laws and were rewarded for doing so with an era of general prosperity and expansion. This does not imply, however, that illicit trade did not occur during this decade. As Chapter 3 contests, the Barbadian elite frequently engaged in the Caribbean's illegal slave trade and some on Barbados still traded with the Dutch through Curaçao, Suriname, and St. Eustatius.⁵⁷ Yet, evidence of Barbadian participation in illicit commerce during the 1680s, outside of the slave

⁵⁷ TNA, CO 1/40, May 1687, Report from St. Loe, CO 1/47, 2 June 1687, Commissioners of Customs to Lords of the Treasury, *Ibid.*, 18 June 1687, Lords of Trade and Plantations to Johnson, and CO 153/3, 22 January 1687, Russell to Lords of Trade and Plantations.

trade, was rare, as the benefit seldom exceeded the risks involved in capture. Thus, the traditional mercantilist view of island trade as ordered and regulated held true through most of the decade and proved that Barbadian commerce worked best when England was a dynamic and central part of it. It took the overthrow of James II and the years of international war that followed to pressure the Barbadian elite into returning to the more flexible, open, and oftentimes illegal commercial approach of earlier years.

Part III: The Importation and Exportation of Goods, 1689-1697

Section I: Collapse and Convoys

The second decade of this study, encompassing the years 1689 to 1697, was far more complex than the previous period, as the robust and expansive trading networks utilized by the elite planters and merchants during the 1680s came under intense pressure as a result of domestic insurrection in 1688, followed by an international war that lasted from 1689 to 1697. The overthrow of James II by a disgruntled Parliament and the rapid transition from the pro-French Stuarts to a Dutch Stadholder still concerned about his territorial holdings in the Netherlands triggered an alteration in foreign policy that made English participation in any war against France a foregone conclusion. By the end of 1689, William III had forced England to join the Nine Years War, a growing conflict that had been raging on the Continent since the previous year. Less prepared to fight than France, England's position of strength in the Caribbean quickly deteriorated. Louis XIV, ignoring a recently signed peace treaty, immediately authorized his fleet to attack both England's and the Netherlands' Caribbean possessions. France's strategy in the western hemisphere centered on a two-part offensive: one half of the fleet was to sail

to Guiana and dislodge the Dutch from Suriname, while the other was to take control of colonies in the Windward Islands and the Lesser Antilles.

At first, this plan succeeded, as Count de Blenac, governor-General of the French West Indies, took advantage of an unorganized English Navy to launch successful attacks on the Dutch island of St. Eustatius, an important harbor for illicit trade, and on the English half of St. Christopher's. By September of 1689, French privateers had also gained firm control over the important Caribbean waterways that connected the various islands together, taking 62 ships at a loss of £332,800 to English merchants and £73,050 to the King's Customs.⁵⁸ While the rapidity and severity of each French victory showcased the inadequacy and ineffectiveness of the Royal Navy abroad, England also struggled to maintain supremacy in its home waters. This culminated in the summer of 1690, when the English fleet suffered a catastrophic defeat at Beachy Head and lost control of the Channel to the French. By the middle of 1690, England's colonial system stood on the verge of collapse, as France had successfully cut off English communication and supply with its Caribbean islands, now stranded and seemingly helpless.⁵⁹

French naval success also posed a grave threat to Barbados, causing many islanders to live in constant fear of invasion, especially since their position 'as the windwardest Island' made them the 'key to all the West Indies,' and a logical military target. Moreover, French success against Barbados would inevitably leave Louis XIV 'master of all the European...trade in the West Indies' as 'the Danes, Brandenburgers, Dutch, and Spaniards would be absolutely shut out from their

⁵⁸ TNA, CO 5/1, September 1689, Account of ships taken by French privateers.

⁵⁹ William Morgan, 'British West Indies During King William's War,' *Journal of Modern History*, vol. 2, no. 3 (September 1930), 378-386 and James Pritchard, 'The French West Indies During the Nine Years' War, 1688-1697: A Review and Reappraisal,' *French Colonial History*, vol. 2, (2002), 45-48.

Table 4.4: Quantity of Trade to Barbados, 1690-1697

Year	% Data	Arrivals	Tonnage	Per Ship	% Ship: England	% Ships: Colonies	% Tonn.: England	% Tonn.: Colonies
1690	75	146	4,859	34.3	19.6	80.4	49.2	51.8
1691	100	327	17,081	52.2	41.0	59.0	70.6	29.4
1695	50	96	4,639	48.3	34.4	65.6	53.9	46.1
1696	100	198	10,845	54.8	41.4	58.6	55.8	44.2
1697	100	165	15,294	92.7	33.9	66.1	50.1	49.9
1698	100	356	37,731	105.9	43.8	56.2	61.3	38.7
Avg.	-	245.33	17,228.38	70.23	38.04%	62.96%	59.47%	40.53%

Table 4.4: TNA, CO 33/13 and 33/14, 1690, 1691, 1695-1698

trade.’⁶⁰ The islanders’ fear increased over time and eventually came to be much exaggerated through the scaremongering of an isolated population. In 1694, for example, rumors persisted of a potential attack on the island, with one source claiming that the French ‘had 20 Saile of men of Warr gone for Barbados to take that place.’⁶¹ This armada, however, never arrived, as no such plan actually existed. Yet, French naval vessels and privateers were present in the Caribbean and freely roamed along highly traveled shipping lanes throughout the early stages of the war, reminding the colonists that such an attack was always possible.

Barbadian planters and merchants especially felt the strain of French transgressions against English Caribbean shipping, with Table 4.4 distinctly showing the transformations that resulted from domestic and international upheaval. During the early years of conflict, the merchants and planters of Barbados struggled to reestablish themselves within their disrupted trading networks and missed the trans-oceanic ships that had previously delivered such a high tonnage of necessary goods. The nadir of the war era for Barbados came in 1690, as both the quantity of ships and overall tonnage dropped to distressingly low figures due to the success of France’s

⁶⁰ TNA, CO 28/3, 23 July 1696, Russell to Council of Trade and Plantations.

⁶¹ TNA, CO 28/2, 25 September 1694, Benjamin Burton’s Deposition

informal blockade upon the island. A desperate letter written by Lieutenant-Governor Stede in February of 1690 describes the situation: ‘some French men-of-war of thirty and forty guns visited us from Martinique. I was forced to unload [our] ships and fit them out as well as we could as men-of-war, for the French within one hour had taken ships, with negroes and much needed provisions, before our eyes....’ Stede concludes that ‘with the difficulty of finding ships, guns, and seamen and the poverty of the people we are hard bested. We have no shipping to carry our produce and bring us necessities.’⁶²

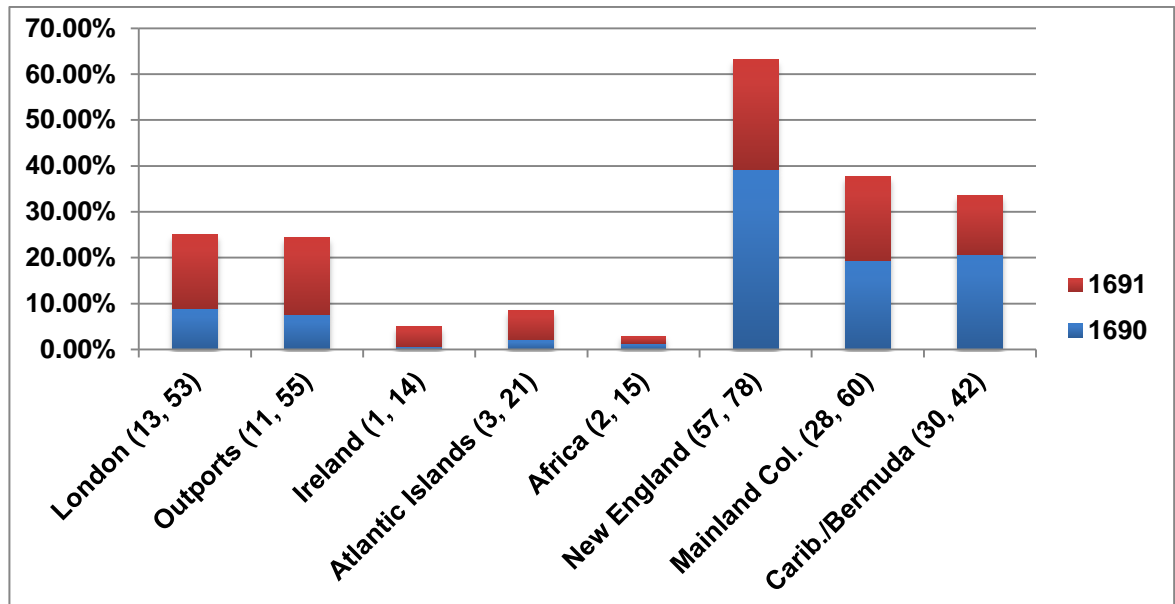
The records support Stede’s panicked letters home. The extant numbers from the Returns for 1690 show a dismal total of only 146 vessels reaching the island with a maximum tonnage of 4,859.⁶³ Trade had become almost entirely localized, as four-fifths of all ships originated in the colonies, with small vessels carrying the majority of goods (34.3 ton average). The additional men and guns needed for protection also placed further limitations on the storage available for cargo. Worst of all, as Map 4.2 depicts, of the 29 vessels that originated from a trans-Atlantic port, only three vessels arrived from Madeira, while a single provision ship came from Ireland, a country mired in its own three-year civil war between Jacobite and Williamite forces.⁶⁴ As these trans-oceanic ships had been of integral importance to the provisioning of Barbados during the 1680s, their decreasing regularity forced Barbadian planters, farmers, and merchants to rely heavily on New England for supplies.

⁶² TNA, CO 28/1, 11 February 1690, Stede to Lords of Trade and Richard Pares, *Yankees and Creoles: The Trade Between North America and the West Indies before the American Revolution* (Archon, 1968), 68-69.

⁶³ This information only applies to three-quarters of the year, as the return is missing for the three month period between 25 September and 25 December.

⁶⁴ TNA, CO 28/3, 8 September 1696. This lone ship unfortunately carried as much tallow as beef.

Graph 4.3: Ships Arriving at Barbados with Imports, 1690 and 1691



Graph 4.3: TNA, CO 33/13 and 33/14, 1690-1691. This graph compares the different origins of imports during a year marked by scarcity with those from a more abundant year. The numbers in parenthesis are the actual number of ships that arrived at Barbados from each region, with the 1690 total preceding that from 1691.

By the middle of 1690, this too had become increasingly difficult, as the trading vessels from ports such as Boston and Salem had to sail past numerous well-guarded French islands and evade both privateers and foreign naval vessels in order to reach their desired destination.⁶⁵ Instead of the bigger, bulkier ships that had previously been used, New England merchants now sent out smaller, faster ships that could more easily outrun or outmaneuver French patrols. Regardless of the danger, New England remained as the most important local supplier, with 39.31% of all ships and 35.05% of possible tonnage deriving from this location. These were also small ships, however, as the 57 vessels from New England only carried a maximum of 1,703 tons, or just over 30 tons per ship. A compounding reason for this decline in tonnage resulted from the fact that the Royal Navy had appropriated much of New England's commercial fleet. According to a petition from a group of local

⁶⁵ TNA, CO 5/1305, 21 November 1689, Petition of several traders to the King.

merchants, 'New England supplies the West Indies with provisions, but many New England ships are now laid up in England, while others have been taken by the French, so that the traders of the Colony are now in great want of shipping.'⁶⁶ The surrounding Caribbean islands also played an important role in supplying Barbados in 1690, as over 20% of the ships and 13% of the total tonnage derived from this region. Thus, New England and the nearby Caribbean islands provided nearly 60.00% of the ships involved in Barbadian imports.

The limited movement of ships as depicted in the skeletal shipping chart from Map 4.2 makes it clear that many other colonies also seemed to suffer from a lack of shipping in 1690. Newfoundland, for example, could not safely send a single ship out to Barbados, while the other mainland colonies only dispatched small vessels that carried few provisions. 14 ships safely arrived from Maryland and Virginia, but these barely averaged 20 tons and tended to carry mostly tobacco, staves, and a few barrels of fish, while Pennsylvania and the Carolinas sent a combined nine ships and 202 tons, mostly of wood. Short distance trade still functioned relatively smoothly, with Barbadian ports welcoming 18 ships from the Leeward Islands, but the 175 tons carried by these vessels made a minimal impact on island imports. Overall, when compared to the 1680s, the islanders received less than 50% of the shipping and between 25-33% of the tonnage, resulting in an island-wide struggle for supplies, especially since those that did arrive were usually staves, headings, and hoops, instead of needed provisions and supplies.

These limitations caused the food that did make it to the island to rapidly increase in price and would have rendered many goods unaffordable to a large

⁶⁶ TNA, CO 1/68, 11 September 1690, Petition of merchants trading to New England.

percentage of the island population. By 1690, the Barbadian government complained that meat cost three times as much as before the war, increasing from an average of 20 shillings a barrel for salt beef in the late 1680s to 60 shillings. This was in conjunction with a 250% increase in the price of fish per quintal, a 1,700% rise in cost of Indian corn per bushel, and, as Governor Kendall reported, similar price hike in ‘all other commodities in like proportion.’⁶⁷ While data for the last quarter of the year is missing from the 1690 Returns, tonnage most likely declined further, as in mid-September the English government put an embargo upon the trade of ‘all vessels except coasting craft and ships trading to Northern Europe.’⁶⁸ This caused a group of concerned merchants based in London to lament that ‘Barbados depends now on England for subsistence, supplies from Ireland and New England being cut off. Fewer ships than can be sailed with six hundred men will not suffice to relieve the island’s necessities, and the planters will be ruined unless ships bring home their produce.’⁶⁹ Governor Kendall painted an even bleaker picture of conditions on the island: ‘the high price of freight, and the scarcity of provisions, caused by a long draught and by the war, has caused great misery, and unless speedily relieved from Old or New England, the commoner sort of people and the slaves must starve.’⁷⁰ Thus, 1690 represented a true crisis period for all Barbadians, with the trading networks that had solidified themselves in the 1680s buckling under the pressures of war.

The Naval Office Returns, however, show that by 1691 English and Barbadian merchants had adopted a series of tactics and adjustments that allowed

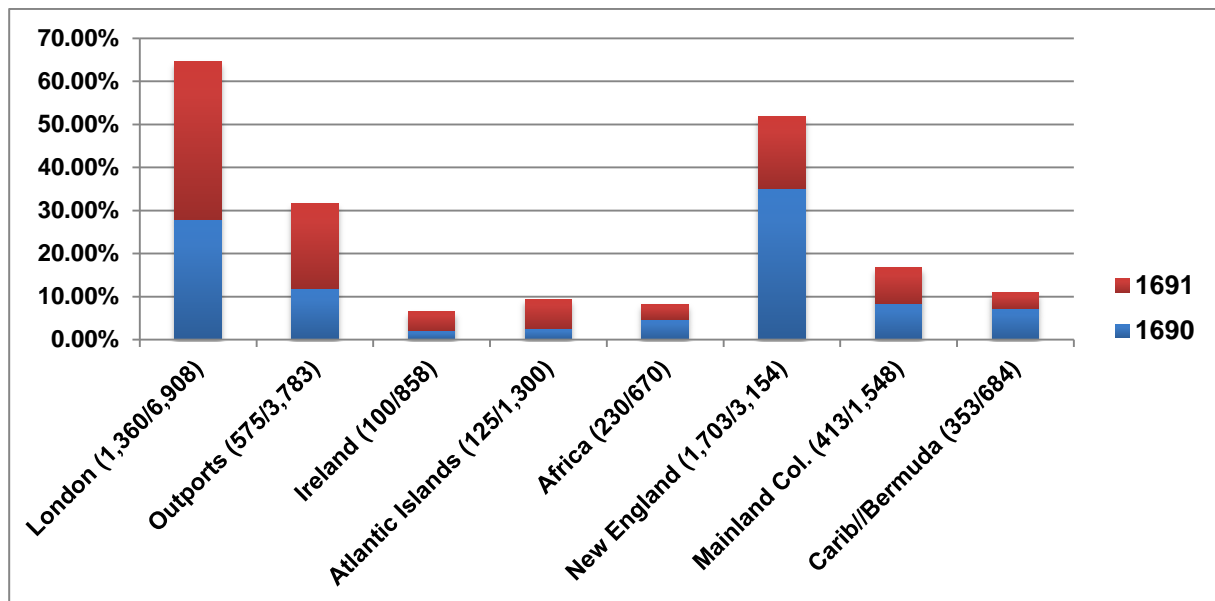
⁶⁷ TNA, CO 29/4 and 28/1, 22 August 1690, Kendall to Lords of Trade and Plantations

⁶⁸ TNA CO 324/5, 18 September 1690, Minutes of the Council.

⁶⁹ TNA, CO 1/68, 21 September 1690, Petition of Barbadian merchants to the King and Queen.

⁷⁰ TNA, CO 29/4, 22 August, 1690, Kendall to Lords of Trade and Plantations

Graph 4.4: Origin of Import Tonnage Arriving at Barbados, 1690 and 1691



Graph 4.4: TNA, CO 33/13 and 33/14, 1690-1691. Similarly to the previous example, this graph also compares the different origins of imports during a year marked by scarcity with those from a more abundant year. Once again, the numbers in parenthesis are the actual number of ships that arrived at Barbados from each region, with the 1690 total preceding that from 1691.

them to successfully reopen trade on a scale that, under ideal conditions, could approach the totals from the early 1680s. In that year, as Table 4.4 and Map 4.3 both depict, 328 ships, with space for 18,905 tons of goods, arrived in Barbados from across the Atlantic World. While the increasing number of vessels was meaningful, it was the expanding points of origin for these crafts that was of the greatest importance. London, the outports, and Ireland, specifically, reemerged as integral hubs of trade, sending Barbados 71.5% of its tonnage (11,549 tons) and 37.20% of all ships (53, 54, and 14 vessels respectively). This trade, once responsible for the island's manufactured goods and clothing, now focused primarily on cheap provisions, especially biscuits, peas, wheat, and oatmeal. More importantly, Ireland once again provided the all-important quantities of beef, pork, butter, cheese, bread, and beer that the Barbadians had lacked in 1689 and 1690. Trade from the Atlantic islands of Madeira, Faial, and Cape de Verde also nearly tripled in both ships

(6.40%) and tonnage (6.88%), as elite Barbadians could again obtain the fancy wine and necessary livestock that had been missing from the island's imports the last two years.

Localized trade from the Caribbean and mainland colonies also remained substantial throughout 1691, but, as Graphs 4.3 and 4.4 show, had become less important as an overall percentage. While trade with the mainland colonies only slightly decreased, remaining right around 18% of the shipping and 8% of the tonnage, the Caribbean declined to only 12.80% of the ships and 3.62% of the tonnage, a drop of about 8% and 7% respectively. Yet, similarly to the year's trans-Atlantic shipping, island merchants had also reestablished many of the local trading networks that had previously nearly disappeared. As Map 4.3 shows, Newfoundland fisheries again supplied Barbados with ten vessels and hundreds of tons of fish, and New York increased its own shipping to the island by 300%. The Middle and Southern mainland colonies also contributed in greater quantities, with both almost doubling the number of vessels and tonnage sent between 1690 and 1691, and began developing and expanding their ability to grow edible crops to accompany the tobacco and naval stores that they already exported to the Caribbean. Virginia reemerged as a particularly important source of provisions, sending with the usual tobacco consignments 633 barrels of beef and pork and 1,119 bushels of corn, along with some flour, peas, and beer. Other colonies that had remained important to Barbados throughout the early years of the war expanded their trade to wartime

highs. New England's trade, for example, grew by over 33%, Carolina's by 200%, Bermuda's by 55%, Pennsylvania's by 60%, and Saltertudas' by 300%.⁷¹

This sudden change of fortune resulted from a variety of causes, many of which had to do with a transformation in the international situation in the Caribbean. Initially, the English had done little to counter the aforementioned initial French victories. In fact, the defeat at Beachy Head made them increasingly cautious and conservative in seeking retaliatory conflict.⁷² Yet, by the end of 1690, the English Navy had regained initiative in the West Indies and scored some considerable victories against the French. First, a fleet under the command of Commodore Lawrence Wright landed at Barbados in May with both ships and soldiers, leading to better protection of the island's trade.⁷³ Moreover, Christopher Codrington, governor of the Leeward Islands, and Sir Timothy Thornhill, one of Barbados' largest plantations owners, led forces that pushed the French out of both St. Christopher's and St. Eustatius and captured Marie-Galante with such ease that they begged the Lords of Trade and Plantation for permission to continue their attacks against the French Caribbean, as 'there was never so fair an opportunity to destroy the French interests in America as this.'⁷⁴ Merchants and captains also took a more active role in defending transatlantic shipping by installing more guns onto their ships to protect their commercial investments.⁷⁵

⁷¹ TNA, CO 28/3, 8 September 1696, Council to Council of Trade and Plantations and TNA, CO 33/13.

⁷² Morgan, 'The British,' 389-390.

⁷³ TNA, CO 31/4, 14 May 1690, Council Minutes.

⁷⁴ TNA, CO 152/37, 4 July 1690 and 3 August 1690, Codrington to Lords of Trade and Plantations, CO 153/4, 25 November, 1690, Codrington to Lords of Trade and Plantations.

⁷⁵ While appearing sporadically and only on long-distance traders in 1688, by 1691 the Returns show that they became commonplace on trans-Atlantic voyages and even began to appear on inter-Caribbean shipping.

On the European front, the Williamite war had effectively ended after the first week in July of 1690, with the lack of success by the Jacobites forcing James into another exile. The English also benefitted from an indecisive Louis XIV, who failed to implement a cohesive policy in the West Indies. After his initial successes, Louis neglected to follow up these victories and instead became increasingly interested in Hispaniola, while diverting most of his ships to the pursuit of Spain's treasure fleets.⁷⁶ Finally, domestic politics and public opinion in England pushed the government into taking a more aggressive approach to trans-Atlantic trade, which resulted in the decision to dispatch a series of convoys to protect both the import and export trades of the colonies.⁷⁷ This strategy, however, hinged upon the removal of the embargo that the government had placed on most Caribbean trade. The Barbadian lobby and merchants in London convinced King William of the necessity of reopening trans-Atlantic commerce against Parliament's wishes, as the islanders were 'ready to perish for want of food and clothing.'⁷⁸ Thus, by mid-September 1690, the English government had successfully formulated a plan to institute a wide-ranging convoy system by the end of the year that would protect merchant vessels trading throughout the American and Caribbean colonies.⁷⁹

By the end of the month, the King in Council had worked out the official arrangements for England's mercantile armadas and assigned four groups of ships:

⁷⁶ Morgan, 'The British,' 380-390 and Pritchard, 'The French,' 45-47.

⁷⁷ Ibid.

⁷⁸ TNA, CO 1/68, 9 December 1690, Petition of Barbadian merchants to the King and Queen.

⁷⁹ The implementation of a convoy system was not a novel concept. The Virginia tobacco and Newfoundland fishing trades had both operated under the protection of larger ships since at least the 1670s, and Jamaica regularly arranged small flotillas to support its economic endeavors. As Table 5 shows, Barbados also benefited from earlier convoys, as a large group of 21 ships arrived on 7 January 1685. This represented a singular event and there are no other records of convoys being sent during peacetime to the island before 1691. TNA, CO 1/39, 5 February 1677, Captains Marsh and Jaques to Vaughan, CO 5/1355, 8 October 1679, Order of the Privy Council, CO 1/66, 5 April 1680, Robinson to Blathwayt, CO 1/44, 4 October 1680, Ships under convoy.

one to the Hudson Bay Company to protect the northern fisheries; another to the Royal African Company; a third to Virginia and Maryland tobacco merchants; and a fourth to the Caribbean planters of Jamaica, Barbados, and the Leeward Islands.⁸⁰ Virginia and Maryland would receive 46 ships and 800 men; Barbados 31 and 400; Jamaica 14 and 200; the Leeward Islands 17 and 199. The Hudson Bay Company declined their assigned convoy, as they wanted to wait until March for more supplies, and the RAC had their convoy cancelled, since their only request was for additional ammunition. In place of these, the King decided to provide New England with six ships and 70 sailors and Newfoundland with four and 40. Overall, merchants in England planned to send 118 ships, 1,709 sailors, and tens of thousands of tons worth of goods to the Atlantic colonies.⁸¹

The Barbadian convoy, packed and supplied during the fall months of 1690 and scheduled to depart by the end of October, was only to accompany the merchants for ‘a sufficient distance out of the soundings.’ They were to be met on their arrival in Barbados with ships ‘from Captain Wright’s squadron, which should attend them there and return [home] with them.’ A single man-of-war was to convoy them on the full trip across the Atlantic. However, William III almost halted the convoy before it left the Downs. The king reneged on his promise to cancel the embargo and initially delayed the Caribbean convoy’s date of departure for nearly six months, until May 1691. Timely petitions from both Chesapeake and Barbadian merchants, and the threat of losing as much as £40,000 per convoy ‘owing to the perishableness of part

⁸⁰ CO 324/5, 25 September 1690, Minutes of the King's pleasure. Douglas Bradburn, ‘The Visible Fist: The Chesapeake Tobacco Trade in War and the Purpose of Empire, 1690-1715,’ *William and Mary Quarterly*, vol. 68, no. 3 (July 2011), 365-367.

⁸¹ TNA, CO 391/6, 4 September 1690, 11 September 1690, 18 September 1690, 22 September 1690, 25 September 1690, Journal of Lords of Trade and Plantations.

Table 4.5: Convoys Sent from England to Barbados, 1680-1698

Dates of Convoy	Ships	Tonnage	Avg. Tons per ship	% Eng. Ships in Convoy	% English Tonnage in Convoy
Jan. 7th, 1685	21	1,730	82.4	14	12.4
Jan. 12th, 1691	5	350	70	3.4	2.3
Jan. 21st-23rd, 1691	36	5,131	142.53	24.5	38.1
Jan. 26th, 1691	7	600	85.71	4.8	4.5
July 13th-14th, 1696	22	1,870	85	26.8	30.9
Sept. 28th-29th, 1697	7	1,827	261	12.5	23.9
May 16th-18th, 1698	10	1,637	163.7	6.4	7.1

Table 4.5: TNA, CO 33/13 and CO 33/14, 1684-1698

of the cargo,' caused William to relent and give the order for the ships to sail sometime shortly after 9 December 1690.⁸²

The trip to Barbados was a resounding success. Taking ten to twelve weeks to cross the Atlantic, the convoy arrived at the island in three separate waves. The first, as Table 4.5 shows, landed at Bridgetown on 12 January 1691 with five ships and a carrying-capacity of 350 tons. The main body began arriving a week and a half later, on 21 January. Over the course of the next two days, 36 ships from London, each averaging over 142 tons, docked in Carlisle Bay and unloaded a plethora of goods, ranging from the expected barrels of beef, firkins of butter, and hogsheads of fish to items that were a bit more surprising for a nation at war, such as 301 periwigs, 99 headdresses, 10 embroidered waistcoats, 70,000 gloves, 19 mirrors, 359 chairs, and the frame of a house. Three days later, the last seven ships arrived with a substantial quantity of salt meat and other provisions. In only two weeks, 48 ships, totaling 6,081 tons, arrived in Barbados from England, representing about 33% of all English ships and 40% of all English tonnage for the year. The success of this convoy quickly restocked an island that had been in desperate need of goods with

⁸² TNA, CO 1/68, 9 December 1690, Petition of the traders to Virginia and Maryland to House of Commons and Ibid., Petition of Barbadian merchants to the same.

quantities that approached the import totals from the halcyon prewar days of the 1680s.

Moreover, the convoy also allowed the islanders to export their valuable sugar crops back to England under the protection of warships. Barbadian planters had first noticed a decline in the number of English ships towards the end of 1688, as the one islander recalled having seen ‘noe ships for two months from Europe.’⁸³ By early 1690, the island’s RAC factors identified an obvious ‘scarcity of freight,’ and observed that ‘masters’ cannot ‘get freight anywhere.’ Warehouses sat ‘full of goods,’ and there was such a surplus that one could ‘lade a Shipp of 2 or 300 tons as fast as he can stow it.’⁸⁴ Even when ships became available, the merchants lacked adequate protection, since the English government required that all returning vessels sail for England together under escort.⁸⁵ Stede complained of 50 Barbadian ships laden with sugar that had been waiting months for English ships to arrive so that they could be escorted safely back to London. The delay caused the ships to deteriorate so much due to teredo worms, marine mollusks that burrow into and destroy wooden hulls, that Stede dispatched this commercial armada on a mad dash to Europe, with two East Indian sails and ‘the largest and ablest ships to convoy the rest...binding them to keep company and assist each other.’⁸⁶ By October, the factors admitted that planters ‘could get no more freight,’ and called for England ‘to thinke of some way to [supply it.]’⁸⁷

⁸³ TNA, T 70/12, 2 November 1688.

⁸⁴ TNA, T 70/12, 25 June 1690 and 8 February 1690.

⁸⁵ TNA, CO 1/68, 22 September 1690, Lord President to Blathwayt and CO 31/4, 3 June 1692, Council of War.

⁸⁶ TNA, CO 29/4, 23 April 1690, Stede to Lords of Trade and Plantations

⁸⁷ *Ibid.*, 16 October 1690.

Table 4.6: Exports from Barbados, 1691, 1695-1697

Year	%: Year	Sugar (t)	Rum (gal.)	Molasses (gal.)	Cotton (bags)	Ginger (bags)
1691	100	11,004	329,316	349,974	10,384	5,321
1695	50	5,154	111,793	157,588	650	7,023
1696	100	9,854	274,630	236,852	1,756	12,327
1697	100	5,475	398,539	359,698	820	6,171
Avg.	-	9,160	306,518	315,425	3,565	9,466

Table 4.6: TNA, CO 33/13 and 33/14, 1691, 1695-1697

The English government hoped that the convoy system would solve the island's problems by allowing for the protection of Barbadian sugar exported to England. The islanders, given four months to load their ships with a variety of cash crops and raw materials, successfully sent a fourteen-ship armada back to London on 6 April 1691.⁸⁸ Table 4.6 shows that this convoy helped Barbadian planters to export over 11,000 tons of sugar, 329,316 gallons of rum, and 349,974 gallons of molasses, as well as 10,384 bags of cotton and over 5,300 bags of ginger, quantities on par with some of the highest prewar totals. Assuming that they legally packaged and marked all exported sugar (which is unlikely), planters and farmers generated an estimated £145,306 from sugar, £15,094 from rum, £4,470 from ginger, and £281 from cotton during this year, a huge increase from the value of exports in 1688, when sugar barely brought in more than £27,600.⁸⁹ These totals represent changing commercial trends that once again placed the metropole at the center of the island's export network, proving that planters and merchants prospered most when they had free and easy access to English ports, a privilege that had essentially disappeared from 1688 to 1690. Thus, the 1691 convoy helped rejuvenate the islanders' export trade by

⁸⁸ TNA CO 28/1, 4 July 1691, Kendall to Lords of Trade and Plantations

⁸⁹ TNA, T 70/943 and T 70/944 for 1688 and T 70/945 for 1691. The prices from these documents represent the amount of money the Royal African Company paid for each good while on the island, which did not include freight, insurance, or marketing costs. There was no available price for molasses in 1688 or 1691.

reopening trans-Atlantic markets to the planters' valuable sugars reestablishing the island's commercial vitality, even if only for a single year.

Since the 1691 convoy to Barbados was so successful, the English government came to view this strategy as a permanent solution to the island's supply problems and began to plan two more commercial armadas for the same year. By 4 May, the Lords of Trade and Plantations met with interested merchants and laid out a schedule that fixed 15 June and 15 August as the days of departure.⁹⁰ The first convoy left on time, sailing out of Plymouth on 14 June. Guarded by three large ships, it stopped at Madeira to load some wine on 11 July, and reached Barbados about a month later.⁹¹ The second convoy, however, proved to be a bit more problematic. After local Barbadian merchants turned down participation in the convoy set for 15 August, they suggested the end of September as a better date, so that its arrival coincided with the planters' production of their first batches of sugar. According to a 5 October entry in their Journal, the Lords reported that out of the 61 ships that had been prepared for the West Indies, 53 had sailed by 30 September.⁹²

Unfortunately, it is difficult to gauge the success of the second convoy, as it did not arrive before the end of the year and the Returns do not survive for the years between 1692 and 1694. Other records, however, hint that the convoy eventually made it to Barbados early in 1692, as the island's Council of War ordered that a large number of newly arrived merchant ships from England 'to be taken up as men-of-war...and that they be despatched to engage the French fleet' that had been reported

⁹⁰ TNA, CO 391/7, 4 May 1691, Journal of Lords of Trade and Plantations.

⁹¹ TNA, CO 28/2, 30 August 1692, Russell to Lords of Trade and Plantations. This convoy appears to have been much smaller than the earlier example, as the Returns show that only eight ships arrived at Barbados from English ports between 27 August and 3 September, 1691.

⁹² TNA, CO 391/7, 4 and 12 May 1691, Journal of Lords of Trade and Plantations and CO 1/68, 5 October, 1691, Commissioners of Customs to Lords of the Treasury.

to the north-east.⁹³ The records provide similar fragments of information for the next two years, with local merchants annually meeting with the Lords of Trade and Plantations in London to request a convoy for either September or October. However, without extant Returns for these years, it is difficult to tell how successful they were or what type of goods they carried to Barbados.⁹⁴

By 1695, the Returns once again provide specific evidence concerning Barbados and the convoy system, highlighting the successes and failures that plagued the practice over the next three years. They show, for example, that 1696 represented the only other instance in which the Barbadians received a complete convoy. In that year, 21 vessels left London in early spring, picked up a single ship off the coast of Lyme Regis in Dorset, and arrived safely in Barbados during the middle of summer. Like the convoy that landed in 1691, the 1696 group contained predominantly large ships that averaged over 85 tons each, with seven of at least 150 tons. The success of this convoy likewise guaranteed that most white Barbadians had enough goods to survive another year of wartime limitations.

In both 1695 and 1697, however, the convoy system played a fairly negligible role in provisioning the island. 1695 stands out as an especially peculiar year because the island's merchants in London decided to limit trade through its own initiative. In April 1695, the Barbadian merchants first met with the Lords of Trade and Plantations to discuss convoys, and, by July, had submitted an ambitious plan that requested an expansion of the system. The Barbadian merchants 'desired their usual quota of 400 English seamen from the port of London,' but hoped to add '200 from the outports, and 300 landmen and 50 seamen more to load wines at Madeira.'

⁹³ TNA, CO 31/4, 25 January 1692, Council of War Minutes, Barbados.

⁹⁴ TNA, CO 391/7, 26 July 1692, Journal of Lords of Trade and Plantations.

In terms of ships, they asked ‘for two fourth-rates and a fifth-rate as convoy.’ They also demanded ‘protection for their men at home’ to limit impressment by the Royal Navy, and requested the fleet to be ready to sail after the 30 of November. By August, they altered their plan by asking for three separate convoys and sent a third letter towards the end of September that informed the Lords that they had changed their mind again and ‘intended to send no ships at present.’⁹⁵ While the merchants offered no explanation for their change of mind, it is likely that they were unable to properly organize their ambitious scheme within the limited time frame. The failure of this convoy is reflected in the Returns, which portray 1695 as a year defined by low ship and tonnage totals.⁹⁶

The 1697 convoy also failed to reach Barbados, foundering in the Atlantic due to an unexpected and untimely encounter with a still-potent French navy. In late spring of that year, ominous news began to leak into Barbados of a ‘disaster of the London Fleet outward.’ As the Barbadian government later learned, four French men-of-war had attacked and dispersed their convoy. For the islanders, the results of this encounter were potentially disastrous, as Governor Kendall pointed out: ‘What is become of them we do not know, for only three ships have arrived here. If misfortune has befallen this long-expected fleet...we shall have no men-of-war to guard our coasts or convoy our ships, but shall be exposed to the insults and depredations of French privateers every day, in the very sight of our houses.’⁹⁷

While the Returns do not show how many ships originally made up this convoy, only

⁹⁵ TNA, CO 391/13, 24 July 1695, Blathwayt to Lowndes and 11 August 1695, Minutes of the Admiralty. TNA, CO 391/7, 13 April 1694, Journal of Lords of Trade and Plantations and CO 391/13, Secretary of the Admiralty to Blathwayt.

⁹⁶ Although Returns exist for only 50% of 1695, it is evident that the island received very few imports, as only 96 ships, with a tonnage of 4,639, arrived at the island by the end of June.

⁹⁷ TNA, T 70/12, 18 June 1697 and CO 28/3, 16 June 1697, Council to Council of Trade and Plantations.

seven ultimately sailed into Carlisle Bay.⁹⁸ Unsurprisingly, the surviving vessels tended to be very large, averaging 261 tons per ship, which helped to mitigate some of the loss. The cargo carried by these seven ships, however, represented almost 25% of the English tonnage for the entire year, making the numerous ships captured or sunk by the French navy a potentially catastrophic loss to the island economy. The failed convoy of 1697 represented the last wartime use of this system in the seventeenth century, as the Nine Years War ended later that year. Yet, the organizational benefits of convoys had become obvious to the government and they continued to sanction them even after the conflict had ended, although these were often smaller in size and less heavily guarded.

Overall, the implementation of the convoy system in Barbados was generally inconsistent and unreliable, leading to widely mixed results. When functioning smoothly, English merchants moved large quantities of ships and materials safely across the ocean to distant colonies further isolated through the vagaries of war. The convoy system, however, existed within a delicate context that relied on effective planning and considerable luck. The slightest mishap, such as unprepared merchants, disease, or rebellious traders, could cause the system to buckle. Larger incidents, such as limited resources or an encounter with the French Navy, could result in its collapse. Furthermore, the system became increasingly complicated and dominated by the self-interest of representatives from individual islands. Merchants constantly requested changes to the frequency, timing, size, and resources planned for each convoy, taxing the abilities of an already limited and preoccupied government. This resulted in scenarios such as the failed convoy of 1695, when an

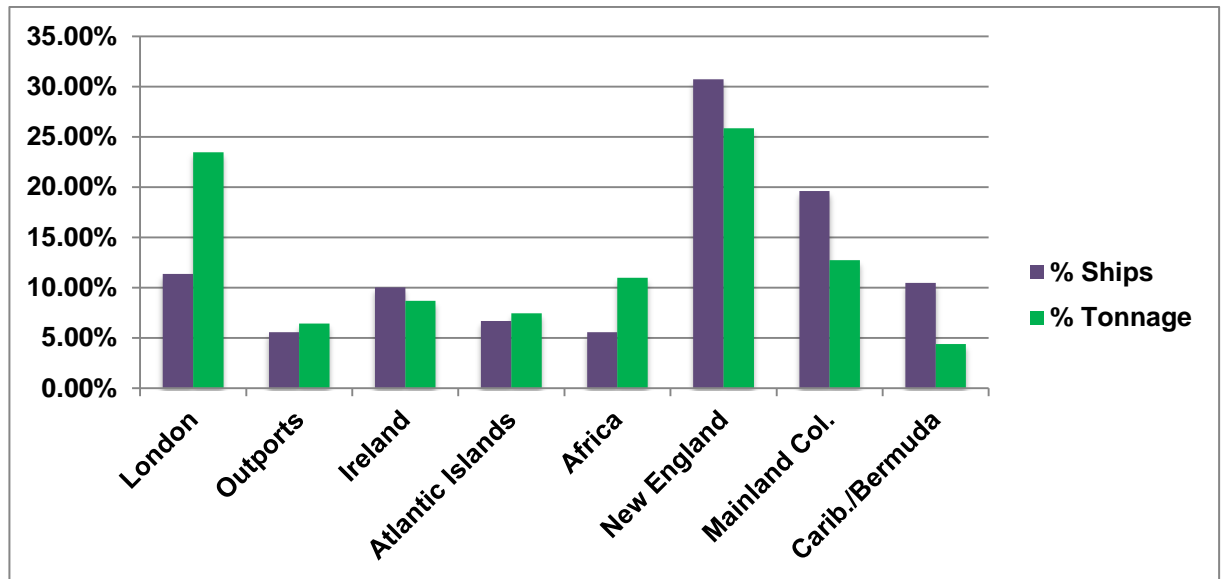
⁹⁸ While it is known that the Leeward Islands were to receive nine ships, and Jamaica seven, the Council did not list the number for Barbados. TNA, CO 324/6, 28 January 1697, Council of Trade and Plantations to Trumbull.

ambitious group of Barbadian merchants tried to rig the system in their favor, but ended up unprepared and unable to send goods to Barbados.

Thus, three conclusions can be drawn in regard to the Anglo-Barbadian convoy system as utilized during the Nine Years War. First, outside of the initial run in 1691, and possibly 1692 and 1696, convoys had a limited impact on Barbadian trade and, while helpful in supplying the island with some needed goods, often either failed to appear or arrived in a reduced state. Yet, when they did successfully reach the island, they were a boon to the economy and could quickly replenish depleted supplies. Secondly, this system reveals how much Barbadian planters and farmers relied on England and Ireland for even the most basic of supplies. No matter how many vessels the islanders received from either New England or the other mainland colonies, they could not adequately replace the quantity of goods the large English and Irish ships could carry across the ocean. Finally, the convoy system proves that Barbadian planters and merchants could neither limit themselves to the narrow confines of the Navigation Acts nor rely solely upon legal commercial channels when periods of conflict disrupted regular patterns of commerce. Instead, they readily embraced a freer and more open style of trade that placed power and control into their own hands.

The import and export data compiled from the Returns for 1695 through 1697 provide additional support for the latter two conclusions. Barbadian planters, during these years, struggled without successful convoys and demonstrate how limited they were when relying heavily on legal local trade from the Caribbean and the mainland. Graph 4.5 shows, for example, that the number of ships arriving from New England remained high throughout the final few years of conflict, as over 30% of all arrivals

Graph 4.5: Origin of Imports to Barbados, 1695-1697



Graph 4.5: TNA, CO 33/13, 1697

originated from that region, while the other mainland colonies supplied 19.60% of the vessels and almost 13% of the tonnage, both period highs. Trade relations with the vessels and almost 13% of the tonnage, both period highs. Trade relations with Pennsylvania became increasingly prominent, with Map 4.4 indicating that, in 1697 alone, 14 ships with 1,100 tons of space arrived at Barbados from the newly-settled colony. New York and the Chesapeake colonies also remained key trading partners, supplying a combined 18 ships and 810 tons. The overall limited nature of trade proved to be more problematic, however, than its localization, as only 459 total ships and 30,778 tons of goods reached the island during these three years, numbers that would have been more than twice as high over a similar period of time in the 1680s.

Yet, the records also show signs of improving conditions of trade across the region. With the English in control of the Atlantic, metropolitan merchants were again able to send supply ships to Barbados and reestablished rates of import conducive to the expansion of trade. Between 1695 and 1697, for example, the ratio of English ships to colonial ships was nearly 1:1.5 and available tonnage was just

under 1.5:1, numbers that again approached the ideal ratios from the 1680s.

Moreover, the average size of the ships involved in the trade almost doubled between 1695 and 1697, increasing from an average of 48.3 tons to 92.7, greatly surpassing the 65.7 ton average from the 1680s. Thus, the only commercial deficiency was that the overall volume was still low, with the islanders only receiving an average of 184 ships a year, proving that available shipping was still hard to come by in both England and the colonies during the latter stages of this long war.

The Returns also show that the export trade experienced signs of recovery between 1695 and 1697, even with a convoy system that struggled to function efficiently. While many Barbadian merchants still complained that the ‘few ships’ arriving from England after the cancellation of the 1695 convoy would ‘cause the fall of sugar,’ Table 4.6 actually shows both the projected totals from 1695 (10,308 tons) and actual figures for 1696 (9,854 tons) represent a respectable showing on par with or exceeding some totals from the 1680s.⁹⁹ While these figures still failed to match the period’s best years, including 1682, 1691, or most years after 1698, it represented a considerable turnaround from 1688 and 1690. Importantly, the secondary trade to the mainland colonies in rum and molasses was also recovering, and in some cases expanding, as these goods increased from a projected 223,586 gallons of rum and 315,176 gallons of molasses in 1695 to 398,539 and 359,698 respectively by 1697. In fact, the 1697 rum exports surpassed all prewar figures by nearly 100,000 gallons and molasses exports remained only 7% behind the era’s highest total in 1682.

Chart 4.2 further shows the reemergence of trans-Atlantic commerce between 1695 and 1697 by once again placing London at the center of the island’s export

⁹⁹ TNA, T 70/12, 26 March 1695 and 8 October 1695.

Chart 4.2: Destination of Barbados' Exports, 1695-1697

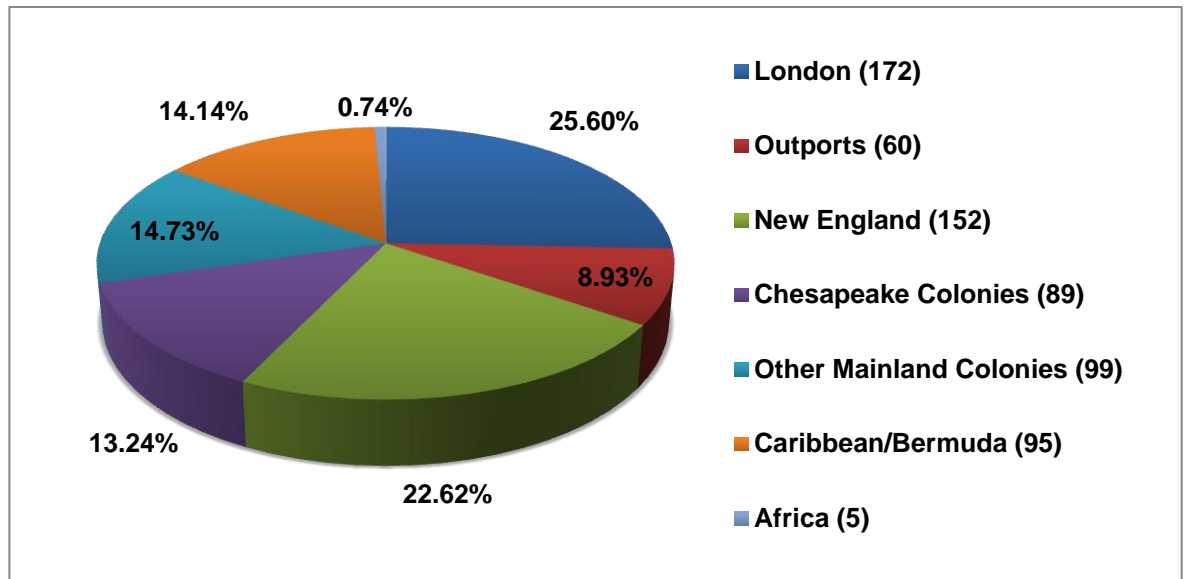


Chart 4.2: TNA, CO 33/13, 1696

trade, serving as the destination for 172 ships (25.60%) . The English outports represented another 8.93%, meaning that well over one-third of all ships involved in the export trade sailed to England. This trend was an important one, as the vast majority of the island's sugar went overseas to London markets. With an average Barbadian price of 24s 8d per hundredweight in 1696, the planters' legal crop sold for approximately £244,379 in London, a sum that dwarfed those generated even during the high yield/low price era of the 1680s. Consequently, the export trade to the colonial mainland saw a vast reduction in scale by the late 1690s. While New England still captured 22.62% of the trade, the Chesapeake, mainland, and Caribbean colonies all remained below 15% for the three year period and experienced a general reduction in their importance. Thus, by 1697, Barbadian planters and merchants had reestablished a position of strength within the Atlantic export trade, relying less extensively on moving goods to local destinations, while sending more ships across the ocean to reach valuable English markets. While the export trade also continued

to lack the sheer volume of the previous decade, it shows that the Barbadian planters and merchants had weathered the worst of the war and, with England again in control of the Atlantic, they could realistically expect to return to a commercial world similar to the one they experienced in the 1680s.

Section II: Securing Additional Supplies during the War

Even with the occasional success of the convoy system and England's increasing control over the Atlantic, life on Barbados remained difficult for many and reached a critical juncture during the early-to-mid 1690s. Some responded to the demanding wartime conditions by leaving the island for a more stable location, which resulted in a free white population that many feared was in decline. The Council and Assembly, for example, wrote that 'scarcities have forced many of the poorer planters to remove to North America,' as they 'suffered great losses' from 'interruptions of trade and high taxes,' while Governor Russell recalled that a great number 'goe off the Island,' as 'Pennsylvania, and other new colonies tempts many from hence.'¹⁰⁰ The majority of white islanders, however, had remained and survived by learning how to adjust their lifestyles to a Caribbean engulfed in combat. A variety of records show that there were at least two methods planters and merchants initiated in order to maintain access to the supplies and provisions needed throughout the Nine Years War.

The first was that both white and black Barbadians were far more self-sufficient than previously thought and grew large quantities of food on their own plantations. The English understood from the earliest stages of colonization the difficulties of settling a colony that was almost completely reliant on trans-oceanic

¹⁰⁰ TNA, CO 28/3 July 1696, Council and Assembly to Whitehall, CO 28/3, 29 April 1697, Council to Lords of Trade and Plantations and CO 28/2, August 30 1694, Lords of Trade and Plantations.

supply lines for provisions. A 1682 pamphleteer, quoting Sir Francis Bacon, recommended that ‘In a Country of Plantations, first look about what kind of Victuals the Country yields of itself to hand...and make use of them.’¹⁰¹ In fact, the English government promoted the theory that every plantation ought to be self-sustaining, especially in times of war, and that imported provisions from North America should be viewed as an emergency supply.¹⁰² The Barbadians partially followed this advice, as they ‘depended heavily’ on the foods crops and livestock produced by the island’s provision farmers and enslaved and indentured populations to such an extent that by 1680 Barbados grew more food than it imported.¹⁰³ A report from the Council of Trade and Plantations in 1693, for example, further mentioned that until that point, ‘the Island has provided for itself.’¹⁰⁴

The second explanation hinged on both the pragmatic and opportunistic approach to trade that many islanders maintained and their willingness to repudiate the commercial regulations laid out by the metropole in the Navigation Acts when they no longer benefitted the Barbadian commercial reality. Instead, they utilized their many networks and relationships throughout the Atlantic world and engaged in a system of illicit trade that brought in provisions and supplies not processed by government officers and have therefore gone unrecorded in the Returns and Customs Records. Christopher Codrington noted that ‘there is so much ignorance, laziness, or Corruption in Naval and Custom house officers, and so general a Conspiracy in

¹⁰¹ Anon., ‘Plantation Work: The Work of this Generation,’ (1682), 15-16.

¹⁰² Pares, *Yankees*, 87.

¹⁰³ Richard Bean, ‘Food Imports into the British West Indies: 1680-1845,’ in Vera and Tuden (eds.), *Comparative Perspectives on Slavery in New World Plantation Societies* (New York: New York Academy of Sciences, 1977), 587 and Jerome Handler and Diane Wallman, ‘Production Activities in the Household Economies of Plantation Slaves: Barbados and Martinique, Mid-1600s to Mid-1800s,’ *International Journal of Historic Archaeology*, (June 2014), 9-18.

¹⁰⁴ TNA, CO 29/6, 6 December 1693, Council of Trade and Plantations to the King. The extent of this self-sufficiency will be analyzed in greater depth in Chapter 5.

people of all ranks and qualitys...to elude ye Acts of Trade, that I have ye Mortification of Knowing a hundred things are done everyday prejudicial to ye trade and interest in England.’¹⁰⁵ William Sharpe, the Commissioner of Customs on Barbados, further admitted that ‘European goods, not from England, and foreign enumerated commodities are frequently run into bays and creeks here, where no officer is provided, also that vessels, cleared from the Custom-house here with little or no cargo, lie off the island and are further loaded by small vessels with goods which are to be carried to foreign markets.’¹⁰⁶ Most importantly, few government officials showed a willingness to defend England’s commercial regulations, thereby giving it their tacit approval. Some even participated in it themselves. Governor Ralph Grey, for example, had capital invested in the interloping trade, owning at least a half share of a ship that sailed between New York and Barbados.¹⁰⁷

By the time the war began, this tradition of illegal commerce was both familiar and routine to Barbadian planters and merchants and centered on two important Dutch entrepôts. The first existed on the small island of St. Eustatius, only twenty miles northwest of St. Christopher’s, where Barbadian planters traded much sugar, while receiving needed imports. Dalby Thomas maintained that a ‘great quantity of Commodities are sent out...and sold to the Dutch at low prices, for private Lucre’ from this island, with the planters benefitting by ‘having Goods in Barter for them directly from Holland.’¹⁰⁸ He further outlined how this system of trade worked: The Dutch would buy large quantities of Barbadian sugar and sent it ‘out of that back door for *Holland* [marked] under the name *St. Eustace* Sugar.’ The

¹⁰⁵ TNA, CO 152/4, 30 June, 1701, Codrington to Council of Trade and Plantations

¹⁰⁶ TNA, CO 28/3, 23 October 1698, Grey to Council of Trade and Plantations.

¹⁰⁷ TNA, CO 323/3, 3 August 1698, Narrative of William Willock.

¹⁰⁸ Dalby Thomas, *Historical Account of the Rise and Growth of the West-India Colonies*, (1690), 44.

Dutch merchants, once arriving back in the Netherlands, brought the illegal sugar ‘produced’ in St. Eustatius to Amsterdam, allowing Barbadian planters to export large quantities of sugar free from English duties. Thomas calculated that ‘over a Thousand and Five hundred Hogsheads of Muscovado Sugar’ (or approximately 900 tons) reached the Netherlands each year through this ruse.¹⁰⁹ St. Eustatius was also useful to the Barbadians as a nearby free port, where goods from all over the Caribbean could be bought, sold, or bartered with minimal risk and cheaper shipping rates. It is likely not a coincidence that the period of French control over the island (1689-1690) directly corresponds with the years of greatest want in Barbados. Unsurprisingly, St. Eustatius was also one of the first locations that the English attempted to gain back during their counterattack in 1690, as the subsequent recapture and reestablishment under Dutch control coincides with the beginning of Barbados’ recovery.¹¹⁰

Besides St. Eustatius, island smugglers also used other Dutch ports to carry out their activities, namely Curaçao to the southwest of Barbados, and occasionally Surinam on the South American mainland. Christopher Codrington maintained that by 1700 commerce with the former location was ‘at present...little less than an open trade.’¹¹¹ One ship captain recalled that during the war, Barbadian merchants frequently sent ‘sugar, tobacco, and indigo to Dutch islands in exchange for dry

¹⁰⁹ Ibid., and Frank Pitman, *The Development of the British West Indies, 1700-1763* (New Haven: Yale University Press, 1917), 166-171.

¹¹⁰ The English government ordered Codrington to destroy St. Eustatius’ port infrastructure upon retaking the island in an attempt to end the island’s role in illicit commerce. Knowing how valuable the island was for the English West Indies, he disobeyed the command and ‘spared it for the sake of [the former residents].’ Instead, he ‘invited the former Dutch settlers to reoccupy it,’ even though the island remained an English possession until 1693. By the end of the 1690s, however, St. Eustatius lost its preferred place within Barbadian trade due to a 5 percent duty the Dutch *WIC* placed on foreign trade after it received formal commercial control of the port in 1696. TNA, CO 152/38, 12 February, 1691, Codrington to Gwyllym, CO 152/37, 3 April 1689, Hill to Lords of Trade, 3 August 1690, Codrington to Lords of Trade, and CO 153/4, 19 November 1690, Order of the King in Council.

¹¹¹ TNA, CO 152/4, 5 May 1701, Codrington to Council of Trade and Plantations.

goods.’ He further explained that many island merchants would re-export mainland imports, especially provisions, to Curacao in exchange for French wine, cocoa, and textiles, while others carried ‘Rumm, beef, and sugar, from Barbados.’ Another source claimed that colonies like Barbados illegally supplied Curaçao ‘with 12 or 1500 tunns of bread and flower, and as much beef, altho’ such provisions one time with another were as dear in H.M. Islands as at Curaçoa, the returns whereof has been in European goods.’ The goods that the white Barbadians illicitly received from the island included ‘cocoa, linnens, muslins, silks and other goods for wearing apparel, with great quantities of rigging, sail canvas, anchors and other sorts of iron works, powder and shott.’¹¹² Those on Barbados became so commercially reliant on Curaçao for goods that the captain estimated that if the island ‘was sunk under water, it would be beter for England by 5 or 600,000 pounds in one year.’¹¹³

To get away with illegal trade in this port, a vessel would be sent ‘to Curacao laden with Sugar, Tobacco, Rumm, and bottle Liquors,’ but would be entered in the Returns as traveling for another legal destination. In one example, another captain recalls that a ship bound for Curaçao listed that it was leaving ‘for Anguilla’ and that the illegal tobacco it carried ‘was entered for bottle beer and the Sugar for flower and the Rumm for Tarr.’¹¹⁴ This ruse allowed Barbadian planters to send desirable illegal goods through legal channels, while also limiting suspicion and minimizing the likelihood of merchants getting caught. As such, trade to Curaçao became ubiquitous for much of the English West Indies, with wealthy planters, government officials, and even governors participating in it. Gabriel McCrackan, a former sailor

¹¹² TNA, CO 5/1292, 20 February, 1710, Several Memorials related to the Sugar Trade.

¹¹³ TNA, CO 323/6, 4 November, 1709, Holt to Bilton.

¹¹⁴ Ibid.

under the hire of Christopher Codrington, recalled that his powerful client frequently traded sugar, indigo, and cotton to the Dutch in Curaçao in 1691.¹¹⁵ A decade later, another report claimed that ‘Gov. Codrington did himself most notoriously break the Acts of Trade and traded with the Dutch at Curacao during the whole war.’¹¹⁶

Suriname, once an English wood-cutting colony under the proprietorship of Francis Willoughby, and eventually transferred to the Dutch as part of the Treaty of Breda in 1667, represented a third center for illicit commerce. As a part of yet another seemingly legal guise, merchants from New England and New York would regularly call at Suriname, conduct their business, and then stop at Barbados on the way back to the colonial mainland. There, they would trade unsold provisions and lumber from North America and dry goods from Europe that they had just received from the Dutch for Barbadian sugar, which they would then take back to Suriname from where it was illegally re-exported to the Dutch Republic.¹¹⁷ The extant Returns for 1681 through 1698 inexplicably record the arrival of 41 ships with a combined tonnage of 1,757 tons from Suriname, ranging from a single vessel in 1697 to as many as 10 in 1686. They brought a host of goods to Barbados, especially timber, provisions, wood for barrel construction, and rollers for grinding sugar.¹¹⁸ While trade with Suriname remained illegal, it was evidently still an active branch that was used to supplement Barbados with needed goods, especially supplies for the construction of sugar mills.

Barbadian planters were also known to have illegally obtained a variety of goods, including provisions and enslaved Africans, from the Danish island of St.

¹¹⁵ TNA, CO 152/2, 6 May 1698, Deposition of Gabriel McCrackan.

¹¹⁶ TNA, CO 152/3, 15 June 1699, Weaver to Council of Trade and Plantations.

¹¹⁷ Koots, *Periphery*, 195.

¹¹⁸ TNA, CO 33/13 and 33/14, 1681-1698.

Thomas, where they traded within a global emporium of Dutch, French, and Spanish merchants.¹¹⁹ Christopher Codrington admitted that the Danish represented a ‘great temptation’ to West Indian merchants, ‘for they will give a third more’ for exported sugar than they would receive in the English market, and pay for it in ready money or rather negroes, Dutch linen and dry goods, which they sell fifty per cent cheaper than is afford among us.’¹²⁰ Enough trade occurred between the Barbadians and merchants on St. Thomas that Governor Grenville worriedly explained that the Danish island had the potential to become ‘the Staple for all sort of indirect and illegal trade...in times of war.’¹²¹

Barbadian merchants also relied upon England’s mainland colonies as important hubs for illegal activity, especially during periods of Caribbean conflict. Sir Thomas Laurence, Secretary of Maryland, wrote that Barbados utilized South Carolina as a major ‘centre for illegal trade,’ where they obtained ‘woollen and linen manufacture, make good stuff and have silk and cotton.’ He also believed that Barbadian merchants frequently traveled to Pennsylvania to acquire illicit goods, since the new colony received an array of material from both Scotland and the interloping merchants of ‘Holland...as well as Surinam and Curacao.’¹²² Furthermore, since sugar became difficult to export during the war, Barbadian planters and merchants also participated in a scheme that allowed them to clandestinely export Chesapeake tobacco as their own product to London, Ireland

¹¹⁹ TNA, CO 28/37, 2 July 1691, Deposition of Joseph Crisp, CO 137/44, 10 June 1691 Beeston to Nottingham, CO 28/2, 2 July 1695, Crispe to Russell, CO 152/2, 6 May 1698, Walrond to Council of Trade and Plantations, and CO 152/2, 11 July 1698, Deposition of Edmund Bugdon.

¹²⁰ TNA, CO 152/2, 27 September, 1697, Codrington to Council of Trade and Plantations

¹²¹ TNA, CO 28/7, 3 October, 1703, Granville to Board of Trade

¹²² TNA, CO 5/713, 25 June 1695, Memorial of Thomas Laurence.

and the Netherlands without paying any duty on it. According to Robert Quarrys, Governor of Carolina,

I have spent much thought and time to find out the reason of the great quantities of tobacco, which for three or fours years past hath been carried to Barbados from this place, Virginia, Maryland and New York. The consumption in Barbados is not so much as formerly and the quantity shipped thither is almost ten times more. At last I found out the intrigue and mystery of it. When the tobacco is landed there they repack it into boxes, casks, etc., and send it for England and Ireland. The conveniency of its package makes it very easy to run, especially since the officers do not expect tobacco on board Barbados ships, and the saving of the duty makes it a far better trade than any commodity they can carry from Barbados. There is a great deal also sent from that island, as shipping offers, to the Dutch settlements.¹²³

The Barbadians also traded with New York for a variety of cheaper luxury items obtained illegally from the Far East. The Earl of Bellomont, New York's governor, insisted that 'a great trade' existed 'between this place and Madagascar from whence great quantities of East India goods are brought, which are certainly purchased from pirates,' before being traded to planters on Barbados. New York, with its former ties to the Netherlands, also served as another conduit for illegal trade with Dutch merchants.¹²⁴ Occasionally, Barbadian merchants even dealt with illegal privateers and traders from as far away as the Red Sea and Russia in hidden coastal locations in New England, New York, and Pennsylvania.¹²⁵

Overall, the decade between 1689 and 1698 proved to be a difficult time for all Barbadians, as England's participation in the Nine Years War effectively ended the substantial expansion of trade that characterized the island's peak commercial moment during the 1680s. Early French success cut the islanders off from most of their trans-Atlantic trade, which resulted in Barbadian markets receiving only a small

¹²³ TNA, CO 323/3, 6 May 1700, Quarry to Commissioners of Customs.

¹²⁴ TNA, CO 5/1115, 18 May 1698, Bellomont to Council of Trade and Plantations.

¹²⁵ TNA, CO 5/713, 25 June 1695, Memorial of Thomas Laurence.

fraction of their usual salt-meat provisions, few of the luxuries, and none of the plantation equipment that generally arrived from England, Ireland, Africa, or the Atlantic Islands. Thus, Barbados' planters and merchants found themselves forced to change their approach to trade and adopt more pragmatic methods in order to survive and maintain some level of profitability. Convoys represented one solution to this problem, as the English government worked with island merchants to send dozens of ships and thousands of tons of goods under escort to Barbados, while also taking much of their sugar back to London's markets. Unfortunately, the system did not always function smoothly and, outside of 1691, 1692, and 1696, proved to be both unreliable and unpredictable, forcing both white and black Barbadians to rely on their own ingenuity to secure supplies and provisions.

Many responded by ignoring the Navigation Acts and participating in a widespread system of illicit trade that served as an alternative and supplemental source of supply. The extensive networks maintained by Barbadian planters and merchants allowed them to turn to their French, Spanish, Dutch, and Danish neighbors to take advantage of commercial relationships that were more personalized and responsive to the islanders' immediate needs. Importantly, foreign merchants also served as an additional conduit through which planters could send a large portion of the sugar, molasses, and rum that would have otherwise sat as wasteful surplus in warehouses in Bridgetown. By trading island exports illicitly, Barbadian planters continued to generate wealth regardless of whether England's ships reached the island. Moreover, they quickly learned that they could successfully ignore the Navigation Acts with almost no fear of punishment, while engaging in a level of free trade that had not been possible since the Third Anglo-Dutch War in the early 1670s.

Thus, the decision to engage in illegal trade, in combination with high levels of self-production, placed influence and power into the hands of the islanders and allowed them the flexibility to pursue the advantages that gave them the greatest chance to both survive and profit during this difficult era.

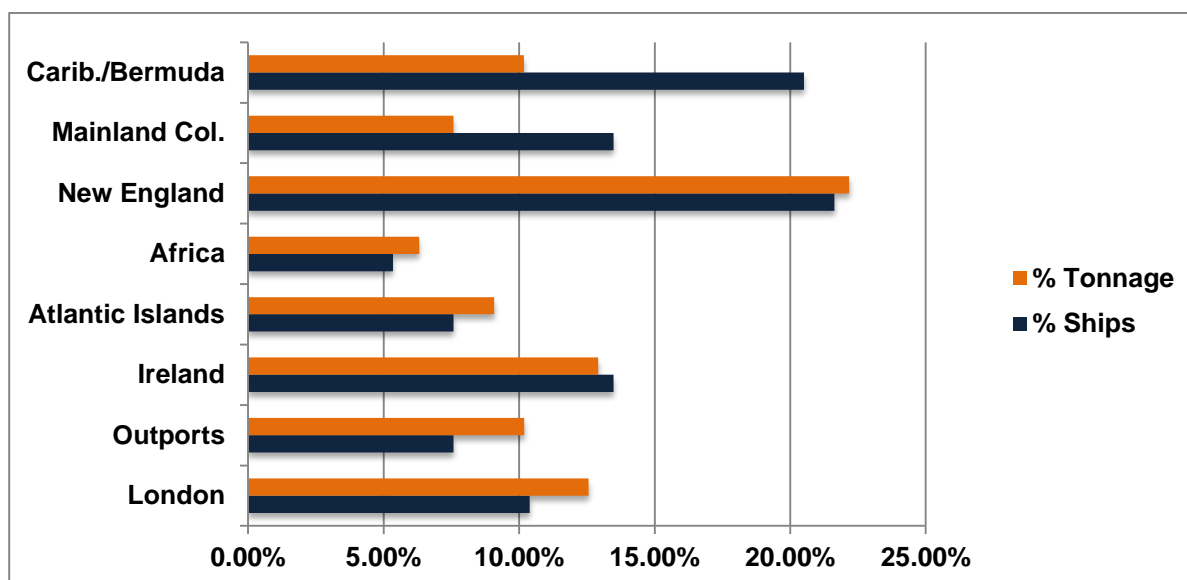
Conclusion

On 20 September 1697, France, England, Spain, the Dutch, and the Holy Roman Empire formally signed the Treaty of Ryswick and brought the Nine Years War to its anticlimactic end. With rumors of peace sweeping through the island by 27 September, most white Barbadians welcomed the war's conclusion and, upon receiving the treaty's conditions on 30 December, published the document 'with great joy.'¹²⁶ With an international desire to reestablish the status quo, little land changed hands in the conflict's aftermath and life for many went back to its prewar condition. This was especially true for those on Barbados, as merchants and planters once again pragmatically shifted their patterns of trade and confined themselves to the limitations set by the Navigation Acts in the hope of taking advantage of England's depleted markets, high demands, increased merchant marine, and enhanced control of the Atlantic.

This resulted in a huge expansion of trade that easily surpassed many of the island's best prewar totals. In 1698, for example, the Barbadians welcomed 356 ships carrying 37,731 tons worth of cargo space. As Map 4.5 demonstrates, these vessels again arrived from all over the Atlantic world, as Barbados' merchants and planters were able to renew the trading networks that they had previously utilized when island commerce had been at its most robust. Much of this reestablished

¹²⁶ TNA, CO 28/3, 12 January 1698, Council to Council of Trade and Plantations.

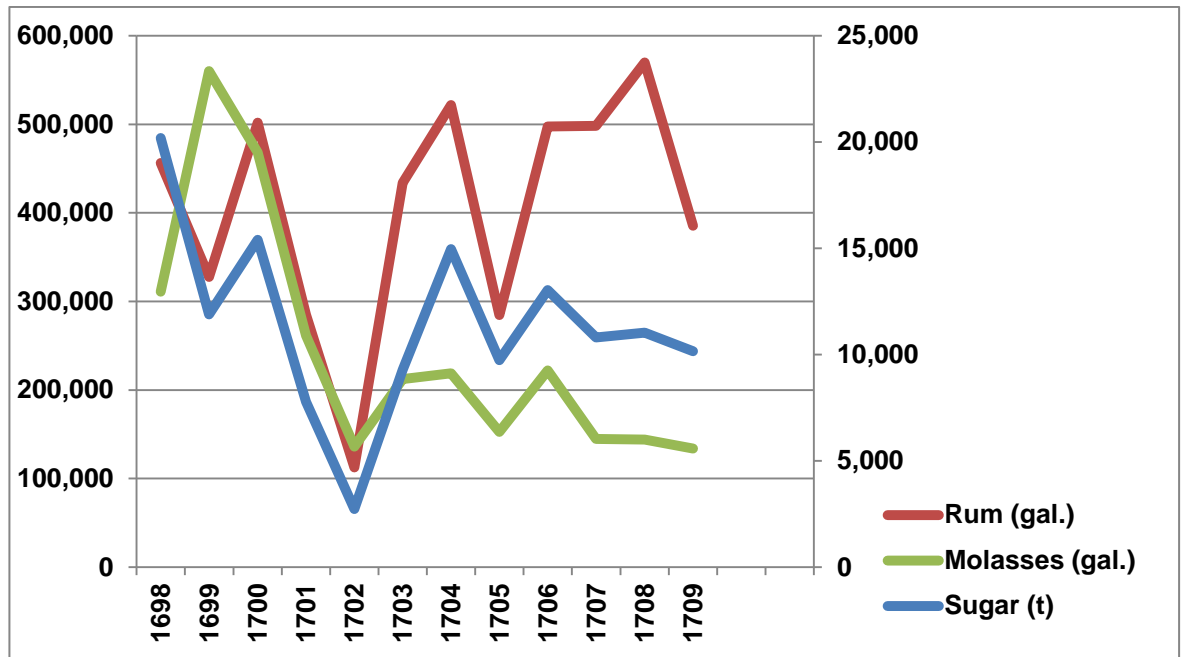
Graph 4.6: Origins of Barbados Imports, 1698



Graph 4.6: TNA, CO 33/14, 1698

success centered on the additional numbers of ships involved in postwar trade, while continuing to maintain the England to colonial origin-of- trade ratios of 1:1.5 for ships and 1.5:1 for tonnage that had defined commerce throughout both the 1680s and the latter years of the war. In 1698, as Graph 4.6 depicts, 43.8% of all ships originated in England and both London and the outports resumed their featured role within Barbados' import trade, combining for 17.97% of the year's total shipping and 31.75% of its tonnage. England's merchants were also responsible for the dramatic postwar revival of commerce between Barbados and both Africa and the Atlantic Islands of Madeira and Cape de Verde, as another 12.92% of the year's ships and 15.39% of its tonnage came from these three locations. More importantly, the merchants of New England and Ireland returned to their proper place at the head of the island's provision trade, sending a combined 35.11% of all shipping and 35.09% of all tonnage to the island. These ships, along with an increase in tonnage

Graph 4.7: Barbadian Exports, 1698-1709



Graph 4.7: TNA, CO 33/13, 33/14, and 33/15, 1698-1709. This graph depicts the legal export trade that occurred between Barbados, England, and the colonies. The molasses and rum totals correspond to the numbers that increase by a hundred thousand gallons on the left side of the chart, while sugar matches up with those in tons on the right side.

from the farmlands of Pennsylvania and the fisheries of Piscataqua, led to a great bounty of provisions entering the island.

A high demand for sugar also caused the export trade to rapidly expand.

Reaching a postwar peak of 20,190 tons in 1698, Graph 4.7 demonstrates that Barbadian planters consistently supplied at least 10,000 tons to both local and trans-oceanic markets throughout the Atlantic world for most of the next twenty years.¹²⁷

This considerable output, combined with a low market supply and high demand, resulted in trans-Atlantic markets experiencing inflated prices. The average price that the planters received for their product increased from 14s 8d per hundredweight in 1698 to 23s 10d in 1700. In peak years of trade during the postwar era, sugar

¹²⁷ TNA T 70/12, 29 March 1698 and 9 June 1698.

legally brought in between £275,802 and £366,496 for the island.¹²⁸ Secondary items such as rum and molasses also continued to sell well, with the island planters and merchants exporting an average of 475,724.39 gallons of rum and 289,329.46 gallons of molasses per year between 1698 and 1709. Thus, by pragmatically reestablishing their trading networks throughout the Atlantic world and subjecting themselves to the regulations imposed by the Navigation Acts, many white Barbadians prospered, with both imports and export reaching record highs. Unfortunately, this boom was short-lived. A new conflict, the War of the Spanish Succession, checked Barbados' commercial expansion in 1701, causing sugar, rum, and molasses exports to precipitously drop, while forcing the islanders to once again adjust to life within a Caribbean at war.

Overall, the last two decades of the seventeenth century represented an era of conflicting visions of success and prosperity in Barbados, and showed just how delicate trans-Atlantic economic networks could be for a small island in the Caribbean. For most of the 1680s, Barbados was at the height of its commercial power, but operated under substantial metropolitan oversight and a general adherence to the Navigation Acts. It relied on a vast trading network and the considerable number of relationships that it created to acquire an unprecedented quantity of imports, including provisions from both Ireland and England's mainland colonies, wine from Madeira, assinegoes from Cape de Verde, and a mixture of luxuries and plantation necessities from London and the English outports. Exports followed similar trends, with Barbadian planters and merchants sending an annual average of over 8,000 tons of sugar back to the metropole and considerable amounts of rum to

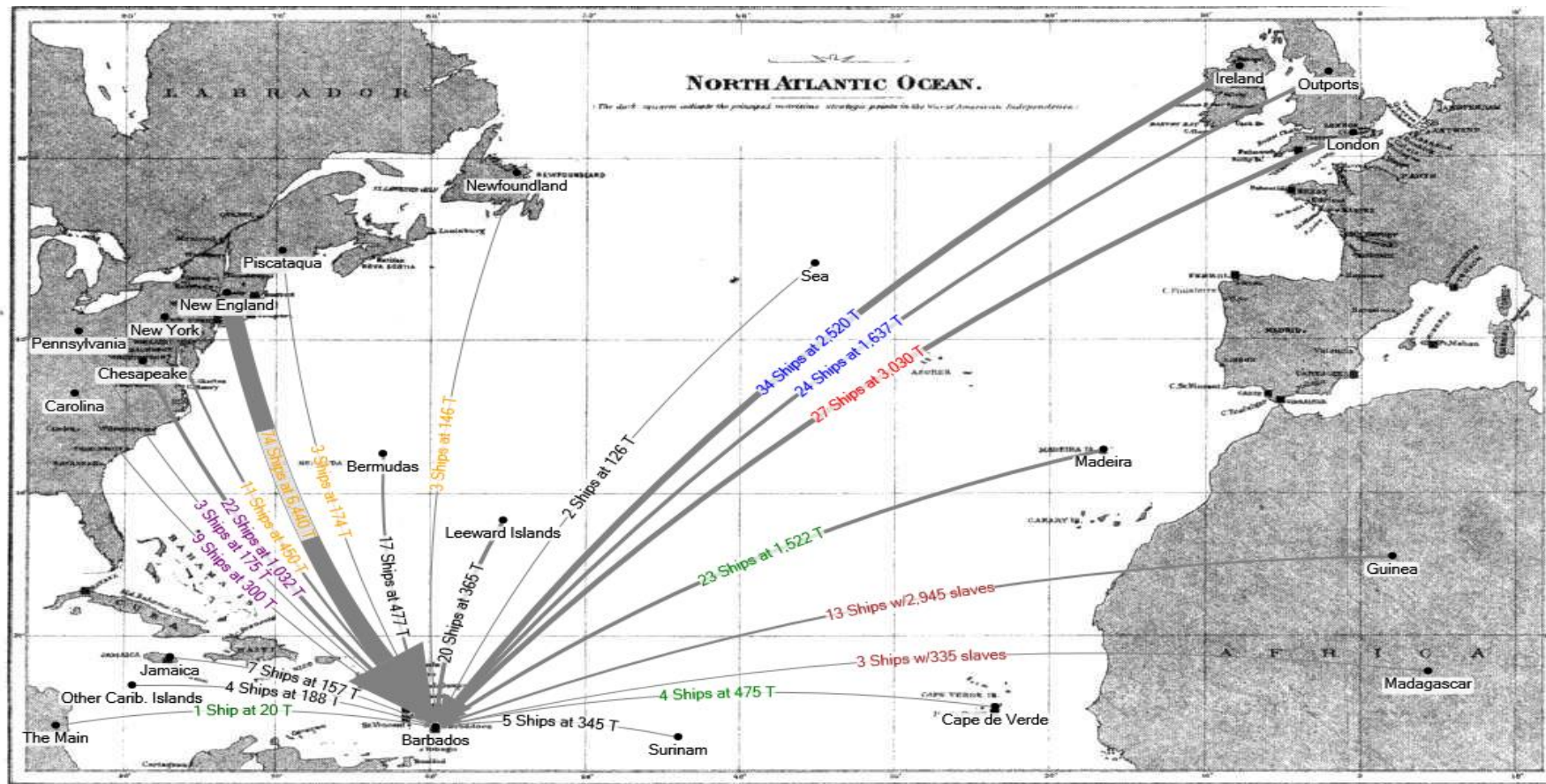
¹²⁸ TNA, T 70/948, 1698.

the plantations of Virginia and molasses to the distilleries of New England. As long as the ratios of colonial to European trading vessels hovered around 1.5:1 and tonnage at 1:1.5, the system consistently worked and Barbados remained well-supplied and well-fed, with few surplus exports left lying in warehouses.

The Revolution of 1688 and the Nine Years War, however, altered this delicate balance of trade. From 1689-1690, the French Navy dominated the Caribbean and threw Barbados' trading networks into disarray, making it both expensive and dangerous for smaller colonial ships to sail in the West Indies. Moreover, England lost control of the Channel in 1690, further disrupting established patterns of import and export. By 1691, however, the situation improved markedly for the island's inhabitants. The introduction of the convoy system allowed Barbados to briefly reestablish high volumes of trade that mimicked those of the 1680s. These commercial armadas, when successful, supplemented Barbados with moderate imports and exports and relieved some of the pressures faced by a population that up until this point had been largely left to fend on its own. Yet, the convoys were often unsuccessful, leaving both white and black Barbadians to rely on other means in order to secure their own supplies. At a local level, the Barbadians countered the scarcity of imported provisions by leaning heavily on their own basic levels of self-sufficiency. Planters and merchants also openly disobeyed the government's Navigation Acts by engaging in high levels of illicit trade, traveling to St. Eustatius, St. Thomas, Surinam, Curaçao or even the English mainland to trade illegally with both domestic and foreign merchants. These strategies appear to have kept the island reasonably well supplied during an era of limited trade and helped most islanders to survive a long and often dangerous war.

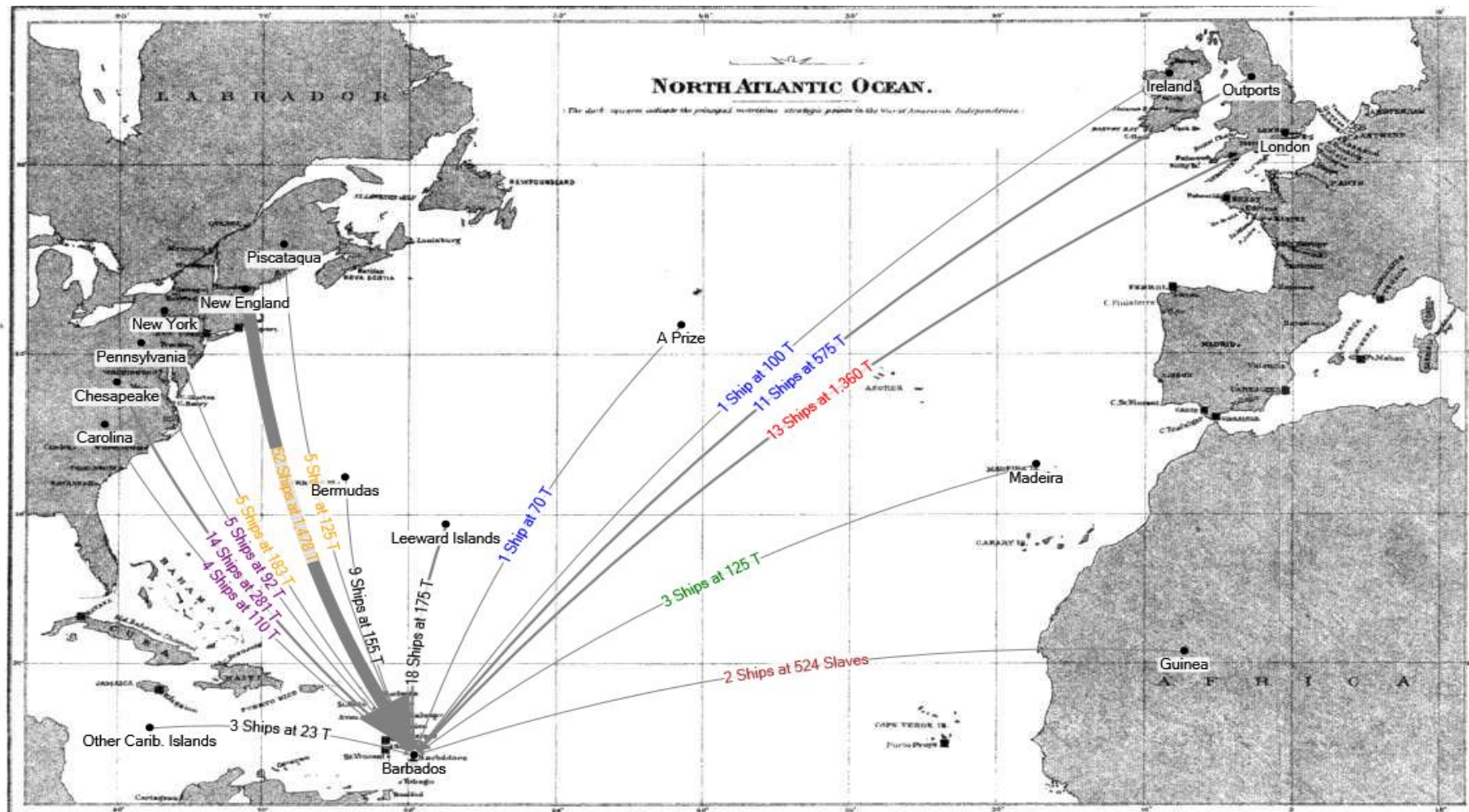
Overall, this analysis shows the constantly changing nature of trade in a late seventeenth-century Anglo-Caribbean plantation society. At their core, Barbadian planters and merchants refused to view themselves as simple cogs within England's hubristic mercantilist machine. Instead, they operated in a more nuanced and pragmatic way, taking advantage of the protection, high prices, and guaranteed markets offered by the Navigation Acts when it was in their self-interest to do so, but quickly complained if they received less shipping than expected from London and the outports. In these situations, they resorted to a freer and more open trade that rejected the restrictions imposed by the Navigation Acts and knowingly took advantage of the feeble and impotent policies of enforcement put into place by a metropole that could not yet adequately overcome the distance between the two locations. Unlike their predecessors, who often spurned London-based merchants and the metropolitan government, contemporary Barbadian planters and merchants welcomed a strong relationship with England, but still desired the power, right, and privilege of 'choice.' They viewed their commercial relationship with the English as a single economic option, one of many that they had when trading throughout the Atlantic. This quickly became the island's planters and merchants greatest economic strength, as their ability to rely on responsive, pragmatic, and flexible economic relationships that incorporated merchants, colonists, and English policy makers into a single commercial unit allowed the small island to emerge as one of the most important and influential colonies of the era.

Map 4.1: Barbados Importation Networks, 1684



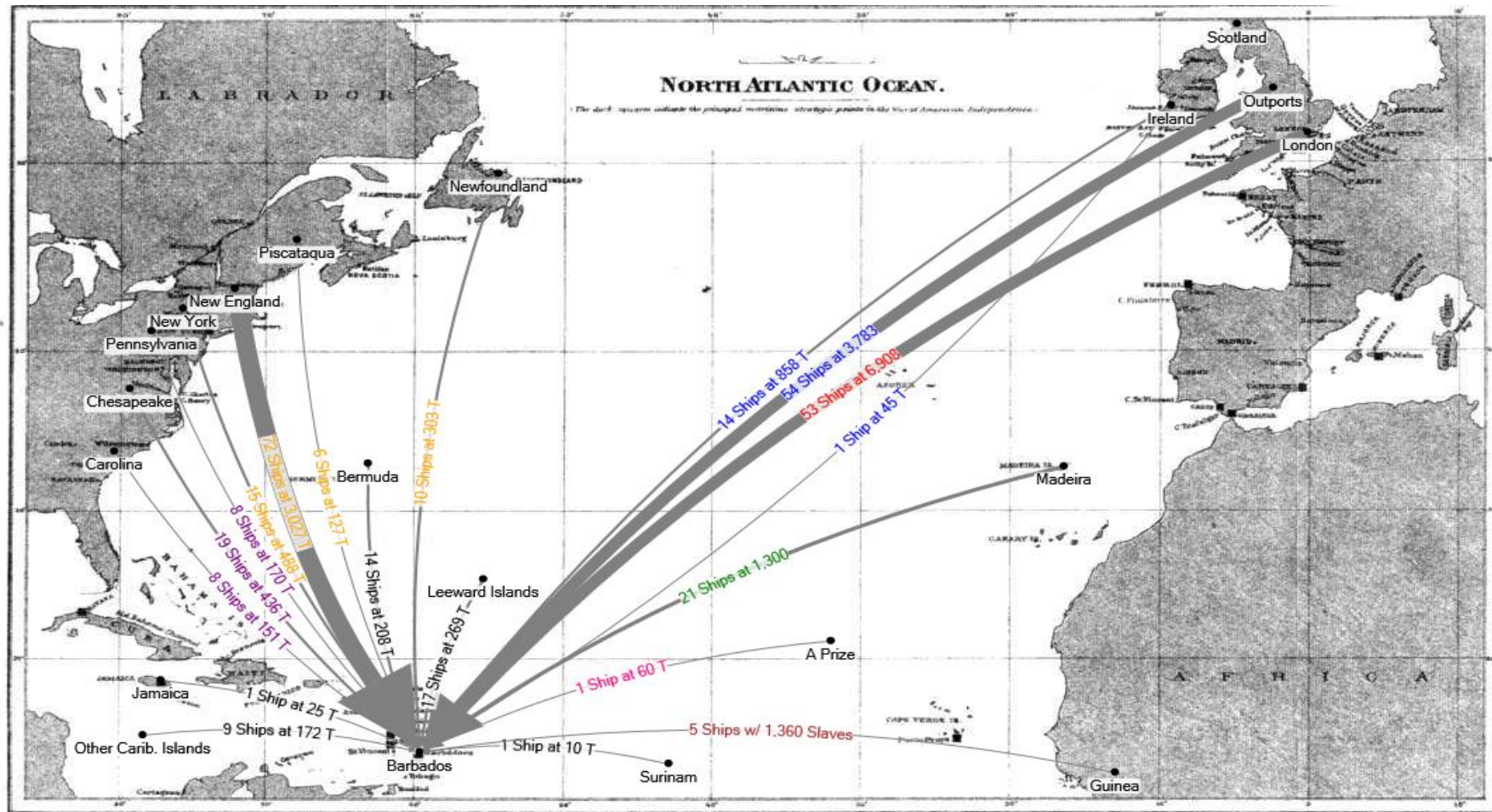
Map 4.1: TNA, CO 33/13, 1684. While this map shows most of the locations contained in the Naval Office Returns, there are a few that lie outside of its limits. Some of the actual locations, therefore, might appear to be inaccurate. This applies most specifically to the Leeward Islands, Surinam, Guinea, and Madagascar. I tried to be as accurate as possible, while also keeping the map legible.

Map 4.2: Barbados Importation Networks, 1690



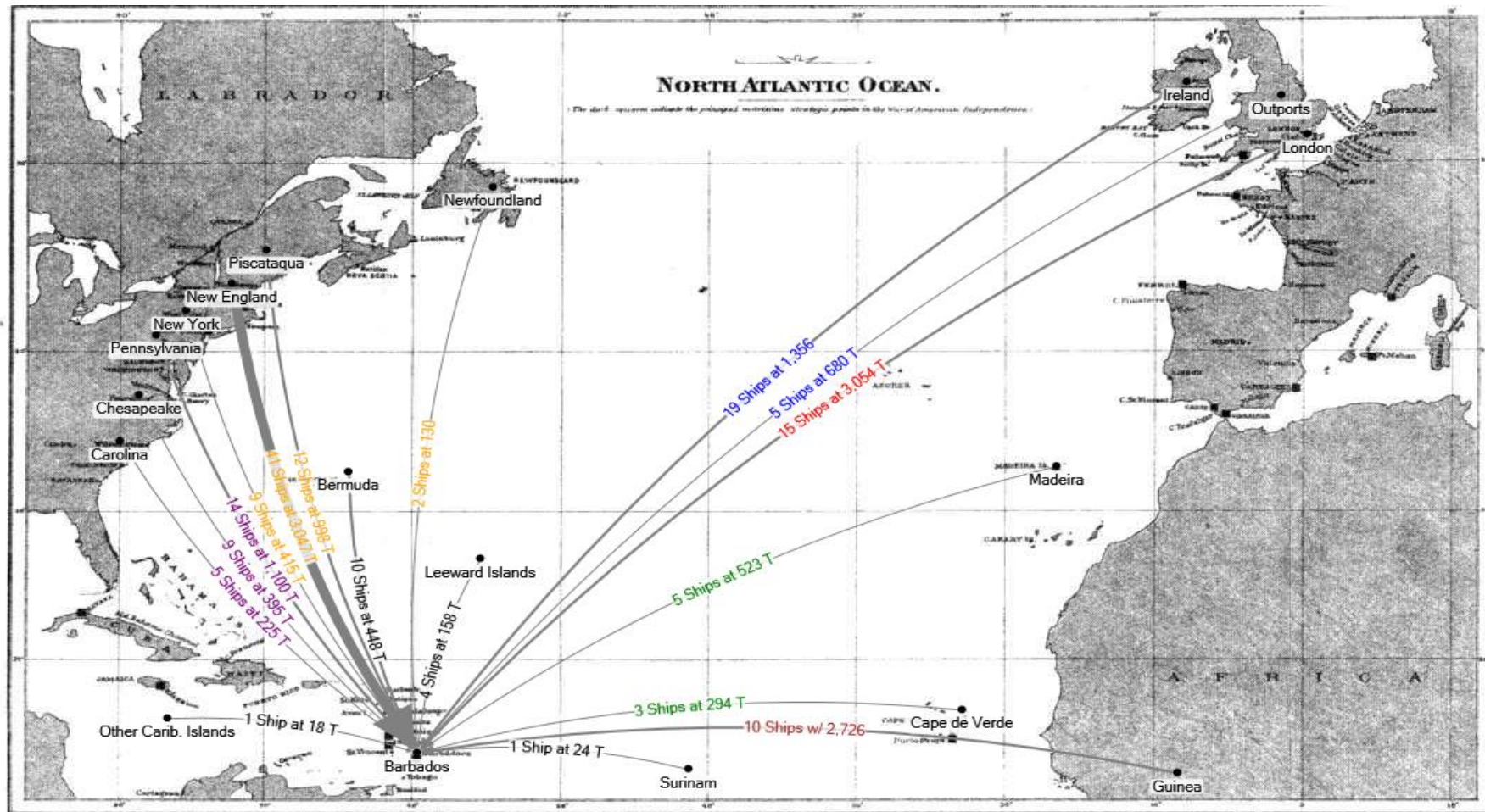
Map 4.2: TNA, CO 33/13, 1690.

Map 4.3: Barbados Importation Networks, 1691



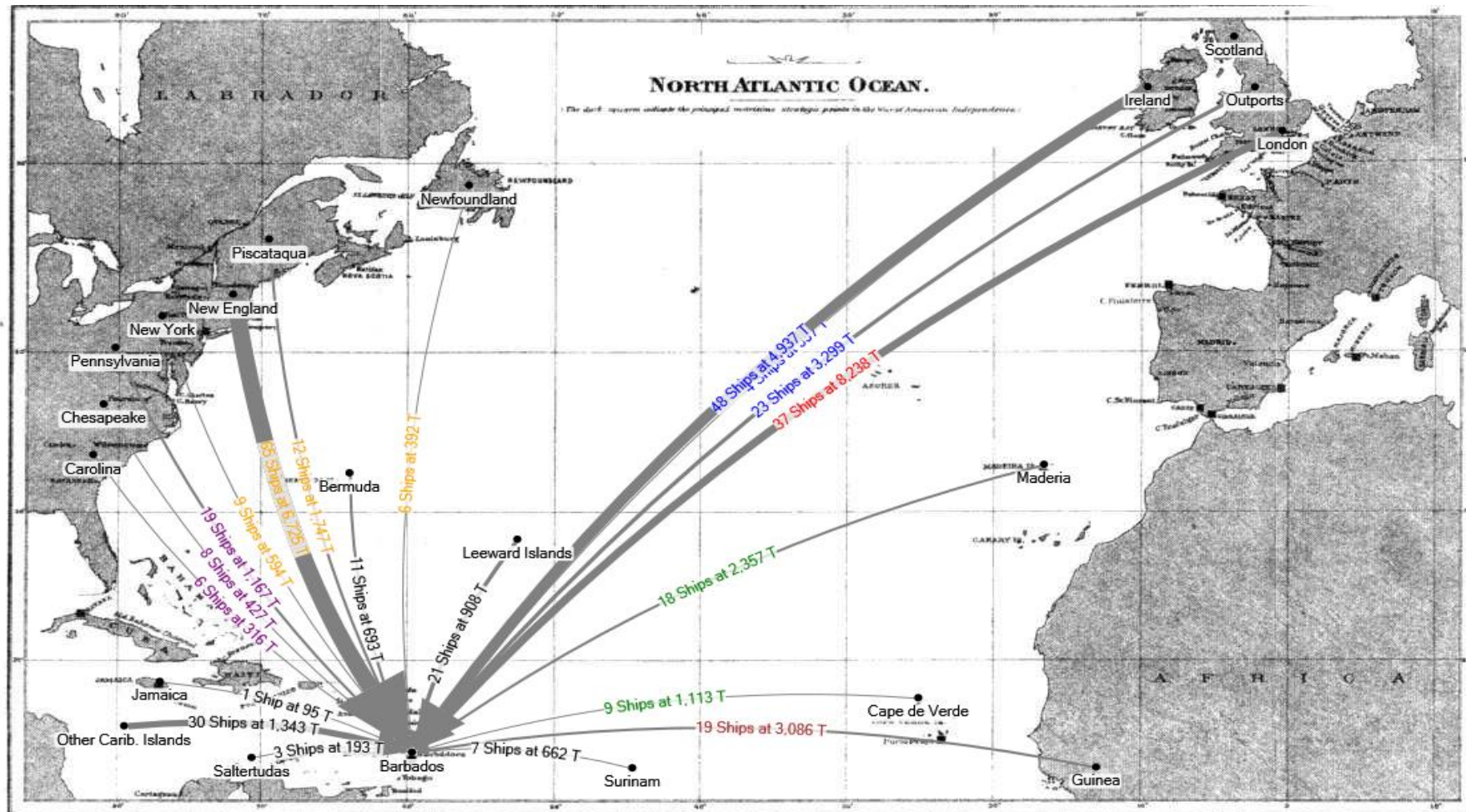
Map 4.3: TNA, CO 33/13, 1691.

Map 4.4: Barbados Importation Networks, 1697



Map 4.4: TNA, CO 33/13, 1697

Map 4.5: Barbados Importation Networks, 1698



Map 4.5: TNA, CO 33/13, 1698.

Chapter 5: The Barbadians' Quest for Energy in the Seventeenth-Century Caribbean, 1680-1700

While most of the grievances from Edward Littleton's *Groans* focused on trade and taxes, he also identified a variety of other 'lesser' issues that affected the lives of late-seventeenth century Barbadian planters and farmers. One of these was the increasing costs of the vital energy inputs necessary for the production of sugar on Barbados. While Littleton voiced his dismay over the high freight prices merchants placed on the horses used to power some plantations and the inherent difficulties in maintaining the great windmills that had come to dominate the island's skyline by the 1680s, he identified the challenges surrounding the infertile soil as the most pressing energy issue of his day. To counter it, Littleton recommended the use of dung. This, however, brought its own problems, as the retired planter acknowledged that 'amassing the vast quantities of Dung we must use, the carrying it to the Field, and disposing it there; is a mighty Labour,' as each 'acre of ground well dress'd will take thirty load of Dung.' Because planters needed so much fertilizer to reinvigorate their lifeless fields, the enslaved had to work to collect it like 'Ants or Bees... and rake and scrape Dung out of every Corner,' with some going to such extreme ends as using 'the Urine of their People' to bring life back to their fields. Thus, while Littleton's concerns related to a very specific issue, he pointed out a larger problem that was a dangerous reality for those planting and farming on the island. By the 1680s, the environment of Barbados had been altered in ways that caused planters to need greater quantities of energy from what they maintained were dwindling overall supplies.¹

¹ Littleton, *Groans*, 18-19.

Originally, it was the planters' easy access to natural energy in its various forms that made sugar production possible on Barbados in the mid-1640s. According to Jason Moore, there were three general inputs needed to successfully grow this lucrative cash crop. First, there had to be an abundance of healthy and nutrient-rich soil. When the overused soil began to show signs of infertility by the end of the 1660s, the planters were forced to figure out how to revitalize it with additional nutrients in order to keep it productive and to maximize scale efficiencies. Secondly, the enslaved Africans, indentured servants, and free whites that made up the island's workforce needed enormous amounts of nutritional energy in order to perform the arduous tasks required by plantation and provision agriculture. It would have been too expensive to have imported the majority of the foodstuffs needed to supply this energy, so planters and farmers had to figure out other methods of producing it locally. Thirdly, the Barbadians needed access to large tracts of woodland, as 'there had to be fuel for the boilers that cooked the cane juice,' and that turned the sweet syrup into muscovado sugar. Since the island's natural forests had almost entirely disappeared by the end of the 1660s, planters naturally looked abroad to neighboring islands for cheap sources of fuelwood.²

This constant search for a productive equilibrium between these three energy sources has defined the movement of sugar's commodity frontier. Historically, sugarcane's relationship to the environment was parasitic at best; the perennial quest for the necessary inputs resulted in rapid biophysical transformation and resource exploitation. As soon as planters exhausted the environment of one location, they wasted little time in abandoning the site and finding fertile soil and virgin forests

² Jason Moore, 'Madeira, Sugar, and the Conquest of Nature in the 'First' Sixteenth Century: Part I: From 'Island of Timber' to Sugar Revolution, 1420-1506, *Review*, vol. 32, No. 4 (2009), 354.

elsewhere. This created a highly mobile and rapidly changing commodity frontier that moved from Cyprus in the late fifteenth century to the eastern fringe of the Caribbean in less than two hundred years. Thus, the general refusal of Barbadian planters to flee their allegedly declining plantations was a unique occurrence in the history of the valuable cash crop. For the first time, sugar planters who had rapidly exploited and used up an area's limited resources stayed and attempted to maintain similar levels of agricultural output through innovation and modernization.³ This meant that energy in its various forms took on a new meaning to the Barbadian elite, becoming a focal point of both their domestic and international policy, and one of their greatest daily concerns.⁴

Despite the importance of this moment within the history of sugar, few historians have written much about the Barbadian elite's quest for energy or the amount that it required to run the island's sugar plantation complex. David Watts and J.H. Galloway have both discussed how the changing environmental conditions on Barbados led to a transformation in the methods used by planters to obtain energy, but offer little information on their specific requirements.⁵ Jason Moore has addressed the issue of deforestation in his work, but does not produce the quantitative evidence to substantiate his claims with regard to Barbados.⁶ Richard Bean has looked at basic nutritional requirements by predicting intake in 1680 and

³ The sugar commodity frontier started in Cyprus (1350-1470), then moved to Madeira (1480-1520), Sao Tome (1540-1570), Pernambuco (1570-1620), Bahia (1620-1670), Barbados (1670-1720) and Jamaica and St. Domingue (1720-1790). Moore, 'Conquest, Part I,' 353. Pernambuco and Bahia, both a part of modern-day Brazil, do not cleanly fit into the sugar frontier model, as the vast quantities of unsettled land, virgin forests, and fertile soil meant that these two locations were not limited by their resources and did not face the same challenges as island-based plantation societies.

⁴ Ibid., 354.

⁵ Watts, *West Indies* and J.H. Galloway *The Sugar Cane Industry: An Historical Geography from Its Origins to 1914* (Cambridge: University of Cambridge Press, 2005).

⁶ Jason Moore, 'Sugar and the Expansion of the Early -Modern World-Economy: Commodity Frontiers, Ecological Transformation, and Industrialization,' *Review*, vol. 23, no. 3 (2000), 410-431.

1698 through a limited analysis of the Naval Office Returns. His work, however, centers on only two years, both of which show significant import surpluses and are not indicative of the complex situation on the island during the late 1680s and most of the 1690s.⁷ Thus, the islanders' ability to adapt to the times, maintain access to their necessary inputs, and innovatively pursue alternative sources of energy must be addressed in order to better understand how Barbados transformed from a boom economy in the 1650s and 1660s to a more mature plantation society by the 1680s.

By utilizing imports recorded in the Returns, as well as a sampling of inventories from deeds and wills, this chapter addresses, predicts, and analyzes the energy requirements of all late seventeenth-century Barbadians and suggests how some managed to meet their resource needs on a daily basis. This chapter shows that the island's inhabitants again relied on a flexible and pragmatic approach to gathering these materials that incorporated a combination of supplies from both local colonial and trans-Atlantic ports and through self-production. The first section considers the quantities of nutritional energy needed by each of the three major population groups in Barbados, why they consumed certain foods, the extent to which they depended on alternative supplies of provisions to offset those that they imported from abroad, and how they might have attained some of this additional supply. The second part covers the importation and use of animals, especially horses, cattle, sheep, pigs, and assinegoes, as another source of energy. Their role as energy inputs was particularly interesting, as the Barbadians consumed some, while using others for an assortment of jobs that ranged from pulling carts across the island

⁷ Bean, 'Food,' 581-590.

and moving the rollers that crushed the cane to providing the manure that planters used to fertilize their crops.

The third section addresses the issue of soil infertility and looks at how the planters managed to reenergize their dilapidated and worn-out fields. Barbadian planters, while regularly complaining about the difficulty of achieving consistently large yields, remained at the forefront of the English sugar trade until 1720 and regularly produced impressive crops throughout this period. Finally, the last section recognizes the difficulties planters had in attaining adequate quantities of fuelwood for their boiling houses, as they rapidly overexploited their own native resources and had to look abroad to supplement their local supply, which often proved problematic, expensive, and dangerous within a crowded Caribbean. By examining these four areas, one can obtain a greater insight into the energy requirements of sugar production on Barbados, as well as a better understanding of the islanders' ability to flexibly address ensuing challenges through their own innovation and experimentation.

Part I: The Quest for Nutritional Energy on Barbados

John Parry writes that Caribbean history 'should be the story of yams, cassava and salt fish, no less than sugar and tobacco,' since the quest for food was always one of the greatest obstacles faced by those living in this region during the seventeenth-century.⁸ For the first Barbadians, acquiring the necessary nutritional energy was relatively easy, as they found their new home to be surprisingly fertile, producing 'oranges, lemons, limes, pomegranates, peeches, and such other fruits' in

⁸ John Parry, 'Plantations and Provision Grounds: An Historical Sketch of the Introduction of Food Crops into Jamaica,' *Revista de Historia de America*, no. 39 (June 1955), 1.

abundance, with a large population of native wild boars roaming the countryside.⁹ After a series of failed experiments to raise wheat in the island's salt-heavy winds, the settlers experienced a brief period of hunger, known as the 'Starving Time,' from 1630-1631. These struggles, however, paved the way for sustained success after the mid-1630s, as the settlers learned how to couple the island's natural plenty with trade from the mainland colonies and Dutch merchants. Moreover, they replaced the ineffective wheat with maize, the preferred cultigen of the aboriginal Arawaks, while also cultivating other Indian foods, such as plantains, cassava, and sweet potatoes. Many had also purchased or raised various species of livestock, and farmers added yams, pulses, and an assortment of fruits—ranging from bananas and papayas to melons and pineapples—to their fields and gardens.¹⁰ Thus, by the 1640s, Barbadian settlers were already working towards substantial self-production, locally growing a variety of fruits, vegetables, and meats that freed many from a heavy reliance on imported provisions.

The island's early elite enjoyed a particularly impressive range of local foods. Richard Ligon, a self-proclaimed gourmand, recorded the culinary wonders and exotic ingredients on the menu at a party hosted by Sir James Drax, the island's leading planter, in the late 1640s. Ligon described the first course as follows:

This feast is alwayes when [Drax] kills a [cow]...and there are these dishes at either messe, a Rompe boyl'd, a Chine roasted, a large piece of the brest roasted, the Cheeks bak'd, of which is a dish to either messe, the tongue and part of the tripes minc't for Pyes, season'd with sweet Herbs finely minc't, suet, Spice and Currans; the legges, pallets and other ingredients for an Olio Podrido... a dish of Marrow bones, so here are 14 dishes at the Table and all of beef...¹¹

⁹ Harlow, *History*, 1-6.

¹⁰ Watts, *West Indies*, 160-161.

¹¹ Ligon, *History*, 37-39.

Drax followed this course with another set of dishes containing different preparations of pork, chicken, goat, mutton, veal, capons, hens, Muscovy ducks, turtledoves, rabbits, Spanish bacon, and tongue, as well as oysters, caviar, anchovies, olives, and different pastries, fruits, cakes, and breads for dessert.¹² While this description might not be representative of spreads found among the greater Barbadian population, Ligon provides a useful insight into both the plenteous nature of the island and the wide range of fresh local provisions available to the elite.

By 1650, however, the wider shift to sugar had seemingly altered the fortunes of many islanders by turning the focus of production to the valuable cash crop instead of needed foodstuffs. These changes also came during an era that saw the island's population swell to unprecedented heights. Dunn maintains that these changes 'overtaxed the food supply, condemning most inhabitants of the island to a semi-starvation diet.'¹³ Higman argues that this occurred because Barbadian planters now participated in a monoculture and 'did not attempt to produce food, clothing, and equipment' for their enslaved and indentured work force, 'but depended on outside suppliers.'¹⁴ Harlow similarly insists that most Barbadian planters moved away from provision farming, as Barbados became 'little more than one large sugar factory, owned by a few absentee proprietors.'¹⁵ The historical records, however, do not support the existence of an island monoculture, but instead describe an agriculturally diverse society after 1650 that produced a large portion of the food and drink that it consumed.

¹² Ibid.

¹³ Dunn, *Sugar and Slaves*, 115-116.

¹⁴ Ibid., 42-47 and Higman, 'The Sugar Revolution,' 215.

¹⁵ Harlow, *Barbados*, 58-67.

In order to effectively analyze this claim, Barbados' population has been divided into three separate groups based on racial and social composition: free whites, indentured servants, and enslaved Africans. The representative population numbers for each group will come from two separate sources: the 1684 census, which lists 17,187 free whites, 2,381 indentured servants, and 46,602 enslaved Africans, will be used for the pre-war and early wartime years between 1680 and 1691, while the government-suggested figures of 12,000 free whites and 42,000 enslaved Africans take into account losses from the conflict and will represent 1695-1698.¹⁶ The population numbers from these divisions will be compared against the known quantities of imported edibles, which will then be converted into calories. Thus, valuable estimates can be made concerning the percentage of imported calories that each group received between 1680 and 1698, and, consequently, the portion of each group's diet that must have been secured from alternative sources.

Before getting to the calculations, however, it is useful to understand how white Barbadians would have viewed the foods that they regularly consumed. Early modern nutritional science and the Galenic model of humoral physiology heavily influenced the islanders' approach to diet and dictated the specific foods and drinks best suited to each social group. In this system, good mental and physical health consisted of a balance between four specific humors (blood, phlegm, choler, and bile), which resided in all bodies. Scientists also divided food into four tastes—bitter, sour, salty, and sweet—that had to be eaten in particular combinations in order to maintain gastronomical harmony.¹⁷ Different types of food could drastically alter this balance, meaning that people had to be very careful about the ways in which

¹⁶ NLC, Ayers MS 827, 1684 Census and TNA, CO 29/2, July 1696, Council and Assembly to Whitehall.

¹⁷ Thomas Tryon, *The Good House-Wife made a Doctor*, (1692), 157-170.

they combined their taste groups. The type of labor that an individual performed also played a significant role in one's diet. Galenic nutrition maintained that laborers had strong stomachs and required heavier and 'hotter' foods, while the wealthy had weaker constitutions that were better suited for lighter nourishment and white meats. A failure to properly adhere to these rules would lead to stomach pains, indigestion, or an alteration in mood, usually towards melancholy. Thus, the English men and women on Barbados took a different approach to provisioning each of the three island groups, relying not so much on whether foods smelled or tasted good, but on how they affected the body and whether they allowed an individual to successfully perform his or her duty.

The island's first group, the free white population, was made up of a few hundred elite sugar planters, thousands of farmers and smaller plantation owners, and nearly 4,000 urban residents that lived in towns and villages. The wealthy sugar planters, as relatively passive participants in plantation labor, maintained a very different diet from those who worked on provision farms. Thomas Moffat, author of *Health's Improvements*, wrote that the wealthy were naturally 'tender persons' who only needed 'thin and light' sustenance in order to remain healthy.¹⁸ He recommended that they eat lighter meats, such as 'veal, lamb, capons, chickens, poacht'eggs, partridges, pheasants, plovers,' and small quantities of fresh fish.¹⁹ Andrew Broode, a noted physician, recommended that wealthy individuals living in 'hote and moiste' climates should center their diet on 'fruytes and herbes and rotes as garlyke onyons and lykes.' Furthermore, 'they muste refrayne from eating of olde

¹⁸ Thomas Moffat, *Health's Improvement: or, Rules Comprising and Discovering the Nature, Method, and Manner of Preparing All Sorts of Food Used in This Nation*, (1655), 32.

¹⁹ Ibid., 285-286.

flesshe,' and 'Fysshe of muddy waters be nate good for them.'²⁰ Physicians also maintained that the elite should avoid all salted meats, since large quantities of the preservative were not healthy for idle individuals.

Instead, the planter/merchant elite would have generally indulged in the fresh food produced on their own plantations. To maintain a healthy diet, the wealthy almost universally kept an array of livestock on their lands, allowing them to eat large quantities of fresh pork, beef, lamb, mutton, and a variety of fowl. They would have also taken advantage of the numerous fruits and vegetables that naturally grew on the island. Furthermore, their many cattle would have yielded large volumes of milk and butter, the former being a particularly valuable commodity that was beneficial for individuals of all humors.²¹ Father Antoine Biet, a French priest visiting Barbados in 1654, recalled the profusion of food on island plantations: For the wealthy, 'everything is there in abundance....They lack no other meats and have all sorts of fowl.'²² Since the elites maintained a diet dominated by fresh local foods, the approximately 200 sugar planters that formed this group will be subtracted from the ensuing calculations concerning the importation of food for the free white population of Barbados.

The remaining 17,000 white Barbadians, however, would have largely relied on imported provisions for their nutritional energy, as the food and drink that entered the island's markets did so specifically to keep a laboring population healthy.

Galenic nutrition maintained that the two staples of a laborer's diet were salted meat

²⁰ Andrew Boorde, *A Compendyous Regyment or a Dyetary of Healthe*, (1542), Chapter 23. Thomas Cocks, another physician, agreed with Boorde's assessment, as he also recommended 'English Hens, Cocks, Veal, Lamb, Chickens, Kid and Capons' for those in hot and moist environments. Thomas Cocks, *Kitchin-Physick*, (1676), 70.

²¹ Moffat believed that milk 'nourisheth plentifully, encreaseth the brain, fatneth the body, restoreth flesh, asswageth sharpness of urine, [and] giveth the face a lively and good colour.' Moffat, *Improvement*, 119-125.

²² Antoine Biet, 'Visit in Barbados,' (1654), 68.

and bread. Boorde wrote that ‘Beefe is a good meate for an Englysshe man...yf it be moderately powdered that the goose blode by salt may be exhaustyd, it doth make an Englysshe man stronge.’²³ Moffat seconded this assertion, arguing that beef was, ‘of all meats most nourishing...for sound men and those that labor or use exercise; so that it be also corned with salt before it is roasted.’²⁴ The inclusion of salt with their meats went beyond preservation, as it was also a valuable staple of the laborers’ diet. An anonymous writer, in a letter sent to the Royal Society, wrote that foods ‘hardned with much Salt’ were a ‘necessary...preservative of Health and Life, and for the increase of people in ye English Colonies.’²⁵ Bread was a close second in terms of importance, with Moffat describing it as ‘the meat of meats,’ while Thomas Cock wrote ‘had Gods providence confined us only to this Aliment...we had no cause to complain of his bounty.’²⁶

Other foods recommended for laborers included cheese, beans and pulses, butter, oil, and starchy vegetables such as corn.²⁷ Cheese was particularly beneficial for this group, as Thomas Tryon wrote that it ‘is an hard tough strong Food, very nourishing and substantial, and excellent for healthy working People.’ When ‘eaten with good store of Bread, it endues those that commonly feed thereon with clean sound Bodies, and brisk lively Spirits, able to endure Labor and Travel.’²⁸ The elite, on the other hand, ‘ought to eat Cheese sparingly,’ as their weak stomachs could not adequately handle the hardy fare. Nutritionists also looked favorably upon oil as an

²³ Boorde, *Regyment*, Chapter 16. Chapter 25 also discusses how laborers could ‘eate grosser meate’ than any other group on the island.

²⁴ Moffat, *Improvements*, 59.

²⁵ RS, Cl.P/7i/19, Anonymous, ‘Concerning Salt and Sugar in Jamaica and Barbados,’ ND.

²⁶ Moffat, *Improvements*, 236 and Cocke, *Kitchin-Physick*, 64-65 and 75.

²⁷ Craig Muldrew, *Food, Energy and the Creation of Industriousness: Work and Material Culture in Agrarian England, 1550–1780* (Cambridge: Cambridge University Press, 2011), 36-116.

²⁸ Tryon, *House-Wife*, 72.

Table 5.1: Estimated Imported Provision Calories, 1680-1698 (in millions)

Year	% Data	Meat	Bread	Peas	Flour	Butter	Corn	Cheese	Prov.	Oil
1680	100%	4,783.00	309.00	196.60	578.90	1,094.00	210.60	165.70	110.74	331.70
1681	80%	1,814.00	164.05	138.01	344.80	573.27	195.20	30.40	660.00	330.00
1682	100%	4,478.00	972.59	251.35	555.20	3,457.50	1,216.00	60.00	756.00	482.00
1684	100%	4,166.50	587.57	224.36	1,074.40	513.18	455.20	116.00	242.50	662.00
1685	100%	6,495.00	836.16	308.40	900.00	1,414.50	392.80	92.80	163.00	1,022
1686	100%	3,857.50	560.79	217.42	102.24	745.42	881.60	125.60	595.50	1,140
1687	80%	4,754.00	440.80	317.65	988.00	669.09	960.80	173.60	288.80	588.00
1688	75%	6,800.00	203.39	221.28	440.00	490.45	1,518.40	51.20	196.80	440.00
1690	60%	907.50	248.59	151.89	629.60	152.66	132.80	24.80	145.00	418.00
1691	100%	5,839.20	494.67	408.63	1,058.40	703.19	104.00	139.20	3,812	406.00
1695	50%	634.50	144.80	56.28	355.20	144.54	42.40	16.80	40.00	108.00
1696	100%	8,549.11	192.80	40.09	179.20	1,565.54	38.40	66.40	NA	2.00
1697	100%	3,527.20	669.60	58.60	599.20	591.14	20.00	44.80	640.00	356.00
1698	100%	7,603.20	418.50	117.96	894.40	2,304.46	390.40	552.80	27.20	572.00
Avg.	-	5,140.22	500.02	215.74	693.24	1,158.03	520.63	132.43	617.24	548.25

Table 5.1: For this table, I used the Returns (TNA, CO 33/13 and 33/14) to calculate the quantities of goods imported and then multiplied them against the caloric values provided by Bean in his work. (Bean, 'Food Imports,' 584). The above numbers should be viewed as minimums, as they do not include any illicitly imported goods and only represent entries marked with actual numbers. If an entry of cheese, for example, read either 'cheese' or 'some cheese,' I did not include it in my tabulations, as there is no way to ascertain a reasonable approximation for this quantity.

ideal additive to food, especially when combined with bread. Tryon argues that

‘Amongst all Fruits or other things eatable, Oyl is one of the best, being of a brave nourishing clean Nature, mild and friendly to most Constitutions, far exceeding Butter or the Fat of Flesh.’ It led to ‘a finer and cleaner Nourishment, better Blood, and purer Spirits,’ than could be had from meat or butter substitutes, although the latter was also a beneficial part of a laborer’s diet if consumed in moderate quantities and at certain times of the year.²⁹ Thus, the free white farmers, planters, and artisans of Barbados had a very specific diet built around not only the kind of work that they performed, but the heat and humidity of the environment in which they lived. By

²⁹ Ibid., 69-71 and 115-118.

Chart 5.1: Percentage of Each Provision Imported into Barbados, 1680-1698

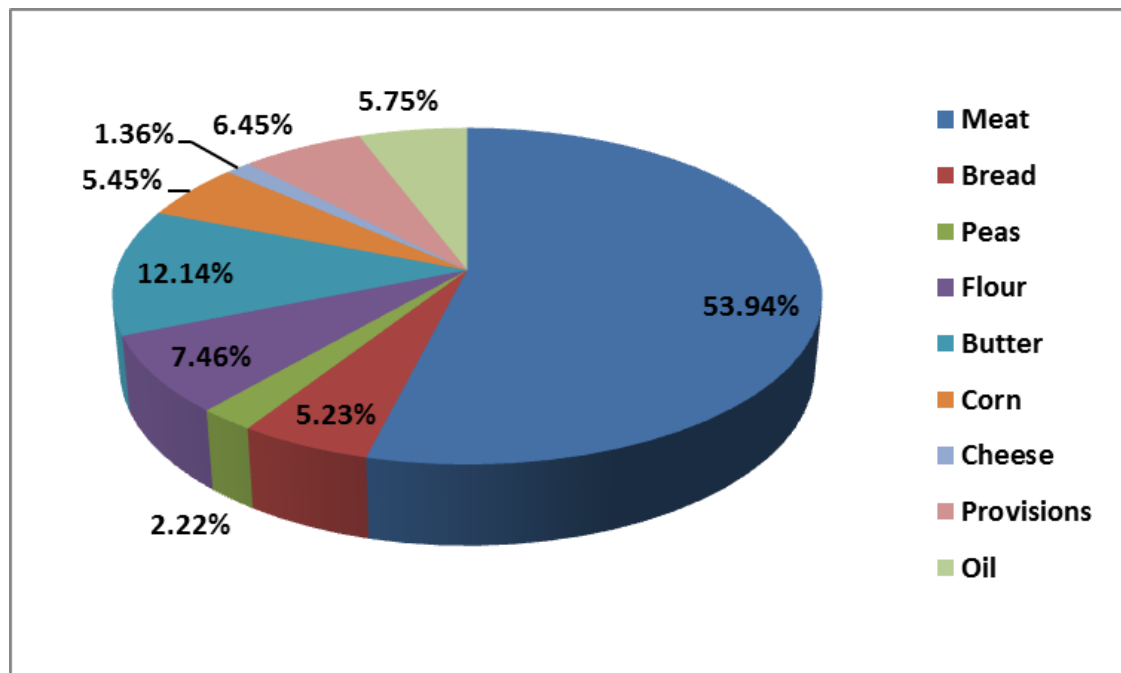


Chart 5.1: TNA, CO 33/13 and 33/14, 1680-1698. Using the average calories from Table 1, I calculated the percentage of calories that each imported item represented to the island's free white population.

following this regimen, they would remain healthy and productive while living in the trying conditions of the tropical Caribbean.

The imports recorded in the Returns reflect the theories of the era's leading nutritionists. By the 1680s, the majority of the free white population's imported nutritional energy came from salt meat, which merchants regularly carried from Ireland or New England in the form of beef, pork, or, less commonly, bacon and mutton. Salt meat was particularly important for laborers because it was both high in energy, at 1,000 cal/lb. and offered the proteins, amino acids, and animal fats they needed to work their fields. In an average year, meat accounted for over 5.14 billion calories and, as Chart 5.1 shows, made up 53.94% of the island's imported nutritional energy. Butter (12.14% and 1.16 billion calories per year [cpy]), flour (7.46% and 693.24 million cpy), and general provisions (6.48% and 617.24 million cpy), made up the next three most important import groups, as white Barbadians

preferred to use imported flour to make their own bread and to use butter, the cheaper and more familiar spread, over oil. Regardless, oil still made up 5.75% of the provision import trade and represented an average of 548.25 million cpy, while peas and corn, the most common vegetables, made up another 2.26% and 5.45%, or 215.74 and 520.63 million cpy respectively. Finally, bread (5.23%) and cheese (1.39%) made up the two least imported staples, as both suffered during the trans-Atlantic crossing and could instead be easily produced locally.

Solid food, however, was not the only way that the free white population could attain its nutritional energy. Many also participated in the hard-drinking lifestyle that had become synonymous with the English West Indies and drank hundreds of calories worth of alcohol on a daily basis. While some fell for the ‘Intoxicating Enchantments’ of ‘Rum-Pots... Punch-Bowls...and Brandy-Bottles,’ others consumed alcohol because Galenic physicians believed fermented beverages to be far healthier and more nourishing than water or fruit juice, especially for white farmers laboring in their fields. Cock, for example, argued that ‘raw cold water... being drank at once in great quantity may cause obstructions, and many dangerous Diseases, as Dropsies.’³⁰ In order to avoid the consumption of water, the white Barbadians produced many types of liquor locally, as Ligon recalled encountering ‘Mobbie, Beveridge...kill-Divell, [and] Drink of the Plantine,’ as well as perino, an alcohol distilled from cassava.³¹ The islanders also imported large quantities of beer, cider, ale, and other forms of distilled spirits from England, Ireland, and the mainland colonies.

³⁰ Cock, *Kitchin-Physick*, 46-47.

³¹ Ligon, *History*, 43. The Barbadians produced mobbie from red sweet potatoes and beveridge from oranges. ‘Kill-divell’ was a local name for rum.

Table 5.2: Liquid Calories Imported into Barbados, 1680-16988 (in millions)

Year	% Data	Wine	Ale	Cider	Spirits	Beer	Totals
1680	100%	1,090.50	428.40	106.90	83.20	NA	1,709.00
1681	80%	1,210.20	45.00	45.80	90.00	215.83	1,606.83
1682	100%	880.40	50.33	2.56	27.00	225.76	1,186.05
1684	100%	1,201.00	18.72	10.97	132.27	46.20	1,409.16
1685	100%	1,001.20	40.97	10.86	176.40	202.75	1,432.18
1686	100%	1,517.20	66.47	8.41	240.60	133.70	1,966.38
1687	80%	1,345.00	80.12	7.88	238.80	179.54	1,881.35
1688	75%	1,133.80	160.82	54.91	21.94	130.20	1,501.67
1690	60%	279.80	6.88	4.47	4.80	88.43	384.38
1691	100%	1,006.60	325.66	44.12	24.39	45.60	1,446.37
1695	50%	585.00	0.0	1.70	42.00	48.32	677.03
1696	100%	470.20	128.16	12.70	6.60	5.40	623.07
1697	100%	250.60	36.77	10.12	2.77	1.80	302.06
1698	100%	902.00	61.98	9.26	4.37	99.00	1,076.61
Avg.	-	1,027.46	116.86	26.33	86.71	114.10	1,371.46

Table 5.2: TNA, CO 33/13 and 33/14, 1680-1698, and Bean,' Food Imports,' 585. See the footnote for Table 1 for information on the methodology used to calculate these figures.

While the elites likewise consumed many of the aforementioned drinks, they also heavily imbibed Madeiran wine, an imported luxury item that most poor whites could not regularly afford. Physicians praised Madeiran wine as a perfect drink for a 'weaker constitution' and recommended it as a necessary part of an elite person's well-rounded diet. As Broode wrote, Madeira wine, when 'moderately drunken...doth quycken a mans wyttes, comfort the herjt, scowre y^e lyuer... reioyce al the powers of man... ingendre good bloude,...[and] nurysshe the brayne and all the body.'³² Elite planters could also drink 'Brandy, Claret wine, White wine, and Renish wine,' as well as 'Sherry, Canary, [and] red sack'³³ Yet, most elite Barbadians rarely imported Continental alcohol, as nutritional theorists considered other wines, especially French and Rhenish, to be less 'fulsome,' since they 'neither

³² Broode, *Regymnet*, Chapter 10.

³³ Ligon, *History* 33-38.

Chart 5.2: Percentage of Each Alcohol Imported into Barbados, 1680-1698

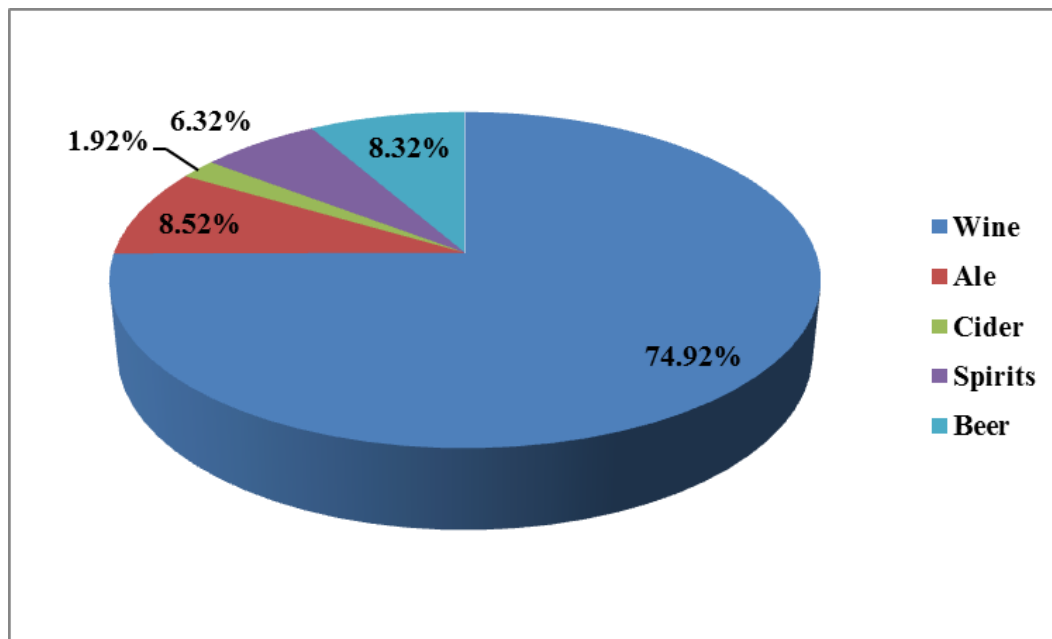


Chart 5.2: TNA, CO 33/13 and 33/14, 1680-1698

keep nor agree well with our stomachs, if so constantly dranke as in England.’³⁴

Hard liquor, in moderation, was also a helpful source of energy for the wealthy.

While they considered distilled drinks to be for a lower class, they nevertheless frequently mixed rum with some sugar and water and consumed the resulting rum-punch in prodigious quantities.³⁵

The data from the Returns support the centrality of alcohol to the lives of free white Barbadians. Table 5.2 shows that merchants carried enough to Barbados to account for an average addition of more than 1.5 billion cpy to the free white diet throughout the 1680s and 1690s. The majority of this energy came from imported Madeiran wine, as Table 5.2 shows that this drink added nearly 1.03 billion cpy to the Barbadian diet and, according to Chart 5.2, represented 74.92% of all liquid calories imported into the island during these decades. Beer, ale, and cider, sent

³⁴ RS, EL/15/74, 27 June, 1675, Mr. Lister’s Letter to Mr. Oldenburg.

³⁵ Muldrew, *Food*, 66-83.

from England and Ireland and heavily consumed by free white laborers, made up a combined 18.76% of liquid calories and added an average of 257.29 million cpy to the island. The Barbadians also imported another 86.71 million calories (6.32%) from other spirits, such as brandy, aqua vitae, and champagne. Thus, alcoholic beverages continued to represent a vital addition of calories to the Barbadian diet, supplying another 1.97 billion cpy during the 1680s, and at least another 300 million cpy even after the Nine Years War cut off Caribbean access to the Atlantic Islands.

With such high levels of nutritional energy reaching Barbados, it would seem reasonable to predict that the traditional historiography is accurate in claiming that the free white islanders imported enough calories from abroad to nutritionally sustain themselves during most of the 1680s and 1690s. However, in order to calculate the veracity of this hypothesis, a daily caloric baseline first needs to be established. An average man performing moderate to high levels of farm-based labor, such as weeding, ploughing, hoeing, and occasionally digging, will need approximately 4,500 calories a day to cover his expended energy.³⁶ Since it is unlikely that all of the island's free white men reached their ideal nutritional requirements on a daily basis, their average calories per day will be conservatively reduced by 33% in all

³⁶ There is an extensive debate among social historians over just how many calories an average laborer needed to remain healthy. Oxley and Meredith considered 3,000 calories a day to be 'a very credible male minimum.' Floud et al. counters this by offering between 3,000 and 3,500. Paulo Malanima represents the low-end of this debate, suggesting that a 30-year old male needed 2,600 calories a day, while Craig Muldrew situates himself at the other extreme, arguing that hard-working laborers required over 4,000. I follow Muldrew's model in this work, as it allows for the most specificity. He calculates that an average male laborer required a minimum of 2,100 calories to survive. He then provided a table filled with different forms of labor and the number of calories that each activity burns per minute. Conservatively using 1,500 as my base, I averaged the calorific energy used per minute based on jobs relevant to planting either sugar or provisions for a ten-hour workday. This came out to 4,500 calorie per day. Astrid Kander, Paolo Malanima, and Paul Warde, *Power to the People: Energy in Europe over the Last Five Centuries* (Princeton: University of Princeton Press, 2013), 40-43, David Meredith and Deborah Oxley, 'Food and Fodder: Feeding England, 1700-1900,' *Past and Present*, no. 222 (February, 2014), 195, Roderick Floud, et al., 'How Many Calories? Food Availability in England and Wales during the Eighteenth and Nineteenth Centuries,' *Research in Economic History*, vol. 31 (2015), 111-191, Muldrew, *Food*, 129-135.

Table 5.3: Caloric Intake for White Barbadians, 1680-1698

Year	% Data	Calories: Food	Calories: Drink	Total: Food and Drink	Daily Calories	% of 2,172 Cal. Diet
1680	100%	7,779,940,000	1,709,000,000	9,488,940,000	1,513	69.66%
1681	80%	4,249,733,000	1,186,046,500	5,435,779,500	867	39.92%
1682	100%	12,228,636,000	1,606,901,000	13,835,537,000	2,205	101.52%
1684	100%	8,041,719,000	1,408,882,000	9,450,601,000	1,506	69.34%
1685	100%	11,625,666,000	1,432,179,000	13,057,845,000	2,082	95.86%
1686	100%	9,146,228,000	1,966,381,500	11,112,609,500	1,771	81.54%
1687	80%	9,180,740,000	1,881,345,500	11,062,085,500	1,763	81.17%
1688	75%	10,800,356,000	1,501,673,500	12,302,029,500	1,961	90.29%
1690	60%	2,810,832,000	384,382,000	3,195,214,000	509	23.43%
1691	100%	12,965,289,000	1,446,364,500	14,411,653,500	2,297	105.76%
1695	50%	1,542,520,000	677,027,000	2,219,547,000	354	16.30%
1696	100%	10,633,540,500	623,065,500	11,256,606,000	1,794	82.60%
1697	100%	6,506,532,000	302,059,500	6,808,591,500	1,085	49.95%
1698	100%	12,880,919,000	1,076,609,500	13,957,528,500	2,225	102.44%
Avg.	-	9,635,610,848	1,371,446,601	11,007,066,449	1,755	80.80%

Table 5.3: TNA, CO 33/13 and 33/14, 1680-1698. The data in Table 3 reflect the combined totals from Tables 1 and 2.

subsequent calculations in order to account for the thousands of poor planters who might not have been able to afford adequate levels of food. Thus, the caloric baseline for an average free white man in Barbados will be 3,000 calories per day.

The Atwater scale, commonly used for differentiating between the calorific needs of different ages and genders, suggests that a white Barbadian woman would require approximately 2,400 calories and a child 1,500.³⁷ When applied to a hypothetical demographic breakdown using the 1716 census, the average free white Barbadian required 2,172 calories per day.³⁸ Basing subsequent calculations on this number, the conservative calculations from Table 5.3 suggests that the free white population

³⁷ The Atwater scale calculates that women expend 80% of the energy of a laboring man, while children require 50%. Ibid., 135.

³⁸ BDA, Pam C 283, 1716 Census. I used the demographic information from the 1716 census because I wanted to improve my model's accuracy by accounting for both age and sex in my results. Unlike the 1684 census, the 1716 version divides the free white population by 'men,' 'women,' 'boys,' and 'girls.' Since the 1683 and 1715 free white populations were almost identical to one another (17,187 to 17,018), I calculated the percentage of the 1716 population that made up each of the four groups and then applied those to the 1684 population.

of Barbados only received a portion of its daily energy needs from legal imports of food and drink.

With peace and economic expansion dominating the 1680s, Table 5.3 shows that free white Barbadians were able to obtain at least 69.34% of their calories from abroad, with peak import years, such as 1682, 1685, and 1688, reaching between 90% and 101%. During the 1690s, however, the Nine Years War inhibited much trans-Atlantic trade and, consequently, the islanders obtained less nutritional energy from distant ports. While the successful convoys of 1691 and 1696 brought wartime highs of 105.76% and 82.60% of the white population's required nutritional energy, these years represented anomalies, as the islanders often struggled to even reach 50%. Fortunately, this downturn was only temporary. By 1698, the importation of food and drink surged back up over 100% and allowed the free white population to restock before heading into the new century and another war. Overall, each free white islander received an average of 1,755 calories per day from abroad during the nineteen year period between 1680 and 1698. This meant that imported provisions supplied the greater free white population with 80.80% of the nutritional energy that they required each day, a substantial total that, despite the conservative nature of these calculations, proves that an impressive quantity of goods arrived at Barbadian ports throughout this period. Yet, this also means that free white settlers were still responsible for finding the remaining 19.20% on their own.

Contemporary sources, however, suggest that this might not have been as difficult for the island's white population as the historiography would lead one to believe, as they regularly depict its attempts at establishing a substantial level of self-production. In the 1640s, for example, Ligon describes a planter-class that realized

the importance of setting aside some of its own land to grow basic provision crops. He wrote that 70 acres were set aside on the 500 acre Modiford/Hilliard plantation for ‘corne, potatoes, plantines, cassavie, and bonavist,’ as well as ‘some few acres of which for fruite, pines, plantines, milions, bonanoes, gnavers, water milions, limons, and limes.’³⁹ Forty years later, Barbadian planters continued to routinely emphasize the importance of self-production. Both the island’s Assembly members and Dalby Thomas wrote that a standard plantation of 100 acres should have at least twenty ‘set apart for Pasture, Provisions, and a Nursery for Canes....’⁴⁰ In fact, English scientists held Barbadian farming in particularly high esteem, with the island’s planters and farmers both gaining a domestic reputation for their skill. In 1680, John Beale, a Fellow of the Royal Society, wrote to Robert Boyle claiming that it would be worthwhile to have the successful white ‘workmen’ of the island ‘showe use Howe to...rayse [our] own food,’ due to the island’s consistent production of ‘such a surplus.’⁴¹

Island inventories further show that Nathaniel Blackiston’s 200 acre plantation in St. Andrews included ‘2 acres of potatoes, 2 acres of yams, 39 acres of corn, a pigeon house, gardens and orchards.’ Joana Cleaver, Michael Wiley, and Thomas Spiar had separate corn houses for storing the harvested vegetable, while Ann Searle had a separate building dedicated specifically to cassava. The inventories also show that the islanders kept considerable numbers of livestock for food, with planters often building pigeon houses, hog sties, sheep yards, fowling grounds, and duck pens on their plantations. Philip Price even maintained a small pond full of fish, a corn mill, and stored a wide variety of provisions produced on his plantation

³⁹ Ligon, *History*, 22.

⁴⁰ CO 31/3, 16 December 1685, Assembly to the King, and Thomas, *West Indian*, 15.

⁴¹ RS, EL/OB/142, 2 March 1680, Beale to Boyle.

to help feed his 116 enslaved laborers, including 120 bushels of Guinea corn, 6 bushels of Indian corn, 130 gallons of rum, and 500 gallons of molasses. The islanders also produced many of their own alcoholic beverages, as nearly 60% of the inventories surveyed show a planter in possession of at least one rum still. They could also make a variety of non-alcoholic fruit juices, primarily from plums, pineapples, and oranges.⁴² Thus, the records suggest that the free white Barbadians could not have legally imported all of their provisions from abroad and made up at least a portion of this deficit by producing a variety of different foods on their own plantations and farms, proving that the island was actually an agriculturally diverse society that produced far more than would have been possible within the sugar monoculture depicted in the historiography.

Unfortunately, the situation was very different for the forty to fifty thousand unfree laborers that performed most of the work on Barbados' plantations and farms. The unfree population was composed of two groups: a large community of enslaved blacks from Africa and a much smaller body of white indentured servants. The unfree white population is particularly difficult to assess in terms of nutritional energy, since it is unclear how many resided on the island after 1684 and to what extent their experiences were similar across hundreds of different plantations. It is well-known, though, that many contemporaries considered their diet to be especially poor. Sir Thomas Montgomery, for example, related to the English government that white servants were 'used with more barbarous cruelty than if in Algiers. Their bodies and souls are used as if hell commenced here and ...they want the merest

⁴² BDA, RB 3/12, 3/13, 3/16, 3/18, 3/20, 6/13.

necessaries of food and raiment.’⁴³ Governor Russell described similarly vile conditions in 1695: ‘I dare say that there are hundreds of white servants in the Island who...have never a bit of fresh meat bestowed on them nor a dram of rum. They are domineered over and used like dogs.’⁴⁴

Henry Pittman’s account of his time as an indentured servant in the mid-1680s gives a more specific insight into the diet of the island’s unfree white laborers. Pittman reported that his notoriously cruel master fed his servants a meager diet of ‘five Pound of salt *Irish* Beef, or salt Fish a Week for each man, and *Indian* or *Guiny* Corn ground on a Stone and made into Dumplins instead of Bread.’⁴⁵ Based on this account, each servant would have received approximately 260,000 calories per year, or 712 calories per day, in imported proteins.⁴⁶ Since indentured servants fulfilled a variety of roles on a plantation, with some working in the field alongside the enslaved and others engaged as artisans, domestics, overseers, or managers, they would have had different nutritional requirements, likely needing between 2,500 (for those involved in more sedentary pursuits) and 4,500 calories per day. It was very common, however, for white servants to be drastically underfed, meaning that they

⁴³ TNA, CO 29/4, 3 August 1688, Montgomery to Lords of Trade and Plantations. Montgomery shared a similar religion with the many Irish indentured servants and, like them, was a Catholic outsider in a predominately Anglican society. See Stede’s contemporary Anglican views on the treatment of indentured servants in CO 29/4, 30 August 1688, Stede to Lords of Trade and Plantations.

⁴⁴ CO 28/2, 23 March 1695, Russell to Lords of Trade and Plantations.

⁴⁵ Pittman, *Strange Adventures*, 11-12. This rough diet caused Pittman to come down with dysentery. When he asked Robert Bishop, his master, to replace cornmeal with more expensive imported flour, Bishop replied that his servants ‘should not have [it] so good,’ beat Pittman with his cane ‘on my head, arms, and back...like a furious Fencer, until he had split [it] in pieces,’ and then ‘confined me close Prisoner in the Stocks...exposed to the scorching heat of the Sun, where I remained about twelve hours.’ Ibid.

⁴⁶ To calculate this rough quantity of daily imported calories, I took the five pounds of beef or fish received per week, multiplied it by both the 1,000 calories worth of energy that this quantity would represent and the 52 weeks in a year and divided the result by 365 to come up with just over 712 imported calories per day. The Indian or Guiney corn received by Pittman was not used in this calculation due to the fact that most plantations produced significant amounts of this product locally and used this to feed enslaved blacks, white indentured workers, and livestock.

would have more realistically consumed only 50%-60% of their ideal totals. Thus, even with this conservative estimate, the island's white servants still had to locally obtain between 800 and 1,500 calories daily. Some of this would have come from the corn that plantation owners provided, but not all would have supplied their workers with this vegetable, especially in the quantities needed to make up the aforementioned deficits. Even worse, indentured servants were not guaranteed to receive any food at all. While the Barbadian government had passed a law in 1682 that required each servant to receive five pounds of meat or fish per week, the courts rarely enforced it and plantation owners, trying to cut costs, often left their unfree white workers to fend for themselves and obtain over a thousand calories worth of their own food each day, an arduous task after a strenuous ten-hour workday that likely left many servants severely malnourished.⁴⁷

The 46,602 enslaved Africans faced even greater struggles in obtaining their nutritional energy, as elite planters were not legally obliged to provide them with any food at all.⁴⁸ The trend of mistreatment and malnutrition began in sugar's earliest days, as Ligon recalled that in the late 1640s, 'Negroes were allowed each man two Maquerels a weeke and every woman one; which were given out to them on Saturday in the evening, after they had their allowance of Plantines,' with 'nothing but faire water' to drink. On special occasions, such as Christmas, the enslaved could be given small quantities of meat and 'if any cattle dyed by mischance, or by any disease...the *Negroes* [eat] the skinnes, head, and intrails which was divided

⁴⁷ Ibid., 89-97 and Rawlin, *Laws*, No. 284.

⁴⁸ NLC, Case K 383.015, Anon., 'An abridgement of the laws in force in Her Majesty's plantations.' (1704).

amongst them by the overseers.’⁴⁹ Such a poor diet led Father Biet to complain that ‘there is no nation which feeds its slaves as badly as the English,’ as they only received ‘potatoes, which serve them as their bread, their meat, their fish, in fact, everything.’⁵⁰

Thirty years later, little had changed in the provisioning of enslaved Africans on Barbados. In 1679, Henry Drax, in a set of instructions left for his factor, provided a detailed list on what to feed the plantation’s black laborers. He recommended, ‘Every Negro have Weekly one pound of ffish or two Mackrell, if Large, otherwise three, and owerseers and head Boylers Duble that allowance.’ To supplement this small amount of protein, ‘Every Negro two quarts of Molases Weekly...you must allow Saltt when they want it and twice or thrice every year geive a barrel of palm oyle amongstt them if Easely to be procured.’ Drax allowed his enslaved Africans to regularly imbibe, as he recommended supplying field workers with ‘Rum Every Morning and att other times as you shall See Convenientt and for the Incoragmentt of Ptickler (sic.) Negros what you shall think fit and according to their Early Rysing and their work.’⁵¹ Drax appears to have provisioned his slaves comparatively well, as those on a nearby plantation received

⁴⁹ Ligon, *History*, 37. Importantly, the planters’ emphasis on providing the enslaved with salt fish did not stem solely from their cruelty towards the Africans, but fit perfectly into their Galenic notions of nutrition that held that salted foods were best suited for those who participated in hard labor. As fish was cheaper than salt beef or pork, it became the preferred import to feed the enslaved population. The true cruelty in regard to diet came from the limited portions and lack of nutritional diversification, both of which often led to malnutrition. Muldrew, *Food*, 38.

⁵⁰ Biet, ‘Visit,’ 66.

⁵¹ Henry Drax, ‘Instructions on the Management of a seventeenth-century Barbadian Sugar Plantation,’ (1679), 5. These accounts fit the current historiography well, as both Bean and Menard supply roughly similar estimates of about 56.1 pounds of fish per year in times of peace. Bean, ‘Food Imports,’ 587, and Menard, *Sweet Negotiations*, 100-101.

Table 5.4: Imported Calories for the Enslaved, 1680-1698

Year	% Data	Fish: Hhds	Fish: Calories (000,000)	Fish: Lbs/Slave	Fish: Calories/day	% of 3,000 Calorie Diet
1680	100%	3,751	1,875.5	48.36	132.49	4.42
1681	80%	2,637	1,318.5	34.00	93.14	3.10
1682	100%	5,112	2,556	65.91	180.57	6.02
1684	100%	3,762	1,881	40.36	110.58	3.69
1685	100%	4,924	2,462	52.83	144.74	4.82
1686	100%	4,574	2,287	49.08	134.45	4.48
1687	80%	3,905	1,952.5	41.90	114.79	3.83
1688	75%	3,989	1,994.5	42.80	117.26	3.91
1690	60%	3,335	1,667.5	35.78	98.03	3.23
1691	100%	5,653	2,826.5	60.65	166.17	5.54
1695	50%	984	492	11.71	32.09	1.07
1696	100%	716	358	8.52	23.35	0.78
1697	100%	2,915	1,457.5	34.70	95.08	3.17
1698	100%	8,028	4,014	95.57	261.84	8.73
Avg.	-	4,347	2,173.5	46.64	130.19	4.34

Table 5.4: TNA, CO 33/13 and 33/14, 1680-1698. The Naval Officer broke down imported fish into six different categories: salmon, sturgeon, and cod, which rarely appeared in the records and were more expensive, and herring, mackerel (both red and white), and the eponymous ‘fish.’ For this chart, I have combined the imports of all six types of fish and converted them into hogsheads.

almost no protein and ate little more than ‘yams, pumpkins, and pigeon-peas out of their calabashes,’ for their evening meal.⁵²

Thus, the better-provisioned enslaved received approximately two pounds of imported salt fish as their primary protein, as it was generally cheap and plentiful. In 1685, the Assembly complained that they had to set aside £35 per year to spend on imported fish for every 50 enslaved Africans, or 0.46 pence per day per person.⁵³

The Returns, however, show that the prices mattered little, as island merchants rarely imported enough salted fish to reach Drax’s recommended figure of a pound per

⁵² J.H. Bennet, *Bondsmen and Bishops: Slavery and Apprenticeship on the Codrington Plantations of Barbados, 1710-1838* (Los Angeles: University of California Press, 1958), 33.

⁵³ TNA, CO 31/2, 16 September 1685, Assembly to James II. Since imported salt fish cost approximately ten shillings per quintal in the mid-1680s, owners would have been able to buy about 70 quintals, or 7,840 pounds, worth of fish for £35. This meant that each enslaved individual from a workforce of 50 laborers should have received about 0.43 pounds of fish per day or three pounds per week if the planters actually spent the full £35 on their provisions. This should be compared to the £10 that the planters set aside for each white servant.

enslaved worker per week. To ‘properly’ feed the island’s 46,602 enslaved Africans with an average of 52 pounds of fish per person per year, planters would have had to purchase at least 4,847 hogsheads of the protein. As Table 5.4 shows, this only happened twice during the peak years between 1680 and 1688 (1682 and 1685), and became an unrealistic standard to maintain once war broke out in 1689. Even when the English regained control over the Atlantic in the mid-to-late 1690s, Barbadian planters still only received at most 34.7 pounds of fish per enslaved African. It took until 1698 before the Barbadians could again surpass the ‘52 pounds of fish per person’ threshold, reaching a period high of 95.57 pounds in that year. Regardless of quantities, though, a diet centered on imported salt fish provided very little overall sustenance to the average enslaved African. As they worked long ten-hour shifts and consistently performed the most difficult tasks on a plantation, many would have ideally required at least 5,000 calories each day, although 2,500 to 3,000 calories per day would have been far more realistic for yet another group of islanders that were consistently underfed.⁵⁴

By either metric, imported salt fish represented a negligible contribution to the enslaved laborers’ daily caloric intake. In 1682, for example, fish added only 180.57 daily calories to the average enslaved person’s diet, representing only 6.02% of a 3,000 calorie standard diet; in 1698, when trade hit its peak, it accounted for just 8.73%. In most years, however, this percentage rarely reached over 4.5%, and even fell as low as 0.78% in 1696. While these proteins could be supplemented with additional fish or turtle meat caught along the shallow shores of the island, local fishing was unlikely to provide much of an impact, as ‘fishing in Barbados [was] not

⁵⁴ Muldrew, *Food*, 131.

the best,' and turtles had become a rare sight in Barbadian waters by the 1680s.⁵⁵

Instead, enslaved blacks had to produce most of their food locally on the island.

Guinea corn and, to a lesser extent, Indian corn were the two most important local staples for the enslaved African population's diet. Most corn was grown on plantation fields specifically set aside for it, with some alternatively interspersed between sugarcane. Local production, however, could be unreliable and was heavily influenced by both climatic and environmental conditions, as well as the enslaved African's general disdain for the vegetable.⁵⁶ In bad years, planters and farmers had to split a limited corn crop in order to feed both laborers and livestock, forcing up prices and making the valuable staple unaffordable to many. The manager for the Codrington estate admitted that 'It is the greatest misfortune in this Island that few Planters give [their enslaved Africans] a Belly full,' as their population was often 'so great and Corn so dear, that they can't afford it.'⁵⁷ Planters occasionally provided a variety of other foods that included yams, taro root, potatoes, and cassava, but these root vegetables were all similar in nature and provided little diversification in nutrients.

Table 5.5 suggests a best case scenario for the enslaved, as this 'ideal' diet provided a laborer with three to four pounds of various local foods in addition to 0.43 pounds of salt fish. Yet, while high in protein and phosphorus, this group of provisions netted an individual just over 3,200 calories, a quantity far less than what he or she would have needed to maintain optimal health at the peak of growing season. Besides its bland and boring nature, and the unrealistic likelihood of an individual consistently obtaining this much food on a daily basis, most of this fare

⁵⁵ Biet, 'Visit,' 65.

⁵⁶ Beckles, 'Economic Life,' 33.

⁵⁷ Bennet, *Bondsmen*, 35.

Table 5.5: Example of Average Enslaved African's Diet with Basic Nutrients

Nutriments	Calories	Protein (g)	Fat (g)	Calcium (mg)	Phosphorus (mg)
0.43 lb. Salt Fish	440	67	1	311	790
1 Pint Corn meal	884	22	8	42	544
1/2 lb. Yams	197	4	0	39	135
1/2 lb. Taro	236	3	0	187	218
1/2 lb. Bananas	193	2.5	0	18	59
1/2 lb. Plantains	270	2.5	0	16	68
1/4 Cup Molasses	225	0	0	170	26
4 fl. oz. Rum	257	0	0	0	4.4
2 Large Potatoes	556	14	0	80	418
Totals	3,258	15	9	863	2,262.4

Table 5.5: Kenneth F. Kiple, *The Caribbean Slave: A Biological History* (Cambridge: Cambridge University Press, 1985), 78. Kiple's table does not specifically account for the Barbadian enslaved population, as it more generally compares the English and Spanish sugar islands. I constructed this table to emulate a diet specific to one that might be found on Barbados.

was marginally nutritious and would have resulted in nutrient deficiencies and general malnutrition. With a diet based around fish and corn, the enslaved Africans would have received dangerously low levels of fat, thiamine, and vitamin A, low to very low quantities of niacin, riboflavin, and iron, and barely adequate levels of vitamin C and calcium.⁵⁸ Furthermore, fish proteins are extremely unstable, and many of the essential amino acids likely broke down as the barreled fish sat for prolonged periods of time in the holds of ships traveling between Newfoundland and Barbados. When the fish did arrive, it was 'a mass of fetid matter' and contained 'as little nutrition as the brine in which they lie.'⁵⁹ Thus, while Table 5.5 is not an exhaustive list of the different provisions available on Barbados, as it does not take into account some liquid calories or most fruits, it does suggest the types of food an enslaved African ate and how deficient this potential diet was in the nutrients needed to maintain basic health.

⁵⁸ Kiple, *The Caribbean Slave*, 26-27, 88. A deficiency in Vitamin C might seem surprising, but many Africans associated intestinal worms with fresh fruit and avoided consuming it.

⁵⁹ *Ibid.*, 80.

To help ameliorate this problem, and to limit their own expenditures, plantation owners across the island launched an initiative in the 1660s to give the enslaved the necessary time and resources to plant their own provisions and to fulfill a portion of their caloric needs. This forced the enslaved Africans into becoming what Beckles called ‘petty proto-peasants,’ who were given little house spots of generally no more than 25 yards square to grow their needed provisions.⁶⁰ As Felix Christian Spoeri, a Swiss physician who visited Barbados in 1661, described: ‘[in] each household the master assigns a parcel of land on which the slaves plant their food and from which they have to maintain themselves without burdening their master.’⁶¹ Some planters, however, resisted this innovation. Thomas Tryon wrote in 1684 that many would not allow the enslaved ‘any sufficient time to manure,’ forcing them to resort to planting ‘upon the Sabbath Day.’⁶² Others, however, recognized the immediate benefits, as it allowed Barbadians planters and farmers to limit their dependence on outside food sources and reduced overall expenditures on both imported and local provisions, while promoting greater island security. Drax warned of the importance of this twice in his instructions, telling his factor that in order to protect against rebellion there ‘Must be greatt Care that they have plantation provision Enough,’ and later, ‘the Negro Must Not by any means Ewer want.’⁶³

In order to provide such large quantities of food, Drax required that his factor set aside three separate fields on his plantation for provisioning the unfree. He gave the first to the enslaved to grow their own food while the second contained an array of different crops planted for the consumption of both white and black workers. On

⁶⁰ Beckles, ‘Economic Life,’ 33-34.

⁶¹ Felix Christian Spoeri, ‘A Swiss Medical Doctor’s Description of Barbados,’ (1661), 7.

⁶² Tryon, *Friendly Advice*, 94.

⁶³ Drax, ‘Instructions,’ 5.

the latter, Henry Drax demanded that ‘Theire Most be Care tane to plantt all the ground you Can with Corn,’ which was ‘wery good for negros,’ and ‘when there is no want of that Every Thing in the plantation will be fatt.’⁶⁴ A third field was to function as a reserve supply, so that if a specific provision failed to grow as expected, there would be adequate amounts in storage to keep the workers fed. Drax recommended to ‘have Constantly a reserve of 12 or 15 acres of Cossava for fear of the others fayling that being a certaine provision and will Ly four or five years in the ground and Still Improve.’ He further advised ‘yearly put some remote Caine pece att Drax hall into potatos which being welle trached Seldom fayls....’⁶⁵ The smaller planters who could not afford to sacrifice separate fields for provisions often allowed the enslaved to intercrop their produce with growing sugar cane. Others allowed their enslaved to hunt lobsters and crabs in the shallows nearby, while some black communities also raised their own livestock, keeping ‘one or two pigs and/or sheep or goats,’ and small numbers of ‘feathered stock of all kinds, including chickens, ducks, guinea fowl, pigeons, and geese.’ By the early 1700s, the enslaved owned so much livestock that they became the ‘essential contributors of meat and poultry’ to the island, even selling surplus animals to the white community.⁶⁶

Finally, many enslaved workers also participated in an internal marketing system that allowed them to sell the excess provisions they raised in return for small amounts of money or for other needed goods. Playing a vital social, economic, and cultural function, these markets quickly became ‘Barbadian institutions,’ and a ‘major device’ by which the enslaved ‘acquired cash or goods to satisfy a variety of

⁶⁴ Ibid., 4-5.

⁶⁵ Ibid.

⁶⁶ Handler and Wallman, ‘Production Activities,’ 1-26.

consumption needs, including additional foods to diversify their monotonous' and nutritionally limited diets. This also gave many enslaved Africans the opportunity to own some small pieces of property and to travel across the island and partake in a social life that would have otherwise been far more restrictive.⁶⁷ They also benefitted white communities, as they were 'essential for the urban population of Barbados,' and allowed many of the indentured servants, enslaved blacks, and even free whites the opportunity to buy a wide variety of affordable foodstuffs.⁶⁸ Therefore, outside of some flour, occasional rice, basic vegetables, salt fish, and corn meal, planters expected the enslaved to provide their own produce and meat, while others tacitly allowed their unfree laborers to obtain many of their own necessities. While it seems unlikely that the enslaved could obtain all of their remaining nutritional requirements on their own, many found some provisions through their own vibrant local economies based upon the trading basic food allocations, raising poultry and livestock, and intensively cultivating the little plots of land that surrounded their huts with the intent to utilize some for subsistence, while trading the rest. This resulted in a population that, while still always underfed, could at least partially sustain itself with an innovative combination of general self-production and a basic reliance on the island's plantation owners.⁶⁹

When the data derived from the Returns for free whites, indentured servants, and enslaved blacks are aggregated together, the limitations of importing nutritional energy into Barbados become particularly evident. Based on the conservative caloric

⁶⁷ Ibid., 9-12 and Hilary Beckles, 'An Economic Life of their Own: Slaves as Commodity Producers and Distributors in Barbados,' *Slavery and Abolition*, vol. 12, no. 1 (1991), 32.

⁶⁸ Simon Newman, *A New World of Labor: The Development of Plantation Slavery in the British Atlantic* (Philadelphia: Univ. of Pennsylvania Press, 2013), 231-233, Handler and Wallman, 'Production Activities,' 9-12.

⁶⁹ Beckles, 'Economic Life,' 34, 45.

Table 5.6: Imported Calories as a Percentage of a 2,758 Calorie Diet

Year	% Data	Total Calories	Calories: Person	%: 2,758 Cal. Diet	%: Island Produced Calories
1680	100	10,757,040,000	445	16.13	83.87
1681	80	6,754,279,500	280	10.15	89.85
1682	100	16,391,537,000	679	24.62	75.38
1684	100	11,331,601,000	469	17.01	82.99
1685	100	15,519,845,000	643	23.31	76.69
1686	100	13,399,609,500	555	20.12	79.88
1687	80	12,943,431,000	536	19.43	80.57
1688	75	13,857,689,500	574	20.81	79.19
1690	60	4,862,714,000	201	7.29	92.71
1691	100	17,238,153,500	714	25.89	74.11
1695	50	2,711,547,000	138	5.00	95.00
1696	100	11,614,606,000	612	22.19	77.81
1697	100	8,266,091,500	419	15.19	84.81
1698	100	17,971,528,500	912	33.07	66.93
Avg.	-	13,102,291,912	568	20.59	79.41

Table 5.6: TNA, CO 33/13 and 33/14, 1680-1698. For this table, I combined the results from Table 1 and Table 4 and divided them by the known 1684 population of 66,170 for 1680-1691 and the estimated population of 54,000 for 1695-1698. 'Island-Produced Calories' suggests the percentage of their nutritional energy the Barbadians locally attained for themselves.

needs outlined above for each of the island's three social and racial groups,

Barbados' 66,170 residents required an average of at least 2,758 calories per person per day. As Table 5.6 shows, at no point during the nineteen years between 1680 and 1698 did the Barbadians receive more than 33.07% of this total from imported provisions. While Table 5.1 shows that the free white population was occasionally capable of purchasing 100% of their general energy needs from English and colonial markets, they only formed about 26% of the overall population and made a limited impact on the aggregate totals depicted in Table 5.6. Instead, it was the tens of thousands of malnourished servants and enslaved blacks that had the greatest influence on the data. 1682, for example, represented the most successful year in terms of the tonnage of provisions landed and purchased during the pre-war period.

The average free white inhabitant had claim to approximately 2,205 calories per person per day. In comparison, the indentured servants accessed approximately 700 calories per person per day, while the enslaved black laborers attained 181. When stretched across the entire population, the overall average for calories per person per day in 1682 equaled 679 (24.62%), a total that was not even enough to make up a quarter of the energy needed for a hard-working islander. This, however, represented a peak moment and was not truly indicative of the rest of the decade, as each Barbadian received an average of only 520 imported calories per day (18.85%) from legal imports during the eight recorded pre-war years.

The situation only deteriorated during the Nine Years War. From 1689 through 1697, with the entire island population receiving limited quantities of provisions from abroad, the average Barbadian struggled to attain even 15% of his or her calories from imports, with lows of as few as 201 calories (7.29%) for 60% of the year in 1690 and 138 calories (5.00%) for half of 1695. Even during the last full year of the war, the Barbadians could only acquire 419 calories (15.19%) per person. In fact, it took European peace, a smaller island population, the expansion of the English merchant marine, and a record high in imports for the colonists to even breach the 30% mark in 1698.

Overall, the Returns suggest that the standard historiography has misjudged how most seventeenth-century Barbadians procured their provisions and, consequently, their nutritional energy. Many scholars still present the late 1600s as a period when ‘planters and managers had grown sugar to the exclusion of all else’ and maintain that a ‘far more balanced and diversified plantation agriculture’ did not

emerge until the end of the eighteenth century.⁷⁰ Yet, the records show that this was not the case. By the 1680s and 1690s, both the white and black inhabitants of the island lived within a matured plantation society that did not legally import the majority of the provisions they consumed.⁷¹ Instead, a range of sources describe the islanders as surprisingly effective at producing an array of fruits, vegetables, liquors, and meats that released many from a complete reliance on the metropole for supplies. Indentured servants and enslaved blacks had become especially adept at partially provisioning themselves, as they received a fairly negligible amount of nutritional energy from salt fish, the only import that they regularly consumed. Responsible for obtaining a majority of their calories on their own, they planted and maintained small gardens of basic root provisions, grew a variety of fruits, raised their own livestock, caught local marine life of the coast, and created a widespread and elaborate system of underground markets that became a ubiquitous part of island life and that eventually represented an important source of food for all island groups. Moreover, while the free white population received more of its calories from abroad than the island's other two groups, they still only received an average of 80.80% per year, meaning that even some of the island's wealthiest inhabitants were responsible for securing a fifth of their own calories, most of which would have likely also been locally produced in the fields, trees, pens, and stills of neighboring planters and farmers.

⁷⁰ Newman, *New World*, 229.

⁷¹ It is also likely that not all of the additional calories needed to sustain life were grown on Barbados, meaning that the islanders maintained other methods of accessing provisions. A significant quantity almost certainly arrived through illegal trade, especially with the Dutch, while others could have been carried in the many small local vessels that the naval officers considered to be too tedious to record in the Returns.

Thus, the Barbadians did not fit into the classic mercantilist narrative of an English West Indian plantation society that single-mindedly produced sugar while remaining reliant on a distant metropole for goods and provisions. Currently, some historians are beginning to see past this archaic interpretation and to explore the complexity of the island's agricultural past. J.R. McNeil maintains that for most English Caribbean societies 'food (that is their energy) came from gardens, fields, and fisheries on and around the plantation,' and that most imported provisions tended to be seen as supplements to their diet.⁷² Moore takes this even further by specifically describing Barbados as a 'complex of economic activities, from slave-trading to cattle-ranching to shipbuilding to foodstuff agriculture.'⁷³ This varied nature of Barbadian food production, in combination with its frequent imports, created a unique situation for the island in relation to the rest of the Caribbean world, as it maintained, according to the abolitionist James Stephens, an uncommon 'middle character' when it came to provisioning its population.⁷⁴

Most Caribbean islands generally fit into one of two distinct patterns of supply. Those living in either larger English-held islands, such as Jamaica, or in French and Spanish colonies actively attempted to produce the majority of the foodstuffs they consumed. With ample space and resources, they could devote hundreds of acres per plantation to vegetable provisions and livestock grazing. In 1688, for example, Jamaican merchants, according to Richard Bean's calculations, imported just under eight billion calories from abroad, while those on Barbados brought in a projected 18.5 billion. Since most imported calories went to white

⁷² McNeil, 'Ecological Atlantic,' 89.

⁷³ Moore, 'Early-Modern World,' 427.

⁷⁴ Quoted by John Stephens in *The Slavery of the British West India Colonies*, (1824-30), but taken from Handler and Wallman, 'Production Activities, 9.

planters, these totals break down to averages of 2,614 imported cpd for each of Barbados' 17,000 free white inhabitants compared to only 2,060 imported cpd for Jamaica's 10,000. Thus, white Barbadians had access to almost 600 more imported calories each day, which suggests that the island relied more much more heavily on imports than a large English island such as Jamaica.⁷⁵

However, smaller islands, such as the English Leeward Islands or those controlled by the Dutch, did not have the luxuries of space or abundant resources and consequently developed a much greater dependence on imports. Barbados, at only 166 square miles, should have fit within this latter description, and most of the traditional mercantilist historians have described its economic habits as if under the assumption that it did. Yet, the importation data from the Returns prove that Barbados did not adequately fit within either model, as its large overall population meant that it was infeasible to import the food needed to support it, while its small size prohibited the islanders from ever becoming completely self-sufficient. Thus, the island's 66,170 settlers had to implement a system that incorporated both methods of supply within what became a diversified agricultural society. This gave the island its own distinct 'middle character' by the 1680s and 1690s that ultimately allowed for the creation of a unique and creolized diet that mixed English meats with American vegetables and Caribbean fruits for a fare that was different from anywhere else in the world.⁷⁶

⁷⁵ Bean, 'Food Imports,' 585-588.

⁷⁶ Handler and Wallman, 'Production Activities, 9-12.

Part II: Importing Animal Energy

The Barbadians have always shared their island with a substantial animal population, few of which are actually indigenous to the Caribbean. When the original settlers first arrived at Barbados in the late 1620s, they found it already heavily populated by enormous feral hogs, left behind by the Spanish, which had grown fat off of the abundant flora and made for an excellent early source of protein. Twenty years later, the range and variety of locally produced meat available on the island had greatly expanded. Ligon described the numerous farm animals he consumed, and the quality of their meat, during his visit in the late 1640s: ‘next to Swines-flesh in goodnesse, are Turkies, large, fat, and full of gravie. Next to them, Pullen or Donghill-foule· and last of all, Muscovia-Ducks, which being larded with the fat of this Porke...are an excellent bak'd-meat. All these, with...Chickens, we eat.’ Furthermore, Ligon also recalled the planters ‘breeding Hoggs, Sheep, Goats, Cattle, and Poultry, to furnish the rest of the Iland, that want those Commodities.’⁷⁷ Father Biet, who attended numerous feasts hosted by the elite during his travels, describes his typical meal: ‘At these feasts there is nothing lacking in the ways of meats which are found in the country, such as suckling pigs, turkey hens, capons, chickens, and wood pigeons.... They lack no other meats and have all sorts of fowl with which their farm yards are filled....Very good mutton is eaten there.’⁷⁸ Spoeri also noted the quality of the meat on the island, especially from local goats: ‘the goats are a particular kind and remain quite small, but their meat is first-rate.’⁷⁹

By 1680, however, Barbadian planters and farmers used the local livestock for far more than just consumption, as they formed an integral part of the agricultural

⁷⁷ Ligon, *History*, 35 and 94.

⁷⁸ Biet, ‘Visit,’ 62-68.

⁷⁹ Spoeri, ‘Description,’ 3-10.

Table 5.7: Animals Imported into Barbados, 1681-1698

Year	Sheep	Hogs	Cattle	Turkeys	Fowl	Horses	Asses
1681	6	0	0	0	0	301	363
1682	6	0	4	0	0	937	607
1684	518	195	89	154	200	498	300
1685	364	106	122	148	60	401	130
1686	97	148	38	86	0	499	532
1687	112	100	117	22	0	357	679
1688	198	0	107	0	0	428	291
1689	60	0	5	0	0	98	0
1690	9	0	0	0	0	83	0
1691	0	0	1	0	0	211	0
1695	0	0	0	0	0	124	177
1696	0	0	0	0	0	319	119
1697	0	0	0	0	0	215	181
1698	0	0	8	0	0	435	284
Totals	1,370	549	499	388	260	4,906	3,663
Avg.	98	39	36	29	19	350	262

Table 5.7: TNA, CO 33/13 and 33/14, 1681-1698. Mules are not included in this table, as the records show that Barbadians only purchased one in 1686 and six in 1687. They also imported a single deer in 1687.

process. Many sugar planters, especially before the 1670s, used horses and cattle to provide the energy that turned the cane-crushing rollers in the mills.⁸⁰ Provision farmers would have also used horses and cattle as draught animals, relying on them to help sow their fields with corn, potatoes, and cassava. These two animals, along with assinegoes, were also responsible for transporting goods across the island. The durable, hard-hooved assinegoes were especially effective at clambering over the uneven, hilly terrain of the island's east coast. Finally, all animals produced valuable dung that was routinely collected for use as fertilizer on the increasingly infertile soil. Thus, their role on the island was a vital one and planters needed animals that could both provide the necessary protein that made life on a Caribbean island possible and the labor that allowed for the profitable production of sugar.

⁸⁰ TNA, C 700/Barbados 3, 1685.

Throughout the 1680s and 1690s, the Returns show that Barbadian planters and farmers imported large numbers of animals from friendly ports throughout the trans-Atlantic world and that Barbados was, consequently, an island bristling with animal life. Table 5.7 shows that merchants shipped 10,270 animals to the island within the eighteen years between 1681 and 1698. The majority of these were for sugar production purposes, as horses (4,906) and assinegoes (3,663) made up about 75% of all arrivals. Horses were the most important animals on the island, serving as ‘the sinews of a plantation.’⁸¹ They effectively filled numerous roles, including the transportation of goods and people across the island and provided the energy needed to crush sugarcane.

The planters generally preferred utilizing horses in their mills, as they produced the greatest amounts of power and would have been able to crush more cane than the mule (0.7 Horse power), bull (0.75 H.P.), cow (0.4 H.P.), or undersized donkey (0.4 H.P.).⁸² It was this occupation, though, that forced the Barbadian planters into continuously buying the animal, as driving the mills was a particularly onerous task that came to ‘destroy so many horses that it begors the planters.’⁸³ Their high death rates, when combined with the fact that they tended to reproduce less frequently in the tropics, made it uneconomical for the planters to breed horses in any capacity. Instead, they imported hundreds on a yearly basis to make up for the deficits caused by their exploitation. The horse trade originated from a variety of different ports, with the majority arriving from Virginia, New England, and Rhode

⁸¹ Philip Morgan, ‘Slaves and Livestock in Eighteenth-Century Jamaica: Vineyard Pen, 1750-1751,’ *William and Mary Quarterly*, vol. 52, no. 1 (January, 1995), 47.

⁸² Kander et al., *Power*, 75.

⁸³ BL, Sloane MS 3926, Henry Whistler, *Journals*, 1654.

Table 5.8: Livestock Inventoried in a Sample of Wills and Deeds, 1681-1695

Owner	Year	Parish	Acres	Cattle	Asses	Horses	Pigs	Sheep
William Robinson	-	St. Michael's	186	12	5	2	Yes	Yes
Timothy Mascoll	1681	-	-	18	NA	7	23	39
John Barwick	1682	St. Thomas	256	29	NA	5	23	NA
Thomas Spiar	1682	St. Philip's	271	41	6	NA	NA	NA
Henry Evans	1682	St. George's	106	13	2	5	26	NA
Richard Barrett	1683	St. John's	80	9	NA	3	NA	19
Anne Searle	1683	Christ Church	400	30	18	3	26	NA
Elizabeth Gritton	1683	St. Michael's	56	Yes	NA	2	15	20
Nicholas Prideaux	1683	St. Michael's	-	18	5	2	Yes	Yes
William Dyer	1684	St. James	317	36		7	30	47
Philip Price	1684	St. Philip's	244	33	NA	NA	7	33
Philip Checke	1684	St. Joseph's	240	2	5	NA	20	4
Michael Wiley	1687	St. George's	10	2	NA	2	NA	NA
Sarah Tode	1690	St. John's	78	14	NA	3	16	9
Richard Morris	1691	St. John's	250	7	Yes	1	Yes	NA
Hilliard Holdip	1691	St. George	-	58	NA	11	44	110
Michael Terrell	1691	St. Lucy's	184	1	NA	NA	20	35
Thomas Richards	1692	St. James	40	14	1	1	1	4
Nathaniel Blackiston	1694	St. Andrew's	200	33	2	2	32	17
Thomas Humphrey	1695	St. Philip's	250	20	NA	5	15	NA
Ferdinando Gorges	1695	St. John's	331	31	NA	NA	13	24
John Cantrell	1695	St. Thomas	24	2	3	3	NA	12
Totals	-	-	3,523	423	47	64	311	373
Averages	-	-	185.4	19	2	3	14	17

Table 5.8: BDA, RB 3/12, 3/13, 3/16, 3/18, 3/20, 6/13. While I looked at hundreds of individual wills and deeds for the entire twenty-year period between 1680 and 1700, only a small percentage included inventories. If an inventory did not list a specific animal, I marked this in the table with a 'NA.' Other inventories listed that a specific animal was present, but did not include an exact number. This is denoted by a 'Yes.' Therefore, the overall totals calculated in this table should be higher than the number given.

Island, while smaller numbers made the trans-Atlantic journey from England and Ireland.⁸⁴

During the 1680s, an average of just under 500 horses arrived each year, with a high of 937 in 1682. Interestingly, the Nine Years War had little effect upon their

⁸⁴ The transatlantic voyage was not an easy one for horses, with so many perishing onboard ships that parts of the tropics became known as the Horse Latitudes. This caused the Barbadians to seek closer markets and to focus their trade on various ports in New England. Alfred Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport: Greenwood Press, 1972), 80-81.

importation. While other animals disappeared entirely from island markets, the horse trade instead shifted to more local ports-of-origin. Even with this resulting in a large decrease in the numbers sent to the island, Barbadian markets still received 211 horses in 1691, 319 in 1696, and 215 in 1697. The inventories from a small sampling of hundreds of wills, organized in Table 5.8, show the consistent prevalence of horses on Barbados, with 22 plantations owning a total of 64 horses, or about three per household. The wealthiest planters in the sample, such as William Dyer or Hilliard Holdip, possessed the most, as these two men maintained seven and eleven respectively on their extensive plantations. Horses, however, were not simply owned by the rich, as most small farmers also had at least one. Michael Wiley, the smallest landholder in Table 5.8 with only ten acres, kept two horses and John Cantrell, who worked 24 acres, had three, indicating that they were a necessity for farms, as well as plantations.

Cattle held a similarly important place within the Barbadian economy. Most of the 382 heads of imported cattle would have been used, like horses, to either pull material around the island or to crush sugarcane. Cattle typically came from Bermuda, with a smaller number arriving from the mainland colonies. In times of peace, they came to Barbados in large quantities; merchants landed over one hundred in both 1685 and 1688. But, unlike horses, the importation of cattle almost completely ceased once the Nine Years War broke out. The comparatively small overall numbers of cattle imported into the island is surprising, as planters considered them to be almost as valuable as horses and owned them in greater numbers. The 22 landowners in Table 5.8, for example, maintained a total of 423 cattle among them, for an average of 19 per plantation or farm. Importantly, all planters and farmers

from the sample, no matter what their acreage, had at least one, with the largest landowners owning over 30. Thus, they appear to have been far more abundant throughout Barbados than the Returns suggest.

The likely reason for this was that planters and farmers raised most of their cattle locally on the island. One way to test this hypothesis is to calculate how many horses and cattle the Barbadians imported into the island based on the standard minimums required to successfully run a sugar plantation. Dalby Thomas maintains that each planter would need five or six horses and eight cattle per 100 acres of cultivated cane fields. The island had approximately 89,306 acres in various forms of cultivation by 1684, 40% of which was actually planted in sugar at any one time, with perhaps another 10% planted in provisions.⁸⁵ Thus, the island would theoretically require 4,465 to 5,358 horses and 7,144 cattle to live on the island. Based on the totals in Table 5.7, the 4,549 horses that the Barbadians bought adequately covered the lower end of this estimate, implying that the islanders imported enough of this animal to meet their needs during this period. For cattle, however, Table 5.7 depicts a very different story. As planters only purchased 382 cattle from 1681-1698, a mere 5.35% of the number needed to effectively run the island's plantations, it is unlikely that importation was their only source of supply, as the few arrivals would have struggled to keep pace with natural mortality rates. Inventories offer further support for the localized reproduction of cattle, with some specifically listing the different ages and sexes present on a plantation. Thomas

⁸⁵ Dalby Thomas provides the ratio of cows and horses per 100 acres that I used in my calculations in his 1690 pamphlet. By using these ratios and the known cultivated acreage of the island from the 1684 census (89,306), I can calculate how many horses and cattle were ideally needed on the farms and plantations of Barbados. Since sugar plantations required more animal labor than provision farms, these numbers are only suggestive and are meant to prove planters' breeding habits. NLC, Ayers MS 827 and Thomas, *West Indian*, 15.

Spiar, for example, owned 20 adult and three young bulls, seven cows, two old cows, three young calves, one old bald mare, and five oxen. Anne Searle's inventory lists an undisclosed number of working bulls, nine oxen, eight cows, three heifers, eight yearling bulls, and two young bull calves.⁸⁶ The wide range of ages and the presence of both sexes suggest that breeding did take place on Barbadian plantations. Thus, it is logical to conclude that the islanders appear to have raised most of their cattle on Barbados, as they likely needed too many to make buying them from abroad cost effective.

Sheep also proved to be a popular livestock option in Barbados, with many planters owning at least a few by the 1680s and 1690s. Already present by the late 1640s, Ligon recalled seeing two different species on the island. The first were from Europe, and 'do not like well the pasture, being very unfit for them...they never are fat, and...their flesh when we tried any of them, had a very faint taste, so that I do not think they are fit to be bred or kept in [Barbados].' The second species was 'brought from Guinny and Binny,' but were considered strange by planters because they had 'haire growing on them, instead of wool,' more 'like Goates then sheep.'⁸⁷ The white Barbadians disliked both types, as the European breed frequently fell ill and provided tasteless meat, while those from Africa were small and seen as bizarre. Instead, some intrepid islanders began to experiment with crossbreeding the two species in an attempt to create an animal that had the best qualities of each. The result was the Barbados Blackbelly, a hair-covered sheep well adapted to the hot weather of the southeastern Caribbean. It was also larger in size than the standard African species, reaching average weights of 106 pounds for a ewe and 125 pounds

⁸⁶ BDA, RB 3/12, Thomas Spiar, 33-39, RB 3/13, Anne Searle, 285-292.

⁸⁷ Ligon *History*, 59.

for a ram.⁸⁸ Developed in the late seventeenth-century, this sheep was already prevalent by 1700, and the only species present on the island by 1750. Griffith Hughes' natural history from that year refers exclusively to the Blackbelly, describing it as being 'hairy like goats,' and 'the sheep that are chiefly bred here,' while making no reference to the presence of any other breeds.⁸⁹

Before the Blackbelly became the prominent species of sheep on Barbados, many continued to import the European version to the island during the 1680s. After horses and assinegos, the Returns show sheep to be the next most popular animal. Planters bought 1,370 overall, and as many as 578 in a single year. Most seem to have been bred in other Caribbean locations, with a majority of the sheep coming from the nearby islands of Antigua and Barbuda, with a smaller number coming from mainland colonies like Rhode Island. As there was little need for woolen clothing in the tropics, the Barbadians primarily kept sheep as a source of dung and food, providing fresh mutton to a population that could only infrequently import this meat. The inventories sampled in Table 5.8 show how prevalent the ownership of sheep was amongst both elite planters and smaller provision farmers. Out of the 40 examples included in this study, 15 (38%) specify the ownership of sheep. Interestingly, sheep seem to appear most frequently on farms of less than 100 acres in size, with five out of the six such landholders (83%) owning at least four sheep, compared to 10 examples from the 15 plantations larger than 100 acres (67%). John Cantrell, for example, had 12 sheep roaming his 24-acre farm, while Elizabeth Gritton had 20 on her 56-acre homestead and Richard Barret had 19 on his 80-acre

⁸⁸ R.K. Rastogi, H.E. Williams, and F.C. Youssef, 'Barbadian Blackbelly Sheep,' in I.L. Mason, *Prolific Tropical Sheep*, (Rome: Food and Agriculture Organization of the United Nations, 1980) <http://www.fao.org/docrep/004/X6517E/X6517E02.htm>.

⁸⁹ Griffith Hughes, *The Natural History of Barbados*, (1750), Book III, 63.

plantation. Larger planters, however, often owned even greater numbers of sheep, with Hilliard Holdip having 110, William Dyer 47, and Michael Terrell 35.

Domesticated swine represented another important source of native protein for Barbadian planters and farmers. By the end of the 1630s, the English had hunted the 'native' wild boars into extinction and replaced them with imported domesticated pigs: 'We have here in abundance, [hogs] but not wild or loose, for if they were they would do more harm then their bodies are worth; they are enclos'd, and every man knows his own.'⁹⁰ As Table 5.8 shows, even more farmers and planters owned pigs than sheep, with 18 out of the 22 Barbadian plantations represented keeping at least one pig, although larger numbers was the norm, as most had 15 to 20 and the wealthiest 30 to 45. Some Barbadians continued to import swine, as Table 5.8 shows that islanders purchased 382 of them over a three-year period between 1684 and 1686. Aside from this brief splurge in the mid-1680s, however, merchants did not regularly bring swine to Barbados. Instead, planters and farmers likely bred and consumed their own. This would have kept population numbers up and would have explained the presence of the different ages and sexes of pigs on many farms and plantations.

Merchants also carried to Barbados small numbers of turkeys, ducks, pigeons, fowl, cats, dogs, and other animals requested by the planters.⁹¹ The Returns disclose that merchants shipped 388 turkeys and 260 fowl to Barbadian markets between 1684 and 1686. The inventories categorized in Table 5.9 also exhibit a variety of smaller animals that made up the island's livestock population. Michael Terrill

⁹⁰ Ligon, *History*, 59.

⁹¹ The importation of hogs for breeding and butchering would explain why the quantities of barreled salt beef arriving at the island were so much higher than those of pork, as many of the islanders would have had access to local stores of the latter meat and would not have had to spend additional money on an imported item.

Table 5.9: Additional Livestock in a Sample of Deeds and Wills, 1682-1695

Name of Seller	Date	Parish	Acres	Evidence of Additional Animals
Thomas Spiar	1682	St. Philip's	271	Turkey Perch and Duck House
Anne Searle	1683	Christ Church	400	10 Turkeys, a pigeon house
Philip Price	1684	St. Philip's	244	A flock (60) of pigeons, a pond with scale fish
Philip Checke	1684	St. Joseph's	240	A Parcell of ducks and dunghill fowls, 2 dogs
Michael Wiley	1687	St. George's	10	A hen house
Michael Terrell	1691	St. Lucy's	184	Poultry of all sorts, a convenient quality
Nathaniel Blackiston	1694	St. Andrew's	200	Pidgeon House
Thomas Humphrey	1695	St. Philip's	250	Some few Ducks, fowls, and rabbits

Table 5.9: BDA, RB 3/12, 3/13, 3/16, 3/18, 3/20, 6/13, 1680-1695.

owned ‘a convenient quantity’ of ‘Poultry of all sorts,’ while Thomas Humphrey had ‘Some few Ducks, fowls, and rabbits,’ and Philip Checke maintained ‘A Parcell of ducks, dunghill fowls, and two dogs.’ Others, like Philip Price, kept flocks of as many as 60 pigeons, and Thomas Spiar built both a turkey perch and duck house on his plantation. Finally, Henry Drax owned a variety of animals that included ‘sheeps, hogs, turekeys, Dung hill fowls, Ducks, pigons, and Rabbets,’ all of which were to serve as provisions.⁹²

Thus, by the 1680s and 1690s, livestock formed an integral part of Barbadian life, as planters and farmers owned a variety of animals that provided energy to the islanders, whether by working in the fields or providing a valuable source of fresh meat. Handler, in a study on plantation production habits, found over 12,000 skeletal specimens of fauna on numerous different plantations across Barbados, confirming that Barbadian planters and farmers bred and ate huge quantities of fresh local livestock and poultry. Sheep and goats appeared to be the two most consumed animals on the island, equaling 25% of the remains, while pigs accounted for another

⁹² Drax, ‘Instructions,’ 1.

21%. The other 54% of the bones represented a variety of different animals, including assorted poultry, rabbit, and, in rare cases, cattle.⁹³ With a little forethought and planning, many planters and farmers could breed enough animals to free themselves from relying on England or nearby colonies for their protein, and becoming increasingly self-sufficient in the process.

The only drawback to such a large animal population, however, was that it also required an enormous amount of caloric energy in its own right. According to Paolo Malanima, the average animal consumed between 2,870 k/cal. and 4,500 k/cal. of fodder per day.⁹⁴ Using the lower end of this estimate and applying it to only the number of animals imported to the island between 1680 and 1698, Barbados' livestock would require almost 10.8 billion calories per year, most of which would have come from corn. The Returns, however, show that the Barbadians imported just under 6.7 billion calories for the entire period.⁹⁵ This meant that the vast majority of the fodder consumed by the animal population also needed to be produced locally, requiring ever larger expenditures of time, money, and human energy in the process. Yet, the islanders inevitably decided that these costs were worth it, as the contributions that animals made to Barbadian society caused them to become a vital and indispensable part of local plantations and farms.

⁹³ Hander and Wallman, 'Production Activities,' 15.

⁹⁴ Kander et al., *Power*, 38.

⁹⁵ TNA, CO 33/13 and 33/14, 1680-1698. I used the low end of Malanima's estimate because, while cattle, horses, pigs, and assinegoes likely consumed more than this total, smaller animals, such as poultry, rabbits, and sheep were present in great numbers, as well. The island also likely contained far more than 10,270 animals in total, as most, besides horses and assinegoes, were bred locally by the islanders. This estimate, therefore, suggests how self-sufficient the Barbadians were in growing their own fodder.

Part III: The Islanders' Battle against Declining Soil Fertility, 1680-1700

For many planters, decreasing soil fertility defined the plantation experience in the late-seventeenth century, greatly hindering their consistent production of both provisions and sugar. This was not a new problem on Barbados, as planters had complained of decreasing crop yields since the sugar industry's earliest days. In 1661, for example, the Council sent a letter to London explaining their plight: 'The land is much poorer, and makes much less sugar than heretofore, and much worse; the people generally poor and vainglorious, making ostentation of riches which they have not.'⁹⁶ By the 1680s, the issue had become a legitimate crisis. In 1687, for example, the General Assembly and Council came together to compose a letter for King James II that singled out increasing infertility as the era's greatest problem, pointing out that 'many Estates...now disabled from making Sugar and become reduced into meer Pastures,' now produce 'but a poor Income unto the Owner.'⁹⁷

Another planter claimed that the island was little more than 'barren, rocky gullies, runaway-land, [and] wasteland' and 'much worn out, and not so Fertile as it was.'⁹⁸ A decade later, the Council and Assembly maintained that the soil had further deteriorated. In a letter sent back to England, they complained that 'Our land, by long tillage and being every year opened and exposed to the violent heat of the sun, is become so barren that it will not produce sugar-cane unless forced by...extraordinary husbandry and labour.' Furthermore, 'many of the best plantations, which once made great quantities of sugar, now make little or none, and near fifty other plantations are ruined and discontinued,' with 'one third of the sugar-

⁹⁶ TNA, CO 31/1, 10 July 1661, Council to Secretary Nicholas

⁹⁷ TNA, CO 1/64, Council and Assembly to James II

⁹⁸ Anon., 'A State of the Present Condition of the Island of Barbados,' N.D.

Table 5.10: Tons of Sugar Produced Per Enslaved African, 1683-1700

Year	Sugar Exported	Enslaved Population	Tons of Sugar/Slave
1681	7,350	41,866	0.18
1682	11,301	43,534	0.26
1683	c. 14,000	46,851	0.30
1688	c. 1,928	53,915	0.04
1691	11,004	49,265	0.22
1696	9,854	41,342	0.24
1697	5,475	41,686	0.13
1698	20,190	43,796	0.46
1699	11,888	45,791	0.26
1700	15,399	48,546	0.32
Average	10,839	45,659	0.24

Table 5.10: For this table, I used the exportation totals already presented in Tables 3 and 6 from Chapter 4 and divided it by the total enslaved population as listed in Table 8 from Chapter 3. It is understood that not all enslaved Africans worked in sugar producing activities, but my figures on the black population are likely to be much lower than reality due those born on the island or that arrived through illicit means.

cane land lies waste and over-run with weeds.⁹⁹ Thus, it was an inevitable truth for most Barbadians that the soil simply could not produce sugarcane as readily as it once did. In the late 1640s, for example, Richard Ligon reported that ‘an acre of good Canes will yield 4,000 pound weight of Sugar, and none will yield lesse then 2,000 weight.’ By 1690, however, Dalby Thomas predicted that an acre on a plantation ‘manag’d to its full height,’ would produce no more than 2,000 pounds of sugar.¹⁰⁰

The statistics from this era, however, describe very different conditions, as planter claims of soil infertility are juxtaposed with rising exports of sugar that surged to record highs by the end of the 1690s. For the ten years represented in

⁹⁹ TNA, CO 29/2, July 1696, Assembly and Council to Whitehall

¹⁰⁰ Ligon, *History*, 94-95, Thomas, *West-Indian*, 15 and Barrett, ‘Caribbean Sugar-Production’ 153. Other historians have calculated worse rates, claiming that yields on many sugar estates declined by as much as eighty percent between 1650 and 1690. Jason Moore, ‘“Stalking Modernity” Sugarcane and the Political Ecology of Europe’s Colonial Expansion, 1450-1750’ (Philadelphia, 2005),’ 21-22 and Menard, *Sweet Negotiations*, 78-79.

Table 5.10, the average quantity of sugar exported was 10,839 tons, produced by approximately 45,659 enslaved men and women. This gives a period average of 0.24 tons of sugar produced per enslaved worker, a number that matches or exceeds the productivity levels of other post-boom sugar producers and shows that Barbadian planters could still effectively manufacture sugar regardless of island conditions.¹⁰¹ In fact, the total tonnage of sugar produced per year throughout the 1680s and 1690s—except for 1688 and 1697—easily top the best years from pre-1670.¹⁰²

After over thirty to forty years of constant sugarcane production, the ability to continue to yield such large crops would have been an impossible task if the planters had not realized that they needed to adapt themselves to their environmental reality and innovate new methodologies that would allow for increased control and manipulation of their natural world. Instead of reaping what the landscape allowed them to sow, they forced nature to bend to their entrepreneurial will. To do this, Barbadian planters pioneered a variety of planting techniques that effectively solved some of the island's infertility problems and came to be fixtures of the greater plantation regime. Some changes consisted of small, simple tweaks in the growing cycle that helped to offset the initial signs of soil infertility. By 1667, for example, planters had extended the growth period of planted canes from fifteen to eighteen

¹⁰¹ This percentage matches up well with other post-boom sugar producers calculated by Jason Moore. He posits that Madeira's soil produced 0.23 tons/slave in 1524 and the Leeward Islands 0.26 tons/slave in the 1770s. Moore, 'Conquest,' 10-13.

¹⁰² In 1657, the island's planters manufactured 7,787 tons of sugar, while in 1663 and 1669 they produced 7,176 tons and 9,525 tons respectively. Historians, however, have estimated that the population of enslaved Africans was only approximately 20,000 in 1655, meaning that sugar production per worker was much higher. In this case, each enslaved person was responsible for 0.39 tons of sugar. The 1660 ratios, however, are much closer to the averages from the 1680s and 1690s. In 1663, for example, the approximately 30,000 enslaved Africans produced 0.24 tons of sugar each, while in 1669, the 32,000 enslaved blacks produced 0.30. Dunn, *Sugar and Slaves*, 87 and 203 and Menard, *Sweet Negotiations*, 68.

months in an attempt to give the plant more time to mature and for the roots to soak up additional minerals.

The two most important innovations, however, included the increased use of manure to offset the soil's exhausted nutrients and the development of the cane holing approach to planting. The earlier of these two modifications was the consistent use of a nutrient-rich manure to artificially nourish and reenergize the island's depleted soil. The concept behind manuring was not new to the island's planters, as most Europeans already understood its agricultural benefits. The Barbadian planters and farmers, however, were the first to introduce this technique to the Caribbean and were heavily manuring their own fields by the 1670s. Henry Drax wrote in 1679, 'Now there is no Producing good Canes withoutt dunging every holle. It Most be one of your Cheifestt Cares.'¹⁰³ Initially, the preferred manure consisted of the marl and mould culled from local gullies. The planters quickly learned, though, that this supply was finite and not as effective as other equally available types. Perhaps the most useful was animal dung, mainly produced by the large numbers of cattle that the planters kept on the island. Cattle waste introduced valuable nitrogen, phosphoric acid, and potash to the ground, making the soil healthier and more nutrient-rich.¹⁰⁴

Some planters, however, had worked together to invent a unique recipe from local waste products that was famous for its fertility and became the standard product used throughout the West Indies. For the base of this mixture, they collected dung from their cattle, pigs, and horses. To this, they added large quantities of random plantation waste materials, including extra vegetables and plant matter, molasses, and

¹⁰³ Drax, 'Instructions,' 8.

¹⁰⁴ Starkey, *Economic Geography*, 36.

bagasse that combined to form a potent and effective blend. Henry Drax created his own specific recipe that ‘by my Certain Experience I know to be Exelent Manure.’ To make this, Drax had a pile of cattle and pig dung from his stables laid over a draining hole from his still house. To this he added both the ashes of burned cane and trash, and ‘let into itt the liqwor from the Still when no longer fit to be Returned into the Cistrans.’ When the mixture was completely saturated, he let it sit for two months before being loaded into carts for transportation to his fields.¹⁰⁵ For distant fields far from the animal sties, Drax also recommended building a kiln, where lime could be burned and its ashes used as another form of fertilizer.¹⁰⁶

Having two forms of effective fertilizer was useful for the elite planters, as by the 1680s and 1690s the soil required huge quantities in order to produce good crops. Edwin Stede and Edward Littleton both suggested that a smart planter would have his enslaved workers spread 30 baskets of dung on each acre of land.¹⁰⁷ If an enslaved African could carry 50 pounds worth of dung per basket, each acre of land therefore required 1,500 pounds of manure to properly fertilize a field. If this was done at least two times a year, as Drax recommended, then the quantities needed rose to approximately 3,000 pounds per acre. For a hypothetical 100-acre plantation, with 40 acres set aside to grow cane, planters needed 60 tons of manure in order to fertilize their fields twice annually. Large planters would have required far more than this, though, as Henry Drax’s 200 planted acres would have theoretically needed 300 tons of manure. The cost of dunging such vast estates could be exorbitant. An anonymous pamphleteer claimed that most plantation owners allowed at least £10

¹⁰⁵ Drax, ‘Instructions,’ 9.

¹⁰⁶ Ibid.

¹⁰⁷ Littleton, *Groans*, 18. There is no official weight for a ‘basket.’ Instead, the enslaved used wicker baskets to transport dung across a plantation.

per acre for purchasing manure. This means that the aforementioned hypothetical planter would be spending £400 a year on manure, while a planter of Drax's significance would have had to invest nearly £2,000, neither of which were reasonable expenditures if one hoped to turn a profit.¹⁰⁸ Thus, the nature of Barbados' soil was limiting for many planters, as its infertility proved costly for most to overcome, making its self-production a necessity if a plantation was to remain profitable into the late-seventeenth and early eighteenth centuries.

After the expanded use of dung, the second important innovation developed by Barbadian planters was the cane-hole planting technique. Created in the late 1690s and early 1700s as an alternative to the trench system of agriculture that was then widely in use, it effectively cut down on soil erosion and made it easier to properly care for each crop.¹⁰⁹ Additional advantages to the system included regular spacing that allowed for a more even distribution of manure, greater protection from strong surface winds, and an increased retention of soil moisture that resulted in improved crops during dry seasons. While beneficial to the preservation of the island's soil, the system itself required a huge amount of labor to clear and prepare a plantation, with planters forcing their enslaved workers to bore 60 to 100 holes per

¹⁰⁸ Demand for manure made animal waste a valuable commodity and caused small ginger and cotton farmers to abandon minor cash crop production and set up dung farms instead. Reaching their peak in 1685, which might explain why 1684-1686 were important years for cattle importation, these entrepreneurs became prosperous by selling their product out of makeshift stalls on their own property and transporting purchased material to cane estates in small wicker baskets carried by enslaved Africans. Barbadian dung farmers controlled the market for nearly forty years, until a wave of epidemic disease decimated the animal population on the island and caused prices to rise. By 1720, planters grew tired of paying these exorbitant rates and increased the production of manure on their own plantations. Watts, *West Indies*, 398-402 and Moore, 'Stalking Modernity,' 21-22.

¹⁰⁹ The first mention of the cane hole planting technique occurs in a 1708 letter from Governor Crowe in which he acknowledges that his neighbor, Mr. Arnold, 'did send 30 negroes for two dayes to help to hole a piece of ground.' TNA, CO 28/12, 2 November 1708. This method, however, must have been used for some time, as Crowe references the style without any further explanation, likely showing that the recipient of the letter was already familiar with it. Watts also claims that the change to this style of agriculture must have been exceedingly rapid, as by the end of 1708 no further references to the old trench system exist in island records. Watts, *West Indies*, 402.

day. For each individual cane, the enslaved would dig out a single six-inch crevice in the middle of a square that was between two to three feet long on each side and five to six inches deep. This shallow pit retained the soil and prevented erosion regardless of weather or terrain. Workers then piled up the displaced earth next to the square to create a raised area of land called the 'straight bank,' which mimicked the two to three foot length of the adjacent square, but had a width of five feet to create separation between two plants. Once the holing process was complete, plantation owners would use both the land between two cane squares, called the 'saddle,' and the land between two straight banks, called the 'square,' to grow additional provision crops, such as taro, yams, corn, or peas. Moreover, the design of the cane squares was effective enough to again support ratooning, allowing some planters to produce quality crops for two consecutive years without replanting.¹¹⁰ Thus, the cane hole system also allowed for a huge increase in the production of sugar, as well as provision crops, which helped planters achieve greater yields, increased nutritional self-production, and, consequently, helped to maintain a healthier and better-fed population.

By the end of the seventeenth century, Barbados was in a precarious environmental position, as its soil was worn out and heavily eroded through years of rampant exploitation and abuse. As the first Caribbean island to produce sugar, planters had been growing great quantities of the cash crop for almost 35 years by 1680 and the soil had lost the initial fecundity that had allowed early producers to generate such incredible wealth. Thus, Barbadian planters and farmers had to begin to innovate and experiment with different planting methodologies and farming

¹¹⁰ Watts, *West Indies*, 400-405 and Pares, *Merchants and Planters*, 43.

Table 5.11: Sugar Sent to London from the English Caribbean, 1697-1720

Year	Barbados	Jamaica	Antigua	Nevis	Yearly Totals	% Barb.
1697	12,236.12	1,995.83	1,856.55	1,458.70	18,599.56	65.79
1698	13,615.50	6,414.01	2,272.31	2,949.13	26,485.70	51.41
1699	10,239.01	4,890.65	4,003.89	3,307.03	23,438.71	43.68
1700	13,545.84	5,272.59	2,955.41	3,464.47	26,903.02	50.35
1701	10,119.55	5,704.94	2,910.59	3,349.20	24,116.94	41.96
1702	3,465.46	3,160.48	3,258.03	2,694.83	13,950.81	24.84
1703	8,114.19	5,323.30	3,795.06	3,174.26	21,661.57	37.46
1704	5,068	5,315.97	2,516.70	2,760.96	16,770.76	30.22
1705	NA	NA	NA	NA	NA	NA
1706	10,966.77	4,635.05	977.60	654.07	18,187.06	60.30
1707	7,165.80	6,203.33	6,203.26	748.70	21,758.66	32.93
1708	8,121.34	6,805.92	2,495.10	874.52	19,457.30	41.74
1709	9,095.90	6,624.51	3,627.25	369.48	20,969.44	43.38
1710	8,458.06	6,202.09	6,301.32	3,757.95	27,367.67	30.91
1711	9,411.40	5,479.51	1,587.08	1,227.15	19,444.48	48.40
1712	NA	NA	NA	NA	NA	NA
1713	6,117.20	7,343.17	6,618.85	3,999.25	27,467.59	22.27
1714	11,364.09	7,097.25	4,892.08	2,432.18	28,257.16	40.22
1715	14,569.17	7,154.03	6,130.11	3,253.15	34,309.09	42.46
1716	11,876.47	9,319.88	6,792.08	3,649.26	33,136.07	35.84
1717	14,119.14	11,761.90	7,598.75	2,942.18	42,087.51	33.55
1718	12,759.11	11,499.23	2,217.39	1,095.56	31,191.73	40.91
1719	6,418.42	8,455.85	6,390.47	2,726.60	30,009.94	21.39
1720	11,544.84	11,736.24	6,339.04	2,744.36	39,020.42	29.59
Totals	218,391.38	148,395.73	91,738.92	53,632.99	564,591.19	38.68

Table 5.11: TNA, Cust. 3/1-3/21, 167-1720. These records only represent the export trade between four English Caribbean islands and a combination of London and the English outports. Exports shipped from both Montserrat and St. Christopher's have been removed from this table due to space restrictions, as they are the two smallest producers of sugar. Their annual figures, however, are included in the 'yearly totals.'

techniques in an effort to maintain their place as the most important and profitable colony in the English West Indies. At first, their efforts were successful, as the adoption of a new agricultural methodology and the application of Old World farming techniques rejuvenated the island's soil and gave many planters a temporary reprieve that allowed them to remain at the forefront of West Indian sugar production for another three decades.

However, with the dawning of the eighteenth-century, Barbadian planters and merchants realized that they could not continue to control 60% of England's sugar market as they had done in the 1680s, a value that was worth more than the combined total domestic exports from all the mainland North American colonies.¹¹¹ Table 5.11 shows, for example, that Barbadian planters and merchants exported an average of 9,247.04 tons of sugar per year to England between 1697 and 1710, equaling 42.98% of the sugar that reached the domestic market. This percentage easily surpassed the contributions from other English sugar islands in the Caribbean, with Barbados' totals over 10% more than the four Leeward Islands combined (32.50%) and 18% more than Jamaica (24.51%).

After 1710, however, the younger sugar producers in the region began to approach Barbados' high yields and gained control of an increasingly large percentage of the market. Interestingly, the Barbadian planters, with vast experience at fending off the natural decline of their plantations, while enhancing the productivity of their soil and, became even more productive, with their average yield for the ten year period between 1711 and 1720 actually exceeding that from the decade before, as the islanders now grew over 10,908.87 tons per year. Yet, the Barbadians' were disappointingly losing ground in England's sugar trade. During the 1710s, Barbados' overall market share dropped to 34.46%, and, while they still remained ahead of Jamaica's 28.02%, fell behind the Leeward Island's combined total of 37.52%. Even though they still produced more sugar than any other individual English Caribbean island, island planters no longer dominated the market and began to realize that they could not cheat their old and over-exploited fields

¹¹¹ Dunn, *Sugar and Slaves*, 201-204.

forever. George Lillington, a Councilman during this decade, noted that it was ‘the General Decay’ of the soil that led to a drop in market share and that inevitably resulted in the many ‘Melancholly instances of the Poverty of the People.’¹¹² Thus, it was only a matter of time before Barbados’ economic shortcomings and limited space would result in the sugar commodity frontier shifting 1,200 miles northwest to the more extensive and plenteous fields of Jamaica, a transition that the records show to have occurred shortly after 1720.

Part IV: Importing Fuelwood into Barbados

In 1722, Jean-Baptiste Labat published a history of the West Indies that included a sketch of an idealized Caribbean sugar plantation. At first glance, Labat’s image looked very similar to many of those already present throughout Barbados: a large estate located along the coast; rows of sugarcane planted in neat rectangular fields; a mill at the center of all cane-growing operations; and a mansion house with enslaved workers’ quarters and animal pens nearby. At the very edge of the sketch, however, stood endless rows of trees. Labat posited that an ideal sugar plantation should be ‘left as far as possible in virgin forest, which would provide a ready source for its future timber requirements.’¹¹³ Barbados, however, had been largely deforested by the late 1660s. This posed a problem for the island’s 350-400 mill owners, as cheap fuelwoods were a necessity for a productive sugar plantation complex and one they had to solve if they wanted to remain economically significant after 1670.¹¹⁴ Many responded by looking abroad for their supplies, a task that became increasingly difficult with the escalation of conflict in the Caribbean during

¹¹² DAB, X10/27, George Lillington, *The Condition of the Island of Barbado* (1710).

¹¹³ Labat (1722) as quoted in Watts, *West Indies*, 385-390.

¹¹⁴ Moore, ‘Conquest, Part II,’ 7.

the 1690s. This made finding continuous access to cheap fuelwood one of the great challenges for late-seventeenth-century planters.

Initially, Barbados was covered with thick aboriginal woodlands and gigantic trees that pushed all the way down to the beaches. By the mid-1640s, however, the switch from tobacco and cotton farming to sugar resulted in the rapid destruction of the island's naturally wooded landscape. Some of this loss was essential and came from preparing the ground for planting. As John Davies noted, 'if the plantation be but newly establish'd, it is requisite that it should have been cleer'd of wood some considerable time before', to the extent that 'there remain not any wood, nor bark, nor leaf, nor so much as the least grass.'¹¹⁵ Many trees were also converted into timber and used in construction. Planters, however, used the rest as fuel in the boiling house furnaces.¹¹⁶ A standard boiling house called for a row of four to five copper cauldrons of differing sizes, each over its own separate fire of varying intensity. The great furnaces burned almost nonstop, except for Sundays, from January until May or June, for an average of 180-250 days per year. The boiling of the raw cane juice served two functions: the clarification of the juice from impurities and the evaporation of water to the point in which granulation could occur. After being transferred to the first kettle (the clarifier) from the receiver—a large vessel that held the juice after it was squeezed from the crushed canes—the syrupy liquid began to separate from nonsaccharine materials when subjected to a low flame. Enslaved black workers would then skim the congealing scum off the top before adding an alkali, usually lime, to the mixture to enhance the clarification process. Upon the completion of this step, trained enslaved workers were responsible for

¹¹⁵ Davies (1666) as quoted in Watts, *West Indies*, 393.

¹¹⁶ Besides metallurgy, no other early-modern industry required as much fuel as sugar. Moore, 'Conquest, Part I,' 559 and McNeil, 'Ecological Atlantic,' 88.

transferring, or skipping, it to the next slightly smaller kettle with a large ladle. They repeated this sequence at each of the next three kettles, until transferring it to the last and smallest vessel, the teache. In the teache, the remaining liquid cooked over the strongest heat in the battery until it had reduced enough to be considered ready for striking, or removal from the copper cauldrons. It was then put aside into the cooler to finish crystalizing.¹¹⁷

With the furnaces running continuously for at least half a year, plantation boiling houses required immense quantities of wood, as ‘any attempt at sugar production without a ready stockpile of forested land would not succeed no matter how favorable other environmental factors’ were for the islanders.¹¹⁸ Moore hypothesizes that a large and busy mill could consume as much as twelve to thirteen thousand pounds of firewood per day and required almost two acres of forest to process a single acre of sugar. Thus, if Barbadian planters planted approximately 32,150 acres with sugar, they would need nearly 64,300 acres of available woodland annually to maintain their boiling houses.¹¹⁹ Broken down to an individual level, the planter elite would have in some cases required dozens of tons worth of wood per day. Based on Moore’s ratio of 1 unit of sugar to 60 units of wood, lesser elites such as Abel Allyne (316 acres) and Michael Terrell (210 acres), would have required an average of 9.06 and 8.49 tons of fuelwood respectively each day, while the island’s greatest planters, such as Samuel Newton (581 acres), Richard Howell (605 acres), and Tobias Frere (604 acres) would have needed 21.45, 33.54, and 26.52 tons per day respectively. Small planters, such as Richard Adamson, who owned 15 acres,

¹¹⁷ Barrett, ‘Sugar-Production, 154-163 and Zahedieh, *Capital*, 88-93.

¹¹⁸ Moore, ‘Early-Modern World,’ 422.

¹¹⁹ NLC, Ayers MS 827, 1684 Census

Table 5.12: Tons of Fuelwood Needed Based on Quantity of Sugar Exported

Year	Sugar Exported	Fuelwood Required Per Year	Fuelwood Required Per Day
1681	7,150	429,000	2,145
1682	11,145	668,700	3,343.5
1683	c. 14,000	840,000	4,200
1688	c. 1,928	77,460	387.3
1691	11,004	589,500	2,947.5
1696	9,854	527,880	2,639.4
1697	5,475	293,280	1,466.4
1698	20,190	1,081,620	5,408.1
1699	11,888	636,840	3,184.2
1700	15,399	824,940	4,124.7
Avg.	10,803	648,198	3,241

Table 5.12: TNA, T/70 938-949, CO 33/13 and 33/14, BL, ADD MS 38714, 1681-1683, and Moore, 'Conquest, Part I,' 375-377 and 'Conquest, Part II,' 7-10. I calculated fuelwood totals by using Moore's ratio of 1 unit of sugar per 60 units of fuelwood.

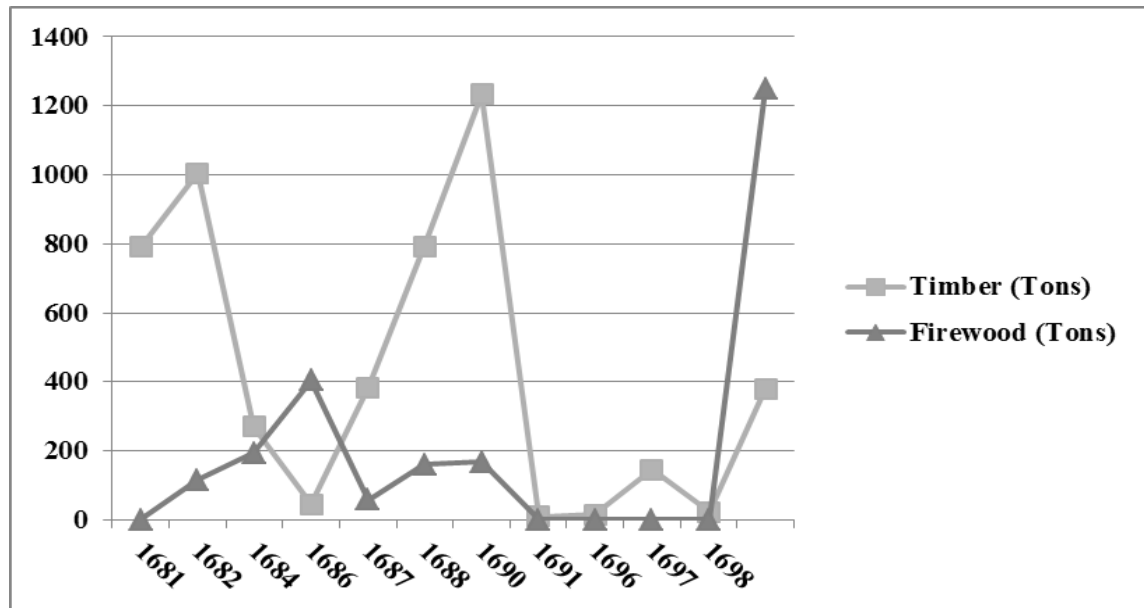
would have still required well over a ton of fuelwood per day.¹²⁰ For plantation owners such as these, firewood was, after enslaved workers, the second largest expense in their budget, accounting for as much as 20% of their yearly operating costs. By 1700, a successful planter with a medium-sized plantation might be spending the equivalent of £200 to £350 a year solely on acquiring enough firewood to keep the boiling houses running.¹²¹

By the 1680s, a combination of huge energy requirements and a lack of local sources meant that the Barbadians had to rely on obtaining almost all of this energy from abroad. Table 5.12 shows that an average sugar crop of 10,803 tons would have demanded an annual total of 648,198 tons of fuelwood to convert cane juice into muscovado sugar, or just over 3,240 tons per day, with peak needs reaching over

¹²⁰ To calculate these quantities, I used a ratio of .24 tons of sugar produced per slave per year to figure out an approximate quantity of sugar produced by each planter. Finally, I utilized the same ratio of 1 unit of sugar per 60 units of fuelwood mentioned above. 'Conquest, Part II,' 7-10.

¹²¹ Matthew Edel, 'The Brazilian Sugar Cycle of the Seventeenth Century and the Rise of West Indian Competition,' *Caribbean Studies*, vol. 9, No. 1 (April, 1969), 42.

Graph 5.1: Importation of Timber and Firewood into Barbados, 1681-1698



Graph 5.1: TNA, CO 33/13 and 33/14, 1681-1698. Using the Returns to accurately measure fuelwood imports is a difficult task, as the officer's entries are inconsistent and, at times, have no real value, especially when he uses the terms 'feet,' 'pieces,' or 'logs.' I have not included these figures, as the Barbadians likely used most 'feet' and 'pieces' of wood for construction, and logs for either ship masts or tail poles for windmills.

5,408 tons in 1698. The Returns, however, suggest that the Barbadians could not have possibly acquired such huge quantities of timber through legal trade alone.

While the islanders made the acquisition of fuelwood an important focal point of their commercial activity, with an average of 34 ships participating in this trade each year, the Returns show that they only managed to transport 6,188 tons of timber or firewood to the island over a ten-year period, with a meager high of 1,630 tons in 1698. As such, the quantity of fuelwood imported into the island would have barely supported Barbados' plantation complex for two days. Moreover, the fuelwood trade was also extremely volatile and was often one of the first sacrificed when trade became difficult. In 1682, for example, Barbadian planters imported nearly 1,120 tons of wood during a year of particularly high trade volumes and peaked at prewar high of 1,401 tons in 1688. Once the Nine Years War broke out, however, Barbadian

Table 5.13: Importation of Fuelwood, Barbados, 1681-1698

Origin	Ships	Timber-Tons	Firewood-Tons	Logs
Africa	1	3	-	-
Bermuda	32	131	-	20
Carolina	54	691	-	400
Crab Island	1	60	-	-
Curacao	2	-	-	-
Jamaica	8	141	9	-
Leeward Is.	52	360	334	40
London	10	15	-	150
Maryland	7	10	-	3
New England	76	1,180	-	-
New York	2	20	-	-
Pennsylvania	6	50	-	-
Providence	5	43	-	-
Saltertudas	1	-	20	-
St. Lucia	38	1,085	83	-
St. Thomas	1	10	-	-
Surinam	34	158	233	-
Tobago	49	571	332	-
Virginia	13	-	19	14

Table 5.13: TNA, CO 33/13 and 33/14, 1681-1698

planters and merchants made little effort to maintain this trade and quickly abandoned it after the French established a strong naval presence in the Caribbean. Quantities during this era dropped to lows of 9 tons in 1690, 20 tons in 1691, and 23 tons in 1697, only to recover to 1,630 tons in the year after the war ended.

Regardless of the limited size and scale of the fuelwood trade, it was an important branch of commerce for Barbadian planters, causing them to utilize a variety of ports throughout the Atlantic to meet their needs. Table 5.13 illustrates the extent of their quest for energy, showing the origins of their fuelwood supplies, as well as the quantities that came from each location. Three trends emerge from this commercial data. First, the search for fuel encompassed the entire Atlantic world: six mainland colonies supplied 137 ships, while a total of 12 Caribbean islands sent

189. 10 vessels even made the trans-oceanic voyage from London, an unexpected discovery considering the bulk of the items in question. The range of Caribbean islands that supplied the planters' wood is also surprising, as they not only traded with other English colonies, such as Jamaica and Bermuda, but appear to have openly received ships from Dutch Curaçao (2 ships) and Suriname (34 ships), as well as Danish St. Thomas (1 ship). Secondly, the endless expanses of virgin forests in the Carolinas served as one of two key fuelwood suppliers from the English mainland colonies, sending 54 ships and up to 691 tons of timber to Barbados, the second highest amount (behind New England) from any one location during this period.

Lastly, the two small, neighboring islands of St. Lucia and Tobago, when combined, represented the heart of the Barbadian fuel trade, with 19% of the vessels and 25% of the wood originating from these two locations between 1680 and 1698. These numbers, however, greatly underrepresent the actual number of ships that sailed between St. Lucia, Tobago, and Barbados, as the majority of wood imported from these islands was done so illegally, with many planters routinely sending their own small ships to gather fuelwood. The Barbadians' reliance on these two neighboring islands is unsurprising, as they had always maintained a special relationship with both St. Lucia and Tobago and had attempted to formally claim and settle both of them at various points throughout the seventeenth century. Tobago, for example, housed a temporary community of Barbadians for a few years in the 1630s, fixing it as a place that 'the people of Barbados have continually sent...for Timber, and fish'd for Turtle.'¹²² The claim to St. Lucia was even more substantial, as the

¹²² TNA, CO 28/4, 30 December 1699, Agents to Council of Trade and Plantations.

Barbadian government bought the island by a deed of conveyance signed by Annawatta, the chief of the local Carib natives, and Thomas Warner, the original ‘founder’ in 1663.¹²³ They proceeded to attempt to establish colonies on the island in 1640, 1644, 1645, and 1667, with each inevitably failing due the ‘unhealthinesse of the aire.’¹²⁴ Lord William Willoughby later repurchased St. Lucia from the native inhabitants during his governorship to use ‘not for planting thereon but for convenience of wood’ and resettled it with small groups of settlers that lived in scattered woodcutting communities across the island.¹²⁵

By the last quarter of the seventeenth century, these two islands had become an unofficial part of Barbados’ insular empire and the elite Barbadians felt justified in their extensive use of all natural supplies. Contemporary records show that they considered both St. Lucia and Tobago as ‘a piece of woodland,’ one that they could ‘use in common to supply themselves with wood.’¹²⁶ For the last ‘20 or 30 years,’ according to local agents, the islanders were ‘sending thither frequently every year for timber.’¹²⁷ Edwin Stede, for example, sent ‘two or three ships’ to St. Lucia in 1686 ‘to cut timber for the public use of this Island.’¹²⁸ Tobago became especially necessary to Barbadian planters by the 1680s, as ‘without timber from [this island] it

¹²³ TNA CO 29/7, 24 October 1700, Council of Trade and Plantations to Vernon.

¹²⁴ TNA CO 28/3, 10 July 1697, Agents to Council and 29/2, 14 June 1676. With the Barbadian government ‘wholly discouraged’ by its numerous failures at settlement, the Duke of Courland, leader of a small duchy on the Baltic Sea, attempted to establish a presence in the Caribbean by settling Tobago. This also failed, as the Courlanders ‘were not strong enough to resist the Indians who, with French among them as wild and savage as themselves, often assaulted the late settlers, killed several of them and forced them to desert the Island.’ The Duke attempted to resettle the island shortly after, but left after facing similar resistance. TNA CO 29/3, 11 June 1681 and 1/48, 3 January, 1682, Dutton to Lords of Trade and Plantations, and 1/48, 5 October 1688, Stede to Lords of Trade and Plantations.

¹²⁵ TNA CO 29/3, 11 June 1681, Dutton to Lords of Trade and Plantations

¹²⁶ TNA, CO 28/4, 30 December 1699, Agents to Council of Trade and Plantations.

¹²⁷ Ibid., 17 November 1699.

¹²⁸ TNA, CO 1/40, 20 October 1686, Stede to Lords of Trade and Plantations.

will be impossible for Barbados henceforward to carry on their sugar works.’¹²⁹

Moreover, with few indigenous Indians and ‘a very good port’ Barbadian entrepreneurs utilized the lush deforested sections of Tobago to grow additional provisions. Planters also sought fuelwood at other nearby islands, such as Dominica and St. Vincent’s. Edward Littleton reported that Tobias Frere, an elite planter, went to ‘Dominico...to fetch timber, as he hath done several times, and as hath been practised for many years, there being always a trade and correspondence between the people of Barbados and the Indians of Dominico.’¹³⁰ Frere, along with other Barbadian planters, also took ‘great liberties to hunt fish and fowl at...St. Vincent, and Dominica.’¹³¹

Yet, a reliance on the naturally abundant resources of Tobago and St. Lucia had drawbacks. It was costly to fit out an expedition to these islands, since it required many laborers and a great number of supplies to cut down the large trees that formed the ancient forests. Moreover, it could be dangerous. In January of 1682, Governor Dutton reported to the Lords of Trade and Plantations that a vessel had recently returned from St. Lucia, where it had been to cut wood, ‘but the natives had killed four of the [woodcutters] and forced them to retire.’ Even though attacks from the natives were rare, a nervous Dutton subsequently ordered ‘that no more ships are to go thither but such as are sufficiently armed and manned to protect the labourers against such attacks.’¹³² The greatest threat to Barbadian security on St. Lucia, however, occurred four years later, when Lieutenant-Governor Stede angrily

¹²⁹ Ibid.

¹³⁰ TNA, CO 31/5, 26 September 1699, Council Minutes and 28/4, 10 April 1700, Agents to Council.

¹³¹ TNA, CO 28/3, 10 July 1696, Agents to Council of Trade and Plantations, 29/6, 12 September 1699, Council of Trade and Plantations to Lords Justices, 28/37, 30 May 1689, Stede to the Earl of Shrewsbury, 1/40, 20 October 1686, Stede to Lords of Trade and Plantations.

¹³² TNA, CO 1/48, 2 January 1686, Dutton to Lords of Trade and Plantations.

shared with London some disturbing intelligence that he had received: 'I learn from Captain St. Loe...that the French begin to make settlements, build houses and inhabit on St. Lucia.... The French settlers assert that they are there under the French King, who is the lawful owner of the Island.'¹³³ Stede later found out that the French had also claimed Tobago, with the Count de Blenac, Governor-General of the French West Indies, justifying his action by claiming that 'I was present when we took it from the Dutch, and I don't remember that the English took any part in the capture.'¹³⁴ James II ordered Stede to take a hard stance on the matter and 'fall down as soon as may be to the Island.'¹³⁵

This quickly escalated into violence on the English side, as Stede sent Captain John Temple on the H.M.S. *Mary Rose* to St. Lucia and St. Vincent. Landing at the former, Temple proceeded to 'set fire to all houses in the bays in these parts, and destroyed the plantations,' while he exchanged bullets and arrows with native Indians at the latter, resulting in the death of two of his men. In retaliation, the English 'burnt their houses and went off.'¹³⁶ The French refrained from violence on their part, but irked the Barbadian government when they celebrated the arrival in Martinique of the heads of the two Englishmen murdered in St. Vincent.¹³⁷ The debate over the ownership of the two isles continued for the next three years, until the Nine Years War unofficially solved the issue by turning the Caribbean into a free-for-all that resulted in the French leaving the islands. While this contested ownership never culminated in a truly violent situation, the possibility always existed, with tension and deceit causing both governors to turn a suspicious eye

¹³³ TNA, CO 1/59, 8 January 1686, Stede to Lords of Trade and Plantations.

¹³⁴ TNA, CO 1/61, 17 November 1686, de Blenac to Stede.

¹³⁵ TNA, CO 29/3, 19 March 1686, James II to Stede.

¹³⁶ TNA, CO 1/60, 25 July 1686, Temple's Journal and 1/62, 19 March 1687, Stede to Lords.

¹³⁷ TNA, CO 1/63, 19 September 1687, Stede to Lords of Trade and Plantations.

towards the other. This episode also greatly affected trade between Barbados and the small ‘wood’ islands for the second half of the 1680s, as it became difficult to safely cut fuelwood in a hostile environment. After the war, the islanders again received word from the H.M.S. *Speedwell* that the French had resettled on St. Lucia and had reestablished numerous plantations on the island, a move that both renewed a nationalistic debate between the two countries and continued to threaten planter access to fuelwood well into the next century.¹³⁸

These challenges caused the Barbadian planters to consider using other materials to power their boiling houses. Throughout the 1680s and 1690s, planters experimented extensively with two forms of natural energy and produced an innovative alteration to the boiling process that offered cheaper fuel costs and greater production efficiencies. Plantation owners began to implement the first of these strategies as early as the late 1660s. In 1669, Nicholas Blake, owner of Bilbao Plantation, complained to Charles II about contemporary conditions on Barbados, specifically describing the deforestation problems that were starting to be felt across the island: ‘a great part of the Sugar Plantations begin to want wood to boil off their crops, so that we must of necessity make use of Newcastle or Welch coals.’¹³⁹ For planters like Blake, coal represented an important alternative to wood that was relatively cheap and easy to obtain. Primarily shipped from London and Newcastle, Barbadians imported hundreds of tons of coal per year during the late-seventeenth century and were able to gain billions of calories worth of energy through its use.

Table 5.14 shows all coal imports to Barbados between 1681 and 1698, the energy that the islanders gained from this alternate source, and how it compared to

¹³⁸ TNA, CO 29/6, 16 August 1699, Council of Trade and Plantations to Earl of Jersey.

¹³⁹ TNA CO 1/67, 28 February 1669, Blake to the King

Table 5.14: Coal Imported to Barbados, 1681-1698 (in Tons)

Year	Coal (in Tons)	Energy/Coal (kcal)	Energy/Wood (kcal)	Ratio kcal Coal: Wood
1681	490	2,123,510,256	2,149,590,000	0.99:1
1682	1,121	4,857,000,419	3,044,799,000	1.6:1
1684	1,601	6,936,715,139	1,262,544,000	5.49:1
1685	1,958	8,483,502,962	1,221,729,000	6.94:1
1686	1,252	5,424,589,228	1,202,682,000	4.51:1
1687	653	2,829,278,567	2,593,113,000	1.09:1
1688	704	3,050,248,256	3,812,121,000	0.80:1
1689	47	203,638,733	1,112,889,000	0.18:1
1690	45	194,973,255	24,489,000	7.96:1
1691	1,641	7,110,024,699	54,420,000	131:1
1695	297	1,286,823,483	97,956,000	13:1
1696	1,113	4,822,338,507	397,266,000	3.24:1
1697	1,766	7,651,617,074	62,583,000	122:1
1698	2,530	10,961,829,670	4,435,230,000	2.47:1
Overall	15,218	65,935,622,102	21,471,411,000	3.07:1

Table 5.14: TNA, CO 33/13 and 33/14, 1681-1698. The Returns generally lists coal in chaldrons, a unit that weighed approximately 5,936 pounds. I converted all quantities of coal into tons for ease of comparison. The kilocalories for each year's coal imports is calculated using the conversions of 1 ton of coal equaling 4,332,739 k/cal and 1 ton of wood equaling 2,721,000 k/cal. The conversion for coal is based on a very low-grade version of the product (20 MJ/kcal) and thus represents a minimum. Kander et al., *Power*, 136.

the island's legal fuelwood supply. The movement of coal into the island followed the general trends already established by food, wood, and livestock. The years between 1682 and 1688 represented a peak moment for coal imports, as they reached consistently high totals that ranged from 1,121 tons in 1682 to 1,985 tons in 1685. After war broke out, the coal trade collapsed, with only 92 tons of coal arriving at island markets for both 1689 and 1690. Coal imports generally remained depressed until greater English control over the Atlantic allowed for a rapid increase in 1696 and 1697. After the war, Caribbean commerce blossomed under the expansion of the Royal Navy and coal imports soared to a period high of 2,530 tons in 1698. Overall, 14,656 tons of coal entered Barbadian ports during this period, for an average of 1,120 tons and 4.8 billion calories per year. When spread evenly over the 358 mills

that dotted Barbados' landscape in 1684, each sugar planter could obtain approximately 3.15 tons (13.4 million calories) annually. Moreover, the energy provided by coal regularly exceeded that supplied by the legal fuelwood trade by an average ratio of 3.07:1, making it a far more efficient source of heat. It was also cheaper than wood, generally costing less than a pound per ton. Thus, coal served as an ideal alternative source of power, since it was consistently inexpensive, packed with energy, and easily found in Barbadian markets.¹⁴⁰

By the 1680s, Barbadian plantation owners also began to utilize a second biological material as a substitute for wood. Cheaper than either coal or timber, and far more plentiful, the Barbadians turned to *bagasse*, the semi-dried, fibrous by-product of processed sugar cane. Before sugar's commodity frontier reached Barbados, *bagasse* was unreliable as a fuel source, as the primitive grinding wheel or dual-rollers system used by many early sugar planters was often too light, leaving many of the crushed stalks damp with cane juice. With the invention of the three-roller grinder in Brazil in the early seventeenth century, and its subsequent migration to the Caribbean, planters could now extract three times as much juice from each stalk, leaving behind consistently drier *bagasse*. By the late 1680s, the Barbadians began to build large storage shelters immediately adjacent to the mills, collecting the used stalks and allowing for them to fully dry out in the hot equatorial sun. *Bagasse* proved itself a particularly important alternative fuel source for mill owners because it freed the Barbadians from relying on distant fuelwood supplies that were limited by the Caribbean's dangerous waterways, increasing prices, and a general lack of English shipping, especially after war broke out in 1689. Thus, the use of vast

¹⁴⁰ Ralph Davis, *The Rise of the English Shipping Industry in the Seventeenth and Eighteenth Centuries* (London: Macmillan and Company, 1962), 177.

quantities of a locally produced waste product as fuel enabled the elite planters to continue to generate large quantities of sugar independent of conditions in the Caribbean or Europe.¹⁴¹

The third strategy represented a strategic alteration of the sugar production process by Barbadian planters. For most of the seventeenth century, it had been the general custom to keep five separate fires, one for each of the copper cauldrons, burning at any given time in the boiling houses. All five were maintained at a separate heat, which allowed those working in the mill to have greater control over boiling temperatures and the cane juice's reaction to the flames, but used large amounts of fuelwood in the process.¹⁴² However, by the end of the 1690s, the Barbadians had developed and perfected the 'Jamaica train,' a modification of the heating system that employed only a single intense fire under the teache and a long covered flue that carried the heat down the line to the rest of the coppers. What the planters lost in temperature control, they made up for in fuel efficiency and decreased their dependence on imported timber and coal.¹⁴³

Thus, by the 1690s, Barbadian mill owners had an array of different energy options at their disposal. Based on legal island imports, the average planter could obtain almost 10 tons of fuelwood and just over three tons of coal per year, as well as an almost endless supply of *bagasse*. The wealthier planters supplemented these totals by organizing their own woodcutting trips to the nearby islands of St. Lucia and Tobago, both of which the Barbadians had 'claimed' for their exploitation.

¹⁴¹ Moore, 'Stalking Modernity,' 16-18, 'Early -Modern World,' 423, Watts, *West Indies*, 398-400.

¹⁴² Ligon, *History*, 87-93.

¹⁴³ J.H. Galloway, *The Sugar Cane Industry: An Historical Geography from Its Origins to 1914* (Cambridge: University of Cambridge Press, 2005), 97, and 'Tradition and Innovation in the American Sugar Industry, c. 1500-1800: An Explanation,' *Annals of the Association of American Geographers*, vo. 75, no. 3 (September, 1985), 342-346, and Watts, *West Indies*, 398-400.

Furthermore, they developed a new method for boiling sugar that used at least two-thirds less fuel, freeing themselves from the expense and burden of finding a nearly endless supply of combustible material. By addressing these issues on their own, Barbadian planters managed to utilize their extensive trading networks to create an economic approach to obtaining energy inputs that was both flexible and pragmatic. When the planters had easy access to neighboring wooded islands or to coal from distant London or Newcastle during the 1680s, they exploited these readily available materials, leading to a peak moment in terms of imported energy. With the outbreak of war, however, they changed their approach by placing a greater emphasis on the utilization of local resources and a manipulation of their own natural world in order to obtain needed fuel. They realized that they had the experience and knowledge to change the way that they produced sugar, introducing key innovations to the process that resulted in smaller operational costs and greater overall efficiencies. These ‘new Improvements and Experiments’ in the collection of energy, defined the Barbadian planters, in Dalby Thomas’ words, as the masters of the ‘Art of Planting,’ proving that they were neither cautious nor conservative, and were willing to embrace the entrepreneurial risks that allowed them to modernize their industry and create a system of self-supply that best suited their needs.’¹⁴⁴

Conclusion

The consistent acquisition of the energy necessary to fuel both large sugar plantations and smaller provision farms represented one of the greatest daily challenges on Barbados, as no other contemporary society required as much power per capita as the small Caribbean island. Barbados’ energy requirements during this

¹⁴⁴ Thomas, *West Indian*, 37.

era can be divided into four separate categories: the nutritional energy needed to power the servants, enslaved laborers, and white farmers that worked the land; the muscle and meat provided by local livestock; the dung used to add nutrients and rejuvenate an otherwise depleted soil; and the wood required to fuel the great fires of the boiling houses. Traditionally, historians have misunderstood the Barbadian planters' and farmers' approach to energy, with some describing the island as a sugar monoculture that imported most of their necessary energy sources from elsewhere in the English-Atlantic world, while others portray a static society that resisted basic change and improvements because its inhabitants had already established a profitable system that had been put into place by the astonishingly successful local planter and merchant elite.¹⁴⁵

Both of these standard mercantilist interpretations, however, are inaccurate and reductive depictions of Barbadian society, as by the 1680s and 1690s the island's planters and farmers had become largely self-sufficient in supplying their own energy needs.¹⁴⁶ In an ongoing effort to make their plantations and farms more efficient and profitable, they actively experimented with different planting techniques and production methodologies in order to overcome the many disadvantages and limitations imposed by isolation, expense, and natural constraint, especially after the Nine Years War broke out in 1689. To reduce their reliance on imported or foreign food, the Barbadians produced many of the provisions that they consumed on local farms and plantations. Enslaved Africans and indentured servants, for example, were expected to find or produce most of their own foodstuffs, as they only received small amounts of imported proteins, usually salted fish, and a

¹⁴⁵ Jack Greene, 'Society and Economy in the British Caribbean during the Seventeenth and Eighteenth Centuries,' *American Historical Review*, vol. 79 (1974), 1,516-1,517.

¹⁴⁶ Gragg, *Englishmen Transplanted*, 182-192.

little corn. The wealthy sugar planters, however, had the ability to be picky about what they ate. They believed that most of the heavily salted and fatty provisions that arrived at the island from abroad were beneath their social standing and instead preferred to eat fresh local fare, such as the vegetables and fruits that they produced and the livestock that they raised. Thus, even during the island's peak trading moment in the 1680s, nearly 49,200 out of the 66,000 Barbadians (73.45%) must have produced a significant percentage of the nutritional energy that they needed to survive. Therefore, it was the remaining 17,000 non-elite free whites, the individuals that Galenic scientists said benefitted most from the salty meats and dairy products that arrived from abroad, who consumed the majority of the imported provisions. On average, more than 80% of their daily caloric intake entered the island by boat. Overall, however, this latter segment of the population had little actual impact on island statistics, as those who were expected to produce own provisions greatly outnumbered those who generally relied on imports. Thus, the average late-seventeenth century Barbadian was responsible for producing almost 80% of his or her own calories every single day. While not self-sufficient in the traditional sense, most Barbadians engaged in considerable levels of self-production and grew significant quantities of their own food.

The island's animal population formed another important source of energy for those living and working on Barbados. As a ubiquitous part of island life, the livestock population numbered in the tens of thousands and included both laboring animals and livestock bred strictly for consumption. The island's large horse, cattle, and assinego populations formed a considerable workforce that the islanders relied upon to perform a variety of roles across the island. Rarely consumed as food, they

instead served as horsepower for the transportation of both people and supplies, pulling plows around the fields, occasionally turning the rollers that crushed the sugarcane, and producing the large quantities of mineral-rich dung that fertilized the island's soil. Almost all landowners owned at least one horse, cow, and donkey, as they, like the enslaved Africans that worked alongside them, provided the labor that made both provision and sugar production possible. Other barnyard animals, such as sheep, goats, swine, rabbits, and fowl were also prevalent throughout the island, but were instead used as a source of fresh meat for a population that needed a steady supply of proteins and vitamins to conduct the hard work that defined a plantation society. While less commonly owned than the aforementioned laboring animals, they were still present in great numbers on many farms and almost all plantations. Thus, animals represented another form of energy frequently utilized by many Barbadian planters and farmers, as the labor and calories that they provided were necessities that made life in the Caribbean profitable and worthwhile.

Plantation owners and provision planters also aggressively tackled the many challenges posed by the progressive decline of the island's soil fertility. For the first time in Europe's historical relationship with sugar, the planters did not rapidly abandon an over-exploited landscape once production began to decline. Instead, most stayed in Barbados and worked to innovate ways in which they could combat the widespread lack of fecundity that plagued them throughout the 1680s and 1690s. They instituted a variety of different strategies that ranged from quick and easy fixes, such as altering the length of the planting schedule, to long-term changes that transformed the theory of sugar planting and overthrew previous notions of best practice. The islanders also implemented Old World farming techniques, like

dunging, and conducted extensive experiments to figure out what combinations of local organic matter could produce the most effective fertilizer for the worn out soil. By doing this, they forced the environment to bend to their will and, in doing so, discovered that they could push their plantations to unexpected levels of production that soared past the highest outputs of the earlier boom period.

Finally, with such a large percentage of land being cleared for either agriculture or pasture, and with the growing needs of planters' boiling houses, the Barbadians had callously destroyed the island's once plentiful woodlands. To counter this, they searched abroad and incorporated the nearby islands of St. Lucia, Tobago, Dominica, and St. Vincent's into a small unofficial 'insular empire' that they actively exploited. When access to these islands proved to be too pricey, difficult, and dangerous, Barbadian planters experimented with new materials, such as coal and *bagasse*, both of which were reasonably cheap and easy to obtain. They also applied their extensive experience as planters to the sugar production process, implementing innovative changes to the boiling house furnaces so that they required less combustible material in order to do the same amount of work. The resulting Jamaica train increased overall efficiency, while significantly lowering fuelwood costs and freeing many plantation owners from a reliance on either foreign or distant suppliers. Overall, these adaptations and innovations allowed those on Barbados to push an island that was worn out and increasingly unfit for a cash crop as exploitative as sugar to remain as a relevant, dynamic, and profitable force within an increasingly competitive and crowded Caribbean.

Conclusion: A Look Ahead to the Eighteenth Century

Edward Littleton, after pointing out the many grievances that the planter class had with England's governance of Barbados, the excessive costs associated with the production of sugar, and the great benefits that plantations brought to the metropole, concluded his *Groans* with a final lamentation to the Lords of Trade: 'It is now that we put an end to this sad Discourse. Having made it appear, that the Plantations are brought to a miserable and ruinous Condition... We have laid before you such a *Series* of Calamities, as are not easy to be parallell'd.' He finished by pleading: 'Let us not be denied the common liberty and privilege of Mankind, to groan when we dy. Let not our Complaints seem troublesome and offensive; but be received with Compassion, as the Groans of dying Men.'¹ Littleton's conclusion highlighted the great concern he appeared to feel as an agent for late-seventeenth century Barbados, with his work vividly depicting a worn-out plantation society ruthlessly exploited by a greedy metropolitan elite intent on confiscating the planters' hard-earned wealth for its own coffers. Importantly, these views were not only the ramblings of a retired plantation owner living in England; they also reflected the perspectives of many of his contemporary planters. The Assembly sent a letter to England in 1690 specifically thanking Littleton for making the metropole aware of the island's desperate plight. They praised the author of this 'too truly titled' pamphlet for his 'lively representation of our present state,' while making clear to all the 'unparalleled insupportableness of our Conditions.'²

While it is unsurprising to see that Littleton's bombastic descriptions had a significant impact upon those who stood at the center of England's mercantilist

¹ Littleton, *Groans*, 35.

² TNA, CO 31/3, 25 November, 1690, Assembly Minutes.

empire, it is remarkable to consider that this highly flawed and distorted interpretation of island conditions has informed the way that multiple generations have understood the history of Barbados' late-seventeenth century. Many scholars continue to see the *Groans* as an indication of a society in turmoil, depression, and decline. Harlow, for example, wrote that the island was experiencing 'social and economic decay' by the 1680s, as the 'position of the planter had altered considerably for the worse,' with many 'seriously afraid of general bankruptcy' by 1685. This inevitably pushed the desperate islanders into greater levels of subordination to the 'interests...of the Mother Country.'³ Almost fifty years later, Dunn echoed Harlow, describing the 1680s as a time of a 'deteriorating economic and political situation on the island,' with their sugar fields 'showing signs of soil exhaustion, their annual shipments... beginning to decline, and their profits...eroded by the steady drop in sugar prices, which hit bottom in 1685-1686.'⁴ Patricia Molen agreed with Dunn's conclusions, portraying the era's white Barbadian population as 'doomed to permanent decline,' regardless of their attempts at 'adapting to the social and economic realities' of life in the Caribbean.⁵ Finally, Puckrein, twenty years after Dunn, writes that the late-seventeenth century Barbadians were unable 'to improve the economic situation' throughout the decade and that the 'social and military problems' that defined this era meant that 'their dependency on England was further solidified.'⁶

This dissertation, however, refutes the works of those historians who have incorrectly portrayed this era as one of decline and dependency, while proving that a

³ Harlow, *History*, 259-267.

⁴ Dunn, *Sugar and Slaves*, 101-103.

⁵ Patricia Molen 'Population and Social Patterns in Barbados in the Early Eighteenth Century,' *William and Mary Quarterly*, vol. 28, no. 2 (April, 1971), 300.

⁶ Puckrein, *Little England*, 144-145.

careful look at the statistical record actually depicts a plantation society that reached a peak economic moment in its early history. The Naval Office Returns, for example, show that the Barbadian economy was rapidly expanding by 1680 and continued to do so until at least 1688, when domestic revolution and international war halted this growth. The island's import trade nearly tripled in the ten years between 1676 and 1686, with their shipping and tonnage increasing from 150 ships and approximately 10,176 tons to 423 ships and 27,200 tons. Exports also reached high levels during this era, passing 11,300 tons worth of sugar in 1682 and a projected 14,000 tons in 1683. While the profits derived from these sugar exports were likely minimized due to the low prices that resulted from the increasingly glutted London market, the planters' attempts at diversification through the expanded production of both rum and molasses allowed them to reach new levels of economic prominence. Eltis calculates that this diversified approach resulted in greater returns per islander during the late 1680s than for a similarly expansive era in 1665 and 1666 and that each islander exported an average of £7.3 worth of goods throughout this decade, a figure almost 4.5 times higher than the tobacco trade in the Chesapeake and twice as high as contemporary sugar planters in Brazil.⁷ This success caused Eltis to label late seventeenth-century Barbados 'the Hong Kong of the pre-industrial age' and the most successful exporter of raw materials 'proportionate to its size and population...in the history of the world up to that point.'⁸

A key reason for this increased success was that the Barbadians' commercial connections grew during this period to encompass new colonies, such as Pennsylvania, and included increased traffic with others like New York, Bermuda,

⁷ Eltis, 'New Estimates,' 646.

⁸ Ibid.

Carolina, and Virginia. Moreover, their trade networks also featured a growing number of trans-Atlantic locations such as Africa, the Atlantic islands of Cape de Verde and Madeira, and, most importantly, London, Ireland, and the English outports. Combined, imports from the Caribbean, English mainland colonies, and Europe gave the Barbadians access to nearly everything that they needed to survive in the tropics. It was both the balance achieved by the Barbadians inside this network and their freedom to move within England's mercantile system that allowed for such rapid and expansive commercial growth. Even though the islanders complained incessantly about the constricting and unfair nature of England's Navigation Acts, they were decidedly advantageous to most merchants and planters at this time, as they helped ensure that the island's elite shipped out large quantities of goods by guaranteeing a valuable market for its sugar in London and provided protection for ships heading across the Atlantic. This gave Barbadian planters and merchants little motivation to work outside of its regulations and appeared to have kept illicit participation in the import trade to a minimum throughout the 1680s. Thus, while Littleton complained of an English government that set out to 'pare us close, and keep us low,' the island's strong relationship with England was mutually beneficial to both sides during this decade and was a key component of the economic expansion that defined the era.⁹

This dissertation has also shown that the importation of unfree labor into Barbados also underwent expansion during the 1680s and reached a peak commercial moment of its own at this time. The indentured servant trade, described as both antiquated and in decline in much of the historiography, experienced a rebirth during

⁹ Littleton, *Groans*, 14-15.

this era, with the projected population increasing from 2,381 in 1684 to over 3,100 by 1688. Furthermore, the Barbadians' importation of enslaved Africans also grew dramatically during the 1680s, with the trade expanding from a legal average of 4 ships and 1,200 black laborers a year between 1674 and 1679 to 12 ships and 2,710 black laborers throughout the 1680s. This huge influx of labor caused the average cost per head to decline, dropping from £18.84 in the late 1670s to £15.60 by 1683. In fact, so many enslaved workers arrived at the island during this era that a natural glut occurred by 1686, when the islanders only bought 83.89% of the Africans that survived the trans-Atlantic voyage. The Barbadians were also constantly attempting to reestablish trade with the Spaniards and sell extra enslaved blacks to South America, where the Spanish colonists would often pay inflated prices in ready bullion. This additional branch of the slave trade flourished in the early 1680s, when Spanish merchants bought thousands of enslaved Africans for tens of thousands of pounds in silver, but it decreased significantly after 1683 and always seemed to remain just beyond the Barbadians' ever-reaching grasp. Thus, Littleton was once again inaccurate in his assessment of the era, as his complaints of an inability to 'procure and keep White Servants' and of the limited importation of enslaved black labor at an overly expensive £20 per head covered up a very different reality.

Barbados' economic expansion, however, came to a definitive halt by the early 1690s. The most obvious reason for this stemmed from the limitations placed on trade by both England's Revolution in 1688 and the nation's ensuing participation in the Nine Years War. With the French Navy rapidly taking control of both Caribbean waterways and the English Channel by 1690, the islanders found themselves cut off from many vital Atlantic markets, with the disruption of trans-

oceanic links to England, Scotland, and Ireland representing the most devastating of these losses. Unable to cheaply and easily receive needed goods, they lost access to thousands of hogsheads worth of food per year, with Irish meat, butter, and cheese, English beer, cider and ale, and Madeira wine infrequently arriving at island ports. A limited slave trade also caused problems for island planters, especially during the early-to-mid years of the war. Between 1690 and 1695, for example, Barbados' ports received an annual average of only 3.5 ships and 1,493 enslaved Africans, numbers that could not offset the increased mortality rates that defined much of the war for this segment of the island's population. Furthermore, prices per head surged upwards after 1698 and continued to do so throughout the war, reaching £26.54 by 1695 and £32.18 by 1696.

Barbadian planters and farmers, however, countered these wartime challenges by relying on three separate measures that helped to keep them supplied with needed goods throughout the conflict. England instituted the first after much encouragement from colonial merchants, establishing an annual convoy system in 1691 for each region of the empire. The Barbadian convoy, specifically, achieved a mixture of both great success and frustrating failure during its eight years in operation. In 1691, for example, 48 ships and up to 6,081 tons worth of goods arrived as part of the convoy, while the 1695 version never actually left England and the still-potent French Navy nearly wiped out the 1697 commercial armada. Thus, while unreliable and occasionally sporadic, especially during the latter stages of the war, both white and black Barbadians appear to have received a much-needed boost in trans-Atlantic provisions from England's annual convoys during its first few years of operation.

The islanders also implemented two other supply techniques on their own, both of which were more local solutions that did not require metropolitan interference. The first centered on the continued goal of insular self-production. As chapter 5 proves, the Barbadian population produced anywhere from 65% to 95% of their own calories each year. They grew a variety of vegetables, including potatoes, corn, and cassava, raised livestock for fresh meat, maintained fruit trees, occasionally caught fish and other types of seafood, and distilled many different forms of liquor. Thus, when war cut them off from their established trans-Atlantic food sources, the islanders turned to locally produced provisions to overcome a significant percentage of their nutritional and caloric deficiencies. Secondly, Barbadian planters and merchants resorted to expanding the scale of their interloping trade by taking advantage of the nearby Dutch, French, Spanish, and Danish colonies to obtain many of the supplies no longer accessible from England, while in return supplying them with hundreds of tons worth of sugar for eventual sale in Amsterdam. The Barbadian elite also participated in illegal trade with mainland English colonies, meeting friendly and enterprising merchants in the many cays, bays, and inlets that lined the North American coast in order to buy and sell goods without having to pay duties or other taxes. While it is impossible to measure the quantity of goods that entered island markets through illegal channels, the records do provide enough anecdotal evidence to suggest that it reached particularly high levels during the 1690s and remained an important source for Barbadian trade throughout the decade.

Thus, the Nine Years War caused a significant and important change in the way the islanders approached trade, as trans-Atlantic commercial voyages became both expensive and difficult. With a major branch of their network essentially cut

off, Barbadian planters and merchants had to find other ways to receive imports and exchange exports, even if it meant directly violating the Navigation Acts by trading to both economic and political rivals. It was this pragmatic, responsive, and flexible approach to trade that defined the changing white Barbadian commercial habits of the 1680s and 1690s. They happily operated within England's mercantilist system when it benefitted them to do so and gladly took advantage of the convoys sent to the island, but refused to follow a single economic model. Instead, they approached trade from a more nuanced, pragmatic, and capitalist point-of-view that stressed doing what was best for their own survival and profit. They wanted the right to choose their own economic destiny and, when able to do so, managed to create a matured plantation society that reached new levels of expansion and production.

This dissertation further argues that the changing environmental and climatic conditions on the island were also responsible for bringing Barbadian economic expansion to a temporary, but rapid, end by 1690. Mired in a particularly bad stretch of the Little Ice Age, the islanders complained of weather patterns that oscillated wildly between excessive rains, unnatural cold, and drought. Furthermore, they dealt with an increase in the number of hurricanes that hit the island and trade winds that unexpectedly shifted directions. The increasing infertility of the soil and the lack of native forest also complicated matters, as these two key problems had to be successfully dealt with if the island's planters, farmers, and merchants wanted to remain productive. Moreover, the changing climatic patterns and resulting wetness proved to be dangerous to many on Barbados, as disease became one of the defining features of the island after 1690, especially in St. Michael's parish. While many established white Barbadians avoided the deadly fevers that flourished as a result of

the cool and wet weather, the newly arrived soldiers and sailors were not as fortunate and died in the thousands. Barbadians of all races and social classes also suffered from a variety of other deadly diseases, including small-pox, dysentery, and, especially, the dry belly-ache.

To counter the results of these environmental and climatic challenges, the island's white population implemented a series of adjustments and innovations that allowed for them to gain greater knowledge and control over their tropical home. Some conducted scientific experiments, testing barometers and possibly thermometers to help predict bad weather. Others, like Captain Langsford, turned to nature and learned that by studying the sun, moon, and sea they could predict storms and uncharacteristic conditions before they occurred. They also incorporated a variety of different strategies to overcome the island's changing environment and increasingly infertile soil, ranging from simple alterations of the growing schedule and experimenting with different planting techniques and materials to incorporating Old World agricultural methods, such as dunging, when it seemed advantageous to do so. Furthermore, Barbadian planters also figured out how to make dried-out cane trash into a viable form of energy for their boiling house fires and reconstructed their furnaces in a manner that utilized less fuelwoods when the French threatened access to their traditional sources.

The white Barbadian population also turned to nature to better understand the many diseases that ravaged their island and to learn how to best cure them. First, they freed themselves from the early-modern view that disease derived from miasmic or peccatogenic origins and instead hypothesized that the island's poor hygienic conditions, such as the regular consumption of rotten food, dirty and littered streets,

and fouled water, were more reasonable culprits. Secondly, they began to understand that European medicine contained serious flaws in its administration and, with guidance from an enslaved population already learned in non-traditional remedies, turned to the natural world to experiment with effective local cures. Both white and black he islanders used the Silk Cotton Tree, the Varvain plant, and the Palma Christi to cure fevers, the Arrowhead root, Iron Vine, and Pigeon Pea to fight dysentery, the Soldier's Bush and Aloe plant to reduce swelling, and the Crab Eye Vine to minimize the symptoms of consumption. Thus, by the end of the 1690s, the white Barbadians emerged from the Nine Years War in a better condition than before the conflict began and now lived within a matured plantation society that they had built and organized for their own benefit and welfare.

While this work fleshes out the experience of those on Barbados during the late-seventeenth century, there is still much work that still needs to be done on the island, as other eras are also underrepresented in the historiography. One such time period is the first two decades of the eighteenth century, another moment in Barbadian history defined by economic expansion, greater social maturation, and international conflict. By 1701, the War of the Spanish Succession (1701-1714) threw the Caribbean into turmoil once again and tested whether or not the Barbadian planters' and merchants' experience from the Nine Years War informed their ability to overcome another extended period of challenges and limitations. Initially, both black and white Barbadians suffered from many of the same problems that had plagued them during the previous conflict. The French Navy again had substantial success in controlling the movement of trade throughout the Caribbean, with one report stating that 'the Caribbee Isles are so much troubled with the French...from

Martinico, that no vessells can pass in or out for them.’ They further threatened the island’s illegal supplemental import trade by having again ‘plundered the Dutch Island named Stacia.’¹⁰

Even more troubling, however, was the fact that the New England merchants initially decided to completely withhold trade from Barbados, further magnifying the already substantial limitations experienced on the island. In the early years of the war, most New England ports refused to take Barbados’ sugar, rum, and molasses as a form of payment, as the merchants claimed that they readily obtained cheaper tropical staples from foreign producers. Instead, the New Englanders demanded monetary payment, which became increasingly difficult after a forced cessation of trade with Spanish America cut them off from needed bullion.¹¹ This led to the islanders experimenting with their own paper money in 1706, a disastrous innovation that inevitably destroyed the credit of many, drove others into bankruptcy, and convinced some to abandon the island in hopes of escaping their debts.¹² One contemporary letter relates that having ‘nothing but paper for silver’ caused many of the ‘miseries of this country.’ The resulting inflation caused the price of sugar on the island to skyrocket from £8 per hundred to £20 per hundred by August of 1706.¹³

The New Englanders’ refusal to trade with Barbados also hurt the islanders’ ability to access needed provisions. George Lillington, acting-Governor of the island from 1710-11, wrote to London ‘that without the constant supplys from [New England] of flower, bisket, beef, pork, salt fish of all sorts, we would not subsist but

¹⁰ TNA, CO 152/9, N.D., March, 1710, Dickenson to Askow.

¹¹ This became detrimental to the point that Barbadian agents fought to obtain a protective tariff on foreign sugars from London, finally winning one worth 12s 6d per cwt to protect Barbados’ planters. Starkey, *Economic Geography*, 86.

¹² TNA, CO 319/1, 1707/1708, Proprietors in Barbados to Queen Anne. Eventually, the home government disallowed the act and the government quickly retired the paper money.

¹³ DAB, Colonel Robert Stewart Papers, 1698-1720 X 10/3, 15 August, 1706, Thomson to Stewart.

must starve.’¹⁴ The islanders also saw their export trade threatened by both the lack of commerce with New England and the significant limitations placed on trans-Atlantic shipping, as wartime conditions within the Caribbean made the movement of goods difficult over long distances. Sugar exports, for example, dropped from 15,399 tons in 1700 to approximately 10,000 tons in 1701 and only 2,731 tons for the first half of 1702. These restrictions ensured tough times for many smaller farmers and poor whites on Barbados, as the widespread ‘want of money,’ in tandem with an overall ‘dearness of all sorts of provisions,’ resulted in conditions that either ‘distroy’d or banish’d most of the poorer sort’ still living on the island. By 1706, the Assembly wrote of ‘the visible, eminent, and universall desolation of this once flourishing, but now poor, decayed Island.’ Another letter communicated to London that ‘Low markets,’ along with ‘our scarcity of money here is very mortifying....We must live in hopes to see happier times.’¹⁵ Governor Crowe also complained of the ‘great violence and oppressions’ that ‘miserably distract, discontented, and impoverished and disabled us even beyond the hopes of recovering ourselves out of the labyrinth of our amazing confusions.’¹⁶

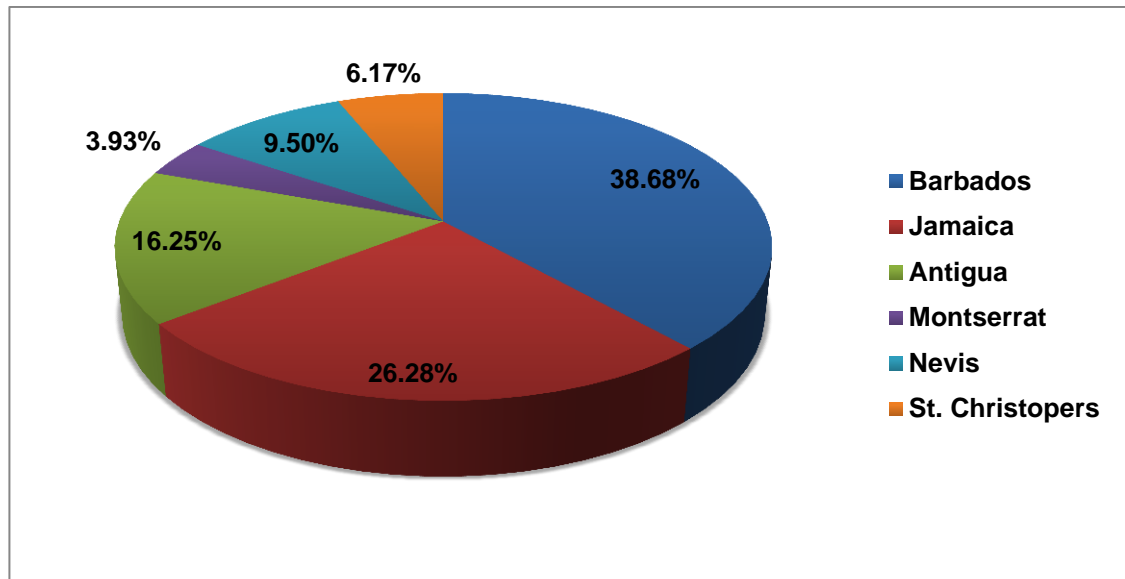
Yet, Barbadian planters and merchants, by relying on many of the same innovations and experiences from the 1690s, managed to counter their early wartime struggles by creating a productive and well-provisioned society by the middle of the war that remained successful for years after the Treaty of Utrecht. The Returns show, for example, that the islanders overcame the limitations placed on their exports, as they sent an average of 13,853 tons of legal sugar to the Atlantic world

¹⁴ TNA, CO 28/13, 13 June, 1710, Lillington to Council of Trade and Plantations.

¹⁵ DAB, Colonel Robert Stewart Papers, 1698-1720 X 10/3, 22 October, 1706, Hays to Stewart.

¹⁶ TNA, CO 28/10, 8 October 1706, Crowe to Council and CO 28/10, 18 October 1706, Assembly to Crowe.

Graph 6.1: % of Sugar Shipped to England by Caribbean Colony, 1697-1720



Graph 6.1: TNA, Cust. 3/1-3/21. The data is missing for both 1705 and 1712, so all resulting numbers should be higher.

between 1706 and 1709 and, according to the Customs records, sent over 11,000 tons per year to England between 1713 and 1720. While their domestic colonial rivals also increased their sugar production after 1700, they could rarely compete against the experienced planters of Barbados. As Graph 6.1 depicts, Barbadian planters continued to ship almost 40% of England's sugar exports between 1697 and 1720, sending home 70,000 more tons than Jamaica and 127,000 more tons than Antigua over that period. Moreover, the island's sugar industry appeared to continue growing throughout the war, as the Barbadians owned 1,309 plantations and operated 409 mills by 1710, a 14.25% increase since 1683.¹⁷

The island's demographics also reflected an expanding society for many white Barbadians, as they benefitted from better weather conditions and improved overall health. In fact, the 1712 and 1716 censuses reveal that the island's population continued to grow throughout the latter stages of the War of the Spanish

¹⁷ TNA, CO 28/13, 1 August 1710, Lillington to Council of Trade and Plantations.

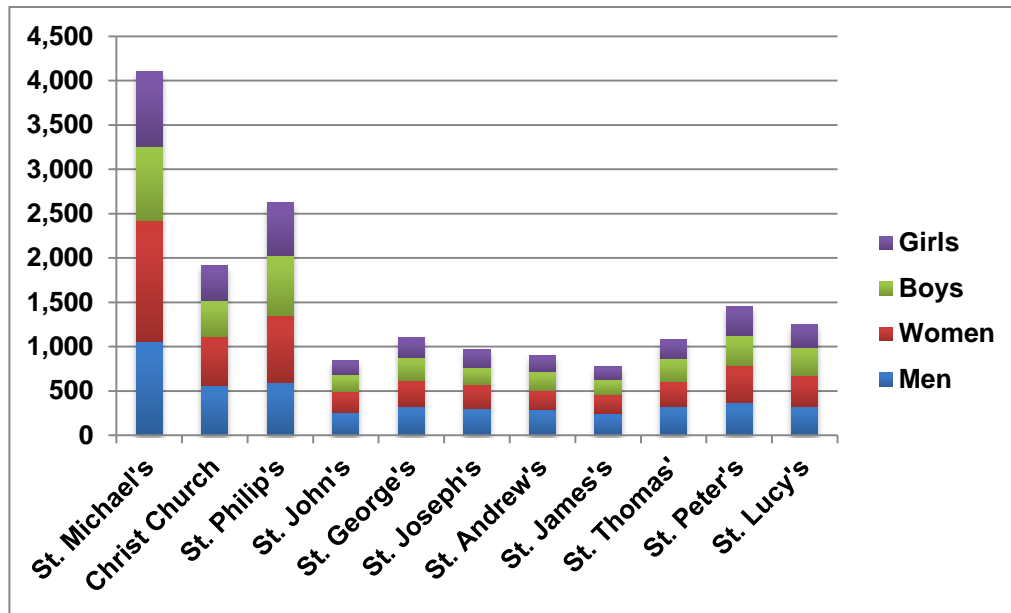
Table 6.1: 1712 Census

Parish	Plantations	Men	Women	Children	Total	Enslaved
St. Peter's	52	339	436	611	1,386	3,708
St. Lucy's	156	302	345	561	1,208	2,742
St. Philip's	268	421	588	996	2,005	5,991
St. John's	156	276	231	352	859	3,813
St. Joseph's	184	274	229	419	922	2,418
St. Thomas'	179	261	253	446	960	3,524
St. Michael's	155	830	918	1,251	2,999	8,551
St. Andrew's	42	257	200	325	782	3,307
St. James'	33	262	96	94	452	2,652
St. George's	84	315	233	407	955	5,264
Ch. Church	NA	NA	NA	NA	NA	NA
Totals	1,309	3,537	3,529	5,462	12,528	41,970

Table 6.1: DAB, Pam. C283, 1712 Census

Succession. Reaching a reported low of 12,000 in 1696, the free white population increased over the course of the conflict to approximately 14,000-14,500 by 1711 and 17,018 by 1715. Surprisingly, the latter figure totaled a number only a few hundred less than in 1683, meaning that conditions had stabilized on the island well before the war ended. The censuses also prove that the demographic trends of individual parishes experienced few large-scale changes since the 1680s. According to the 1712 census, the southern parishes of St. Michael's and St. Philip's remained the largest, with populations of 2,999 and 2,005 respectively. The two northernmost regions, St. Peter's and St. Lucy's, were the next-most populated, as Speightstown's presence in the former and the many small farmers of the latter resulted in 1,386 and 1,208 white settlers. The central parishes of St. John's, St. Andrews', and St. James', all located in a region limited by poor soil composition and hilly terrain, continued to have the fewest inhabitants, with 859, 782, and 452 respectively. However, when these numbers are compared to the 1716 census, most parishes show evidence of

Graph 6.2: The 1715 Census



Graph 6.2: DAB, BS 19, 1716 Census

considerable peacetime population growth, with St. Michael's, St. Philip's, and St. James' exhibiting particularly impressive gains of 37%, 34%, and 71% respectively. St. Michael's, for example, now contained over 4,000 inhabitants, while Christ Church had 1,914, St. Peter's 1,452, St. Andrew's 903, and St. James 775.

Additionally, the island's white adult population nearly reached equilibrium in regard to gender distribution, with men (3,537) only slightly outnumbering women (3,529) by 1711, a trend that would reverse itself for the first time four years later (4,641 to 4,978). The island population was also quite young, with Governor Crowe and George Lillington both reporting to England that 1,103 total baptisms occurred between 1708 and the summer of 1710, versus only 848 burials.¹⁸ With so many baptisms taking place, children came to dominate the island, making up about 43.5% of the free white inhabitants tallied in both censuses.¹⁹ This represented a great

¹⁸ TNA, CO 28/11, 18 August, 1708, Crowe to Council and 1 August, 1710, Lillington to Council.

¹⁹ DAB, Pam. C283, 1712 and BS 19, 1716 Census.

demographic change for Barbados, as until this point the white population had a reputation for being predominantly young, unmarried, and male.²⁰ Youth was still the trend, however, as the median age for both sexes was 19 and only 16% of the white inhabitants were over 40 (with 3% being over 60). Yet, the island was no longer a man's world, as demographic statistics reveal a sexual equilibrium that allowed for an increasing importance in the role of women and families and provided additional proof of the continued maturation of this plantation society.

The enslaved black population also continued to increase in size throughout this period. While the 1712 Census reported the total as 41,970, which likely reached nearly 47,000 with the addition of Christ Church's totals, a hypothetical projection based on 2% mortality rates during years of peace and 7% during the war gives population figures of 48,525 by 1715, and 66,672 by 1720, a total that would have easily represented the largest enslaved workforce on the island up to that point and a huge 45% increase in the forty years since 1680. The continued expansion of the island's black population was a vital component of the success experienced by white planters, merchants, farmers, and artisans during this era, as it was the cruel and dehumanizing exploitation of this community that allowed for increased production of not only sugar, molasses, and rum, but also the ground provisions and livestock needed to feed all races and social groups on the island, as well as the cotton used for clothes. It was their labor that gave planters political power in both Barbados and London, earned them the wealth and prestige that made the great sugar plantation owners some of the richest men in the English world, and that freed the island from a restricting reliance on an overreaching and domineering metropole.

²⁰ Gragg, *Englishmen Transplanted*, 143.

Moreover, the island's black enslaved black population also taught its white owners about life in a tropical environment and showed them the incredible medicinal qualities of their natural surroundings. They did all of this for a racist and cruel social class that openly despised and feared them, while continuing to push for their own basic human rights, producing most of their own food and general household materials, and maintaining an important sense of community that could provide strength and some semblance of stability within a brutal and violent world. Thus, to a considerable extent, it was the enslaved Africans who were responsible for much of the 'maturity' that defined Barbadian society in the late-seventeenth century, as the intense, but systematic, exploitation of this unfree population created the necessary conditions for continued success and expansion to sweep across the island.

Overall, this brief preview of the period between 1700 and 1720 proves that Dunn was wrong when he claimed that Barbados existed as a 'demographic disaster area' that depended on constant in-migration to sustain a healthy and naturally-increasing white population.²¹ Additional research needs to be conducted to definitively show that, by 1715, both the white and black populations were growing across the island, and that the numbers had rapidly recovered from the disruptions caused by involvement in two international wars. More information also needs to be provided on the island's early-eighteenth century approach to better health care, sustainable agricultural practices, continued access to imported provisions, the infertility issues that plagued many farms and plantations, and an improved understanding of the causation between disease and filthy local conditions. Finally, future work must address the fact that the balanced, young, and growing free white

²¹ Dunn, *Sugar and Slaves*, 301.

population, and the growing community of enslaved Africans that were increasingly able to naturally reproduce, both helped to create a Barbados that displayed a creolized maturity that boded well for the creation of a relatively stable and sustainable eighteenth-century plantation society for the wealthy white planters that controlled the island.

Thus, the image of Barbados that emerges from this dissertation does not resemble the one described in much of the older historiography and proves that the white Barbadians were not actually living within a ‘poor and impoverished’ society, struggling through ‘a period of depression,’ or dealing with an ‘era of uncertainty.’ Instead, this dissertation treats the 1680s as a crucial time period in the island’s early history, as it was during this decade that Barbadian society reached a substantial state of maturity for the first time. Furthermore, this dissertation shows that it was during the 1680s that the wealthy white islanders attained the height of their seventeenth-century economic power and importance by establishing a peak commercial moment for both imports and exports that lasted throughout most of the decade. Moreover, by the 1680s and 1690s, they had developed a deep understanding of how the English colonial system worked and a mastery of how to best benefit from it. They knew when to follow the Navigation Acts and when to blatantly disobey them, had established an illegal commercial network that tied the English, French, Spanish, Danish, and Dutch into a single flexible commercial unit, and dominated and manipulated the slave trade to suit their own ends.

Finally, they also proved during this era that they were neither the ‘dependents’ of a controlling and omnipotent metropole, nor the ‘primitive’ and ‘wasteful’ colonists that possessed an aversion or hostility to innovation. They were

instead masters of the ‘Art of Planting’ and the contemporary leaders of the English West Indies. As early capitalists, they created an updated and altered notion of what ‘empire’ actually meant, showing the English government that the small, rocky outcrops of land randomly scattered throughout the Caribbean were not simply the ‘golden geese’ for a wasteful and greedy monarchy, but individual societies with their own economies, political institutions, and social structures, and a sense of duty to their own preservation and prosperity that superseded any allegiance to a distant metropole. They maintained a distinct sense of what Ivan Roots termed ‘localism,’ giving priority ‘to the apparent needs of a community’ rather than to the larger state or nation.²² With Barbados at their head, the English West Indies came to embody many of the Whiggish economic theories popular at the time, including an open and generally free trade, an early capitalist approach to commerce, a strong mercantile relationship with the Dutch, an empire built on commerce and labor instead of the narrow-minded production of unrefined raw materials for metropolitan markets, and a great disdain for trading monopolies.

This self-serving interpretation of empire gave the elite Barbadian planters and merchants a considerable sense of their own power and place within the Atlantic world, and helped them push away from a dependent and unequal relationship with the metropole.²³ The Barbadians did not need London as much as England’s government wanted to believe that they did and preferred general self-sufficiency to a distant dependency. They, like the rest of the English Caribbean, forged their own paths, instituted their own governmental regulations, followed their own economic

²² Ivan Roots, ‘The Central Government and the Local Community,’ in E.W. Ives, ed., *The English Revolution, 1600-1660* (London, 1968), 37.

²³ Steven Pincus, ‘Addison’s Empire: Whig Conceptions of Empire in the Early 18th Century,’ *Parliamentary History*, (2012), 107-110.

ideals, and formulated their own solutions to the variety of unique problems that they regularly encountered. Thus, the Barbadians' success was their own accomplishment and both the peak commercial moment that they experienced during the 1680s and their ability to adjust to the trials of the 1690s two of their greatest achievements.

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