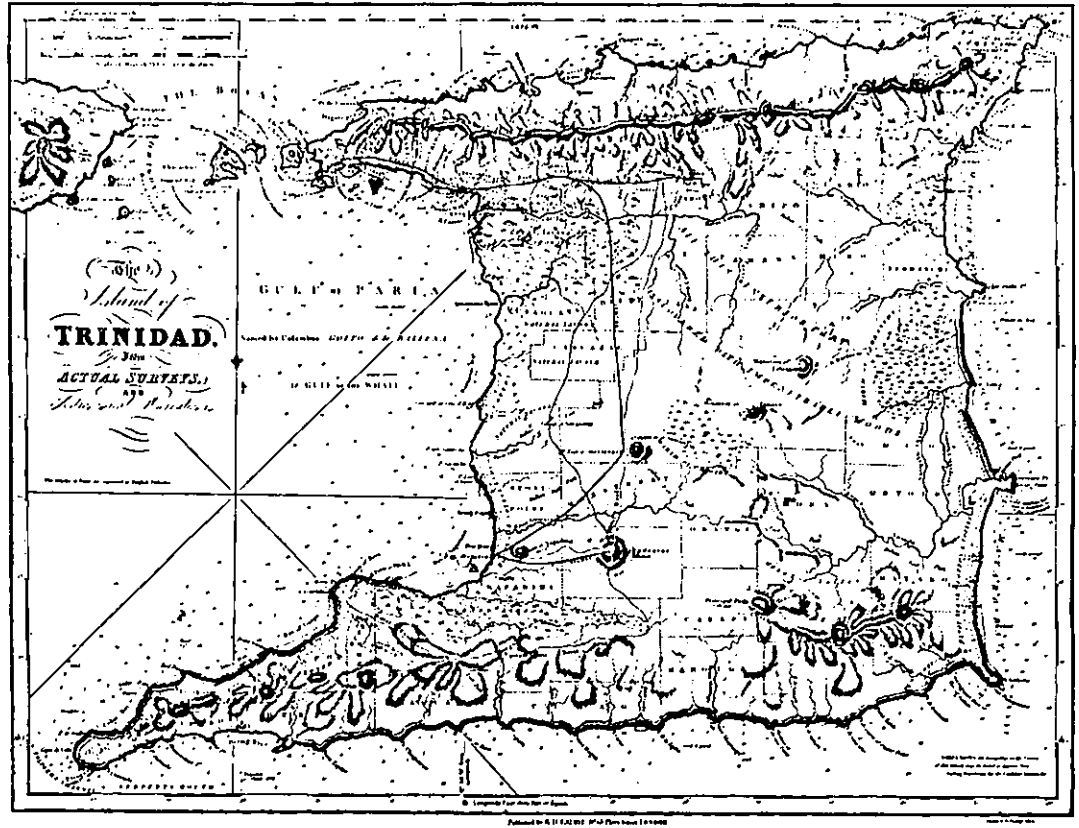
The plantation slaves of Trinidad 1783–1816

A mathematical and demographic enquiry

A. MEREDITH JOHN

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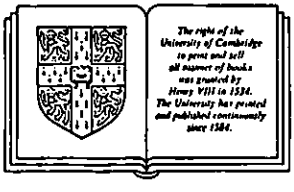


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The plantation slaves of Trinidad, 1783–1816

A mathematical and demographic enquiry

A. MEREDITH JOHN
Stanford University



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The supposed necessity by which the slave trade was long defended and maintained was deduced from the . . . want of an adequate stock of black labourers for the use of the plantations. To domestic service, and the various indoor employments of personal slaves, the same argument was not, and could not . . . be applied. It is the diminution or increase, therefore, of the numbers of *plantation* slaves, much more than that of the black population at large, that a British statesman must now be anxious to ascertain.

– African Institution,
A Review of the Colonial Slave Registration Acts in a Report of a Committee of the Board of Directors of the African Institution
(London: Ellerton and Henderson, 1820, pp. 25–6).

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Preface

The story that unfolds in the following pages is grim. The plight of the plantation slaves in Trinidad may be the most dismal known for any reliably reported population, save in time of natural disaster.

This study of the plantation slave population of Trinidad is a demographic and mathematical analysis in a historical setting, rather than a historical study that incorporates some demography and mathematics. As such, the emphasis is upon demographic methods and models, many of which are well-established in the demographic literature, and some of which were developed in the course of this study. The slave registration data are good, but not perfect. Therefore, the approach taken in this study is the estimation of plausible conservative upper and lower bounds for plantation slave fertility and mortality.

The data used in this study come from the Trinidad Slave Registers for 1813, 1815, and 1816, which fill two enormous ledgers kept at the Public Record Office in London. Stanley Engerman and Robert Fogel put the slave registration data in machine-readable form, and generously provided me with a copy of the data tape. The computations in this study were done on the IBM mainframe computers at Princeton University and Stanford University, and on an IBM personal computer. Figures were drawn on a Sun microcomputer, provided by Marcus W. Feldman of Stanford University.

Archival materials relating to slavery in Trinidad were found in the Public Record Office and the British Library in London, and the Scottish Public Record Office and Scottish National Library in Edinburgh. Secondary materials came from the Princeton University Library, Stanford University Library, Harvard University Library, the Nettie Lee Benson Latin American Collection of the University of Texas at Austin, the Bancroft Library of the University of California, and the New York Public Library.

The prospect of naming all the individuals who assisted me in one guise or another in the production of this book is daunting; surely some will be inadvertantly omitted in the attempt. Ansley Coale, James Trussell, and Robert Fogel oversaw the project in its early days as a doctoral dissertation.

Elizabeth John, Peter John, Stanley Engerman, Tammy Feldman, and Brian Arthur read much of the manuscript and provided me with marvelously detailed and insightful comments. Greg Clark, Paul David, Walter Falcon, Bob Feldman, Andrew Foster, Noreen Goldman, Timothy Guinnane, Gene Hammel, Ben Hermalin, Dudley Kirk, Reynaldo Martorell, Jane Menken, Ron Lee, Drew Lyon, Anne Pebley, Sam Preston, Roger Schofield, Charles Schorin, Etienne van de Walle, Susan Watkins, Gavin Wright, Ken Wachter, and Chris Wilson provided helpful comments and advice at various points during the course of the project. To all of these people, and to the staffs of the libraries in which I worked, go heartfelt thanks.

This study began as a doctoral dissertation, prepared for the Department of Economics, Princeton University; there it was funded by the Frank W. Notestein Fellowship under the auspicies of the Office of Population Research and the Population Council, New York. At Stanford University, funding was provided by the Sloan Foundation under the auspices of the Committee on Population Studies, and by the Center for Research in International Studies.

1

Introduction

. . . I speak . . . as an inhabitant of the Island of Trinidad . . . where slaves are not branded with a hot iron; where Families are not separated at the caprice of their owners, or by Judicial Sale for the satisfaction of Creditors; where the evidence of Slaves is admitted, even against their Masters; where every legal facility is afforded to the slave to purchase his freedom; and where he is presumed by Law to be free until proof is brought to the contrary . . . [1]

Denied a local legislative assembly and ruled by fiat from London, Great Britain's recently acquired colony, Trinidad, often served as a pawn in contests for parliamentary power during the first two decades of the nineteenth century. In 1802, George Canning used the issue of Trinidad's future labor force – slave or free – to force William Pitt into opposition to Henry Addington's government in a parliamentary struggle.[2] Ten year later, Lord Liverpool, the Secretary of State for War and the Colonies, preempted a challenge to the fragile government of Spencer Perceval by promising the emancipationist James Stephen and his followers an Order in Council requiring the registration of slaves in Trinidad. Seldom were the desires and wishes of the residents of Trinidad considered.

Since its capture from Spain in 1797 during the Napoleonic wars, Trinidad had proved more a political liability than an asset to Great Britain. The colony had blossomed in the last quarter of the eighteenth century under the Spanish crown. The economic growth of the island was prodigious as migrants flocked to the island with their slaves at the invitation of the Spanish, anxious to establish plantations. Yet the driving force behind Spain's flourishing colony – the massive influx of French Catholic planters and colored freedmen – made Trinidad a thorn in the side of the British government. In 1797,

[1] W. H. Burnley, *Two letters and an Address to his Excellency Sir R. Woodford, Bart., and the Honorable the Board of Council*, p. 5.

[2] Patrick Lipscomb, "Party Politics 1801–1802: George Canning and the Trinidad Question," *Historical Journal*, 12 (1969), pp. 442–66.

Britain's new colony had a population that was thought to be, at best, treacherous: Spanish and French planters held no love for the British crown. Thus, rather than allow the residents of Trinidad a legislative assembly, as was enjoyed by other British Caribbean colonies, it was deemed best that Trinidad be ruled from London by a royally appointed governor.

The acquisition of Trinidad in the Napoleonic wars brought to the fore an issue that had been festering in Parliament for decades: the future of slavery in the British Caribbean colonies. By 1797, Parliament was committed to the eventual abolition of the slave trade. Trinidad, an island with exceptionally fertile lands, was largely uncultivated. The farming of new lands in Trinidad would require the introduction of a large labor force. Should that labor force be slave or free?[3]

Central to many of the parliamentary debates on slavery in the British Caribbean colonies were demographic issues. The antislavery forces in Great Britain – those advocating the abolition of the slave trade and those agitating for the complete emancipation of slaves – had long contended that mortality among the slaves in the British Caribbean colonies was extraordinarily high, especially when contrasted with the mortality of slaves in the United States. The opponents of slavery also claimed that slave fertility was extraordinarily low. The high mortality and low fertility were said to reflect the brutal nature of slavery in general, and of the use of slave labor in the cultivation of sugar in particular.

Supporters of slavery in the British Caribbean islands admitted that slave mortality appeared high and slave fertility low. But, they argued, these phenomena did not reflect the cruelty of slave labor; rather, they stemmed from the adverse effects of a tropical environment – which bore as hard upon Europeans as upon slaves – and from the behavior of slaves themselves. Slaves were felled by fevers and dysentery, about which the slave owners could do little: high slave mortality was beyond the control of slave owners. Furthermore, slaves were allegedly loath to enter into conventional, Christian marriages, indulging instead in promiscuous behavior that led to rampant venereal disease and widespread sterility. Hence, low slave fertility was also alleged to be beyond the slave owners' control.

It was clear to all parties that the combination of low slave fertility and high slave mortality would result in a slave population that could not be sustained without a slave trade. Hence, representatives of the interests of West Indian planters in Great Britain strongly opposed abolition, first of the transatlantic slave trade, and later, of the intercolonial slave trade. To abolish the slave trade and make the future of the slave labor force dependent upon the reproduction of the extant slave populations would, they believed, spell economic disaster for West Indian planters.

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[3] Lipscomb, op. cit.

The prevailing perceptions of the demography of British Caribbean slave populations played a key role in the debates about the abolition of the slave trade, in the debates about the nature of the Trinidadian labor force, and, in 1815, in the debates about the Slave Registration Bill. Some notions were accepted by all parties: for example, the conventional wisdom was that slave women born in the New World were more conscientious mothers than were slave women from Africa. Other notions were the topics of heated partisan debate. For example, although all parties accepted the premise that slave mortality was high, the antislavery forces contended that high slave mortality stemmed largely from the cultivation of sugar – a contention rejected by those representing the interests of the West Indian planters.

But were the widely held beliefs about the nature of slavery in the British Caribbean true? In fact, was it even true that slave mortality in the British Caribbean was especially high, and that slave fertility was especially low? Or were these observations about the slave populations, based at best on casual empiricism, erroneous?

The history and demography of many of the slave populations of the British Caribbean have already been extensively studied. The most ambitious of these are pancolonial, interdisciplinary explorations of Caribbean slavery that focus upon demographic and economic variation among colonies rather than on variation within a given colony.[4] Other studies of slavery in the British Caribbean are less extensive, focusing either on a particular aspect of slavery, such as slave nutrition, or on a particular colony or plantation.[5] Still others have compared the demography of slave populations in the British Caribbean with the slave population of the United States, a comparison often attempted by nineteenth-century writers.[6]

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[4] See, for example: Barry W. Higman, "The Slave Populations of the British Caribbean: Some Nineteenth Century Variations," in *Eighteenth Century Florida and the Caribbean*, ed. Samuel Proctor; Barry W. Higman, *Slave Populations of the British Caribbean, 1807–1834;* Richard B. Sheridan, *Doctors and Slaves: A Medical and Demographic History of Slavery in the British West Indies, 1680–1834.*

[5] See, for example: Michael Craton, "Jamaican Slave Mortality," *Journal of Caribbean History*, 3 (1971), pp. 1–27; Michael Craton, "Changing Patterns of Slave Families in the British West Indies," *Journal of Interdisciplinary History*, 10 (1979), pp. 1–35; Barry W. Higman, "Household Structure and Fertility on Jamaican Slave Plantations: A Nineteenth-Century Example," *Population Studies*, 27 (1973), pp. 527–50; Barry W. Higman, "The Slave Family and Household in the British West Indies 1800–1834," *Journal of Interdisciplinary History*, 6 (1975), pp. 261–87; Kenneth F. Kiple and Virginia H. Kiple, "Deficiency Diseases in the Caribbean," *Journal of Interdisciplinary History*, 11 (1980), pp. 197–215; Kenneth F. Kiple and Virginia H. Kiple, "Slave Childhood Mortality: Some Nutritional Answers to a Perennial Puzzle," *Journal of Social History*, 10 (1976), pp. 284–309.

[6] See, for example: Stanley L. Engerman, "Some Economic and Demographic Comparisons of Slavery in the United States and the British West Indies," *Economic*

Despite the apparent abundance of materials on Caribbean history and slave demography, there is a relative dearth of scholarship about colonial Trinidad, both in the Spanish period (1498–1797) and in the British period. Early accounts of the history of Trinidad were written by P. F. M'Callum (1805), J.-F. Dauxion-Lavaysse (1820), E. L. Joseph (1838), P. G. L. Borde (1883), and L. A. A. De Verteuil (1884). The subsequent destruction in Trinidad of many of the Spanish and French documents on which these works were based means that, in many cases, these secondary materials constitute the only available sources describing some aspects of early Trinidad.[7] In other cases, primary sources survive in British and Spanish archives.

There are also few recent monographs on Trinidadian history. Bridget Brereton and Gertrude Carmichael chronicled the history of the island from initial European contact to the present.[8] James Millette wrote about the development of Trinidad as a British Crown Colony.[9] Linda Newson studied Trinidad before and during the Spanish colonial period.[10] There also exists a handful of journal articles that deal with various aspects of Trinidadian history.[11]

The extant literature on British Caribbean slave demography includes some work on Trinidadian slavery, but the material about Trinidad is scant in comparison to that for other British colonies such as Jamaica and Barbados. Although the slave registration data for Trinidad are more detailed than those for any other British colony, complementary materials in the form of plantation records and journals are scarce in comparison to those of many other British colonies, rendering balanced studies of Trinidadian slavery all the more difficult.[12] Using the Trinidadian plantation slave registration records,

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History Review, 29 (1976), pp. 258–75; Herbert S. Klein and Stanley L. Engerman, "Fertility Differentials between Slaves in the United States and the British West Indies: A Note on Lactation Practices and their Possible Implications," *William and Mary Quarterly*, 35 (1978), pp. 357–74.

7 Linda A. Newson, *Aboriginal and Spanish Colonial Trinidad: A Study in Culture Contact*, p. 9.

8 Bridget Brereton, *A History of Modern Trinidad 1783–1962*; Gertrude Carmichael, *The History of the West Indian Islands of Trinidad and Tobago 1498–1900*.

9 James Millette, *The Genesis of Crown Colony Government: Trinidad 1783–1810*.

10 Newson, *Aboriginal and Spanish* . . . .

11 See, for example: Gertrude Carmichael, "La Reconnaisance Estate, Lopinot Valley, Arouca," *Caribbean Quarterly*, 6 (1960), pp. 279–81; Barry W. Higman, "The Chinese in Trinidad, 1806–1838," *Caribbean Studies*, 12 (1972), pp. 21–44; K. O. Laurence, "The Settlement of Free Negroes in Trinidad Before Emancipation," *Caribbean Quarterly*, 9 (1963), pp. 26–52; Lipscomb, op. cit.

12 Higman, *Slave Populations* . . . ; Newson, *Aboriginal and Spanish* . . . ; Sheridan, *Doctors and Slaves*, has few references to Trinidad, suggesting a dearth of medical information about the colony.

Barry Higman studied the heights of slaves in Trinidad, Trinidadian slave family structure, and the African origins of slaves in Trinidad; Gerald Friedman also examined the height data in the Trinidadian slave registration records.[13] Each of these studies focused on an individual facet of slavery in Trinidad, rather than trying to draw a complete picture of slavery in the colony. While including extensive tabulations of data from the Trinidad slave registration in his monumental book, *Slave Populations of the British Caribbean*, Higman eschewed detailed analysis of the various data.

Despite the wealth of studies on Caribbean slavery and the inclusion of Trinidad in some of them, a fresh examination of Trinidadian plantation slavery, employing the British slave registration records and complementary archival materials, is warranted for several reasons.

First is the uniqueness of Trinidad's historical position at the time of the slave registration: Trinidad was at a far earlier stage of economic development than were such long-established colonies as Jamaica and Barbados. In 1813, when the initial registration of Trinidadian slaves was conducted, slaves had been present on the island in large numbers for only thirty years; only 10 percent of the land in Trinidad was under cultivation. No detailed study of slavery in such a frontier colony yet exists.

Second, in the past twenty years, mathematical demographers have created powerful tools with which to examine data collected in less developed countries. Such data have flaws not unlike those present in the slave registration records, including age misreporting and the omission of vital events. These indirect demographic estimation techniques often allow the general structure of a population to be elucidated accurately despite shortcomings in the data.[14] The present study brings these tools to bear for the first time upon the comparably flawed slave registration data.

This work examines the interplay of the myriad forces that together shaped the plantation slave population of Trinidad. Unlike the comparative studies of slavery in the British Caribbean, which address demographic variation *among* Caribbean colonies, this study explores the sources of demographic variation *within* a single colony.

This study of the plantation slave population of Trinidad is based on the Trinidadian slave registrations of 1813, 1815, and 1816, in which the Registrar of Slaves recorded information on 17,087 plantation slaves.[15] The slave

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13 Barry W. Higman, "Growth in Afro-Caribbean Slave Populations," *American Journal of Physical Anthropology*, 50 (1979), pp. 373–85; Barry W. Higman, "African and Creole Slave Family Patterns in Trinidad," *Journal of Family History*, 3 (1978), pp. 163–80; Gerald Friedman, "The Heights of Slaves in Trinidad," *Social Science History*, 6 (1982), pp. 482–515.

14 See, for example: United Nations, *Manual X: Indirect Techniques for Demographic Estimation*.

15 T. 71/501–2: Trinidad Slave Registers.

registration data give a blurred picture of plantation slavery in Trinidad in the period 1813–16. Errors in the data – misstated ages, mismeasured heights, erroneously recorded family relationships – mean that a sharp, clear image of plantation slavery cannot be discerned; however, as in many pictures, there is a good indication of the magnitude of the image and a rough outline of its shape. Thus the principal goal of this study is to draw plausible upper and lower bounds on the levels of plantation slave mortality and fertility in Trinidad in the early nineteenth century, with the hope that "truth" lies somewhere within the bounds. Insofar as possible, the sources of uncertainty – of fuzziness in the picture – in the estimated levels of fertility and mortality will be identified.

Using this approach to the study of plantation slave demography in Trinidad, several questions can be asked. Was mortality among the plantation slaves exceptionally high? Was fertility among the plantation slaves exceptionally low? Was the cultivation of sugar especially inimical to slave reproduction? Did the mortality and fertility of slaves born in Africa differ from those of slaves born in the New World? Were slaves who were owned by Catholics better off than were slaves who were owned by Protestants? Did the plantation slave population of Trinidad have the long-run potential for reproducing itself, thereby ensuring a slave labor force in Trinidad after the closure of the slave trade?

Several important questions cannot be addressed with the slave registration data from Trinidad. Slaves had been present in significant numbers in Trinidad only since 1783; thus, thirty years later, few adult slaves in Trinidad had been born on that island. The transatlantic slave trade was closed in 1807, and the intercolonial slave trade was closed a few years later. Thus, most of the slave children present in Trinidad in 1813 were born on that island. There were too few adult slaves born in Trinidad, and too few child slaves not born in Trinidad, to permit examination of the influence of Trinidadian birth on mortality and fertility in a statistically meaningful way. Similarly, there were too few colored adult women – women of mixed black and white ancestry – to allow comparison of the fertility of colored and Negro slaves in a statistically meaningful manner.

Another intriguing question cannot be resolved for want of information about European and free colored mortality. Trinidad was a frontier colony. Malaria and yellow fever were rife. If the mortality of the European and free colored populations were comparable to that of the slave population, then high slave mortality could not plausibly be ascribed to slavery itself, but rather must be attributed to a harsh physical environment.

The second chapter of this book briefly surveys the history of Trinidad from 1498, when Christopher Columbus claimed the island for Spain, to the registration of slaves in 1813. In particular, it traces the introduction of slaves to the island and the role of slavery in the economic and political development

of the colony. In a conventional demographic study, Chapter 2 would serve as a description of the background of the study population.

Chapter 3 examines in detail the collection of the slave registration data in 1813 and the ensuing controversy over slave smuggling; this chapter is analogous to a description of the data collection process. Chapter 4 describes Trinidad's population in 1813, including what little is known about the free population, drawn largely from the annual reports of the Commissioners of Population. Thus Chapter 4 corresponds to the data description section of a conventional demographic study. In this chapter, some of the characteristics of the personal and the plantation slave populations are compared, and detailed tabulations of many of the characteristics of the plantation slave population are presented. The chapter concludes with a description of Harmony Hall plantation in North Naparima county.

The use of formal, or mathematical, demography begins in Chapter 5, which describes the methods used in studying the mortality of the plantation slaves. The aim of the methodological discussions is to explain the details of the estimation techniques used in reconstructing the plantation slave population so that the assumptions underlying the estimates, as well as the sensitivity of the estimates to those assumptions, are clear. Some readers may wish to skip this chapter and proceed directly to Chapter 6, which presents the findings about plantation slave mortality. Chapter 7 contains both a description of the methods used in studying slave fertility and a discussion of the findings; again, the methods sections can be skipped without loss of continuity.

In Chapter 8, using the evidence – both statistical and historical – presented in Chapters 3–7, four main questions about the plantation slave population of Trinidad are addressed. First, how high was plantation slave mortality? Second, was plantation slave fertility high or low? Third, was there demographic evidence that slaves were smuggled into Trinidad in 1812 and 1813? And finally, did the plantation slave population of Trinidad have the long-run potential to reproduce itself?

2

Trinidad, 1498–1813

Trinidado being ye windermost Island lyes in 9 degrees north latitude is near halfe as bigg as Ireland. There is on it a towne called St. Joseph settled by aboute 80–100 Spaniards at most and in ye yeare 1646 the English settled a Colony on that Island by Comission from ye longe parliament by settling in an unhealthy parte of it parte of their people died and they deserted it within 2 yeares time.[1]

A colonial slum provides a woefully poor defense against sabre-rattling enemies bent upon territorial expansion. In the middle of the eighteenth century, Spain was in an awkward position: tight control of trade between the Iberian peninsula and Spanish colonies in the New World had left many of Spain's strategically located possessions undeveloped and virtually unpopulated. If these island colonies, which were ripe for conquest, fell into the hands of the enemies of Spain, then Spanish mainland possessions would be all the more vulnerable to attack. Such was the situation of Trinidad, located off the coast of Venezuela, in 1765.

Christopher Columbus led the first visit by Europeans to Trinidad. The expedition – Columbus's third voyage to the New World – approached the island from the southeast on July 31, 1498. Columbus named the island *La Trinidad* and claimed it for the king of Spain. In the years following Columbus's visit to Trinidad, there were many other expeditions authorized by the Spanish Crown, principally to assess the value of Spain's new possession, but only one, led by Alonso de Ojeda in 1499, actually made landfall.[2]

A quarter of a century after Columbus claimed the island for Spain, the Spanish crown granted contracts for the colonization of Trinidad. In 1530, a contract was let to Antonio Sedeño who, in 1532, established a small enclave on the island; it was abandoned in 1534. Subsequent attempts at Spanish set-

[1] Anonymous, 1666. Reproduced in TTHS No. 357.

[2] Gertrude Carmichael, *The History of the West Indian Islands of Trinidad and Tobago 1498–1900*, p. 12; Linda A. Newson, *Aboriginal and Spanish Colonial Trinidad: A Study in Culture Contact*, p. 71.

tlement on the island fared no better: some settlement contracts were let but never filled, while other contracts produced settlements that survived no more than a few months.[3]

The failure of the early Spanish attempts to settle Trinidad was not surprising: life in Trinidad was difficult. There were periodic famines, perhaps due to drought, when crops planted by both Indians and Spaniards failed, reducing the inhabitants of the island to a diet of berries and roots. Spanish supply ships were, at best, few and far between.[4] At the end of the sixteenth century, however, nearly a hundred years after Columbus's first visit to the island, prospects for the Spanish development of Trinidad brightened. The Spanish government commissioned Don Antonio de Berrío and his aide, Domingo de Vera y Ibargoyen, to establish a town on the western part of the island. They founded St. Joseph de Oruña in 1592, planting a cross on the proposed site of the church and marking the foundations of municipal buildings.[5]

Why did Spain bother settling Trinidad? It had no precious metals. Early attempts to establish agriculture in the island had failed because of drought, a shortage of labor and a lack of trading opportunities: crops rotted in warehouses, often for several years in a row, when Spanish trading ships failed to anchor at Trinidad. The early importance of Trinidad to the Spanish empire lay not in its agricultural potential, but rather in its value as a military base for expeditions in search of *El Dorado*. Alluring tales of the city of gold brought explorers, both British and Spanish, to the Caribbean. It was believed that great riches – stones and precious metals – lay somewhere in the interior of the Spanish mainland territories, perhaps near the headwaters of the Orinoco river. Activity surged in the last decade of the sixteenth century as explorers sought the mythic wealth. Trinidad became an important stop for the adventurers who there could replenish supplies of wood and water.[6]

Another motive behind the early Spanish attempts to populate Trinidad was the desire of the Spanish to prevent French and British encroachment on the island. A Spanish settlement contract granted in 1592 noted that one purpose of settlement was to prevent incursions by non-Spanish settlers into Trinidad. The policy was successful: French and British settlements in Trinidad foundered.[7]

By the beginning of the seventeenth century, Trinidad enjoyed a prosperous tobacco industry. The tobacco leaves grown in Trinidad were reputed

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3 Carmichael, p. 17; Newson, p. 73.

4 Newson, pp. 78, 93.

5 Bridget Brereton, *A History of Modern Trinidad*, p. 2; Carmichael, p. 22; Sir Claud Hollis, *A Brief History of Trinidad Under the Spanish Crown*, p. 9; Newson, p. 74.

6 Carmichael, pp. 24–5; Hollis, p. 18; Newson, p. 135.

7 Newson, p. 74.

to be of exceptionally high quality. The trade in Trinidadian tobacco was brisk and often illegal. Despite Spanish laws prohibiting mercantile contact between her colonies and foreign nations, the main carriers of Trinidad's tobacco crop were Dutch and English vessels. The tobacco growers in Trinidad had little option but to flout Spanish law: a dozen or more years might elapse between visits of Spanish trading ships to Trinidad. The island prospered so well with the illicit tobacco trade that in 1605 the governor of Trinidad decided to rebuild the town of St. Joseph, which had been sacked by Sir Walter Raleigh in 1595. The governor also arranged for the purchase of negro slaves to cultivate the tobacco crop. In 1606, Dutch merchants supplied 470 slaves to Trinidad, many of whom were sold to other colonies for 150 *pesos* each. The tobacco industry thrived: in 1611, fifteen ships harbored simultaneously in the Gulf of Paria, all laden with Trinidadian tobacco.[8]

Unfortunately, the flourishing traffic in tobacco violated the Spanish crown's monopoly on trade with her colonies. In 1612, the King of Spain responded to the illegal trade, authorizing Don Geronimo de Portugal, *Captain General* of the Armada in the Indies, to go to Trinidad and, ". . . capture, burn or sink the ships of these traders . . ." His success – burning eleven foreign tobacco ships harbored at Port of Spain – destroyed Trinidad's tobacco industry.[9]

Without the tobacco trade, Trinidad slipped back into the poverty that had characterized the island in the sixteenth century. By 1630, St. Joseph consisted of no more than thirty mud and thatch houses inhabited by forty or fifty men. The island's other town, Port of Spain, was smaller. In 1632, the governor of Trinidad reported that "wine, oil, clothing and other supplies . . ." were so scarce that Trinidad would have to be abandoned altogether.[10]

Again, agriculture brought the island back from the brink of ruin. The crop was cocoa, which Spaniards had cultivated in Trinidad since 1615. By 1668, the commercial cultivation of cocoa was firmly established, and the island's economy again thrived. A Briton reported that Trinidadian cocoa was the finest in the West Indies. The Spanish shipping monopolies still posed legal problems, however, and so the cocoa trade was largely illicit, carried by foreign trading vessels. Cocoa production peaked in 1704, when Trinidad exported 248,600 pounds of beans. In the same year an unidentified epidemic virtually eliminated the small slave population of Trinidad. By 1720, annual exports of cocoa had fallen to 130,000 pounds per year, largely because of the labor shortage. In 1725, a fungus devastated the cocoa estates, and the

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[8] Hollis, pp. 23–8; Newson, pp. 148–9.

[9] Royal *Cédula*, April 6, 1612: British Museum Add. Ms. 36320, reproduced in TTHS No. 134.

[10] Hollis, pp. 37–8.

industry further languished. The island's Catholic clergy contended that the disaster was divine retribution for the failure of Trinidad residents to pay tithes. In 1757, Trinidad's cocoa industry revived with the introduction of a more robust variety of cocoa from Brazil, after which no significant cocoa diseases were reported. By 1770, about 10,000 pounds of cocoa were exported each year.[11] However, the new cocoa variety was not immune to drought: in 1772, the cocoa crop again failed.[12]

Virtually all early Spanish settlers received land grants in Trinidad. The sizes of the grants, which were intended for farming, varied from one *peonía*, or about 100 acres, to three *caballerías*, or about 1,500 acres. Many of the seventeenth-century grants were in the vicinity of St. Joseph, but the lands there were not particularly fertile and were soon abandoned. In the early eighteenth century, prospering cocoa plantations were established in the valleys near Port of Spain and in the upper parts of the Aricagua valley.[13]

Trinidad's agricultural development was not thwarted by a shortage of land. To the contrary, exceptionally fertile land was plentiful; labor to work the land and markets for the crops were scarce. The labor shortage had long been a problem on the island. In 1612, during the height of the tobacco trade, the governor of Trinidad sent a message to Madrid, stating that agriculture in Trinidad could not be developed unless at least 100 laborers were sent to the island. In 1617, the governor again petitioned the Spanish crown, this time for 300 Negro slaves – two-thirds male – to work in Trinidadian fields. The petition failed, but a slow trickle of slaves flowed into the island via an unauthorized slave trade.[14]

The prospects for Spain's Caribbean possessions changed in the middle of the eighteenth century with the accession of Carlos III to the Spanish throne. Carlos III recognized that Spain was not realizing the full potential – both military and economic – of her vast empire. Island colonies such as Trinidad were of strategic importance because of their close proximity to the more lucrative mainland possessions. These colonies were also conspicuously vulnerable to attack:

> . . . the islands of Trinidad and Margarita subject to this Viceroyalty lack entirely any troops, fortifications or defence and are without any power to resist any attack from enemies.[15]

It was essential that Spain's Caribbean colonies be strengthened against encroaching enemies, lest they be seized as bases from which to attack

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11 Ibid., pp. 130–4.

12 Brereton, p. 3; Carmichael, pp. 33–5; Hollis, p. 78.

13 Newson, p. 127.

14 Newson, p. 121.

15 Report to the Crown by Don Pedro Mexia de la Zerda, 1772. Reproduced in TTHS no. 401.

Spain's mainland territories. Spain was also losing wealth to her enemies through uncontrolled illicit trade between foreign merchants and her colonies, not unlike Trinidad's early tobacco and cocoa trades. Together, these problems – lack of defenses and loss of revenues – pointed to the desirability of both military and economic development of Spain's Caribbean colonies.

In 1765, as a first step toward strengthening her Caribbean colonies, Spain relaxed the laws governing trade between Spanish ports and Spanish possessions in the New World. The number of Spanish ports allowed to trade directly with the colonies increased from two to nine. In addition, Trinidad, Santo Domingo, Puerto Rico, Cuba, and Margarita were opened to direct trade with the Iberian peninsula.[16]

The economic and military development of Trinidad required increases in both the military and the civilian populations of the island. Spanish policy had long excluded foreign immigrants to Spanish colonies, or had deterred foreign settlers by requiring special licenses and ten years' prior residence in Spain. A prime concern had been prevention of the spread of Protestantism in the New World. Hence, when Spain eventually opened her colonial doors to foreigners, the only immigrants allowed were Catholic.[17]

A *Cédula de Población*, published in Madrid on September 3, 1776, addressed the problem of increasing the civilian population of Trinidad. Foreign Catholics were invited to settle in Trinidad on generous terms. Settlers were granted up to 1000 *quarrees* (3,200 acres) of land, and were exempted from import duties on any goods, including slaves, that they brought to the island. Don Manuel Fàlquez, the governor of Trinidad, was instructed to encourage the immigration of French Catholic planters, skilled in tropical agriculture, from Dominica, St. Vincent, Grenada, and Tobago, colonies that were ceded to Britain by France in the Treaty of 1763. On the other hand, Catholics from British and Dutch territories were precluded from immigrating to Trinidad because Britain and Holland were hostile to Spain. In 1779, Irish Catholics from the Danish colony of Santa Cruz were invited to immigrate to Trinidad.[18]

Migrants from colonies in which the soils were worn and depleted were easily induced to come to Trinidad, because

> The French Island of St. Lucia . . . [has] considerably declined, the crops by no means answering the expectations of the proprietors, many of whom have migrated

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16 Linda A. Newson, "Foreign Immigrants in Spanish America: Trinidad's Colonisation Experiment," *Caribbean Studies*, 19 (1979), p. 137; James Millette, *The Genesis of Crown Colony Government*, p. 7.

17 Newson, "Foreign . . . ," pp. 133–4.

18 Ibid., pp. 138–9; C.O. 101/21: January 11, 1777. Reproduced in TTHS No. 421.

to the Spanish Island of Trinidad where the soil is believed to be uncommonly fertile and where vast encouragement is offered to the new settler.[19]

The migrants to Trinidad were enthusiastic about their new home, reporting that

Indigo grows splendidly; sugar canes ratoon ten years in succession without being replanted; coffee yields better than in any other part of America; cotton produces up to four pounds when planted at nine by nine feet; tobacco yields a quartern to each foot while for cocoa the lands are very good.[20]

One of the early settlers attracted to Trinidad by the *Cédula* of 1776 was a French planter from Grenada, Roume St. Laurent. He, like many other Frenchmen in Grenada, found life in that colony under British rule intolerable and thus welcomed the opportunity to emigrate. In the spring of 1777, St. Laurent visited Trinidad to assess the suitability of the island for large-scale migration of French Grenadian planters. He estimated that the island contained about 860,000 acres, of which 570,000 acres were more or less flat and thus suitable for plantations. He reported that the northern part of the island was very mountainous, but beyond the mountains was an area suitable for the growing of coffee, cocoa, sugar, indigo, and cotton:

Cotton is very good and bears better than in other islands . . . the coffee is very good and cacao does better apparently in the hills . . . the Spaniards usually plant large trees in their cacao estates about forty feet distance to shelter them from the sun which appears to do more harm than good, as it withdraws the great part of food necessary for vegetation . . . The air is very healthy all over the island . . . rain falls abundantly after the middle of May . . . From the 16th of March to the 3rd April while we lived in Port of Spain, the thermometer ranged from 76 at eight o'clock in the morning to 83 at two o'clock and it fell to 76 at nine o'clock in the evening.[21]

St. Laurent argued that if sufficiently generous settlement terms were provided, more than 350 families from Grenada, Martinique, and Dominica could be persuaded to immigrate to Trinidad, bringing with them perhaps 33,000 slaves. His suggestion, which implied a substantial influx of both labor and capital into the island, appealed to the governor of Trinidad. Seeking advantageous terms of migration, St. Laurent traveled to Caracas in 1781 and to Madrid in 1782 to negotiate the details of the *Cédula;* meanwhile, planters began migrating to Trinidad, lured by the prospect of generous grants of fertile lands.[22]

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[19] Governor General of Grenada to the Secretary of State for War and the Colonies: January 10, 1779. Reproduced in TTHS 424.

[20] C.O. 101/21: January 11, 1777. Reproduced in TTHS No. 421.

[21] C.O. 101/21: Report from St. Laurent to Lord Macartney, Governor of Grenada, September 1777.

[22] P. G. L. Borde, *Histoire de L'Ile de la Trinidad sous le Gouvernement Espagnol*, Vol. II, pp. 139–40; Newson, "Foreign . . .," p. 139.

St. Laurent's efforts were realized in a second *Cédula de Población*, published in Madrid on November 24, 1783. Many clauses of the *Cédula* dealt with trade provisions between Spain and France, but most dealt with the settlement of Trinidad by the new colonists. The immigrants were to be Catholic citizens of countries friendly with Spain; each immigrant must swear an oath of loyalty to the Spanish crown. Each white immigrant would be granted four and two-sevenths *fanegas* of land (32 acres) for each member of his household, both male and female, and two and one-seventh *fanegas* for each slave brought to Trinidad. Free colored immigrants would be given two and one-seventh *fanegas* for each household member and the same amount for each slave. Free settlers of any race who resided in Trinidad for at least five years and who intended to stay permanently would be entitled to the rights and privileges of Spanish citizenship, and eligible to hold civil and military offices. The Spanish government promised to provide the new settlers with livestock, food, supplies, and agricultural implements at reasonable cost. The settlers were exempt from all taxes for ten years. In 1786, the exemption of the slave trade from import duties was made perpetual. [23]

The *Cédula* of 1783 marked Trinidad's beginning as a viable slave economy. Before that time, only a few slaves were present on the colony. But, now that land was granted on a per capita basis, the new migrants had strong incentive to acquire as many slaves as possible as rapidly as possible. The ownership of slaves was the means to wealth in Trinidad.

Trinidad developed rapidly. During the first few years following the *Cédula*, grants of land to the French were made in the northern and western parts of the island: Maravel, St. Ann's, Santa Cruz, Maracas, Aricagua, and Naparima.[24] Between 1783 and 1797, the French established 468 plantations covering 85,000 acres, or about 10 percent of the island.[25] The older Spanish plantations centered around St. Joseph and Port of Spain. In 1782, before the second *Cédula*, Trinidad had 2,813 inhabitants, of whom 126 were white, 295 were free colored, 2,082 were Indians, and 310 were slaves. By 1789, the population included 5,170 free people (white and colored), 1,432 Indians, and 6,451 slaves, making a total of 13,053 inhabitants. The town of Port of Spain consisted of 600 buildings made of wood and shingles housing 3,000 inhabitants, a third of them white.[26]

The spectacular population growth following the 1783 *Cédula* spawned equally impressive agricultural growth. Initially, cotton was the crop favored

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23 Carmichael, pp. 393–9, contains an English translation of the *Cédula*.

24 Newson, *Aboriginal . . .*, p. 195.

25 Andrew Pearse, "Carnival in Nineteenth Century Trinidad," *Caribbean Quarterly*, 4 (1956), p. 176.

26 ADM 1/315: Admiral Wm. Parker to the Secretary of the Admiralty, August 3, 1788. Reproduced in TTHS 175.

by the immigrant French planters, and in 1788 it accounted for nearly three-quarters of the value of Trinidad's exports. However, the ravages of boll weevils and the introduction of the Otaheite sugarcane combined to place cotton second behind sugar. The first sugar mill was built in Trinidad in 1787; a decade later, 130 sugar mills were operating on the island.[27]

Cocoa was largely a crop of the Spanish and so was grown on the estates in the southern part of the northern mountain range, east of Port of Spain. The crop was relatively easy to grow because the trees required little attention other than harvesting. To protect them from the intense sun, the cocoa trees were grown in the shade of the taller, immortelle trees:

> A Cacao plantation forms of itself a most charming prospect. The trees are planted at twelve or fifteen feet apart and range from about twenty-five to thirty-five feet in height. The leaves are large and, when young, are of a violet-red hue; whilst from the larger branches hang red, yellow, green, or dark crimson pods . . . In January and February, the [tree] exchanges its leaves for a thick covering of bright red blossoms, the ground underneath being literally carpeted with flowers, whilst birds of various species and of the most brilliant plumage, join in gay concert above.[28]

Mature cocoa trees produced beans for about 100 years. However, since a cocoa grove took several years to become established and show returns, the French who migrated to Trinidad after 1783 opted instead for crops that realized quicker profits, such as cotton. Thus, in the latter part of the eighteenth century, cocoa never accounted for more than 10 percent of the value of Trinidadian agricultural production.[29]

Cotton was the crop favored by the French immigrants who, shortly after the promulgation of the *Cédula* of 1783, established estates on the east coast of the island and in the Bocas. Cotton had been a minor crop in Trinidad until the 1770s, when Spanish duties on cotton were lifted in an effort to encourage Spain's cotton textile industry. High-quality cotton grew easily in Trinidad, a point noted by St. Laurent. As a commercial venture, it appealed to immigrants because it was relatively inexpensive to establish a cotton estate and because the crop matured quickly. By 1784, cotton accounted for about 70 percent of the value of Trinidad's agricultural production. In 1789, when parasites ravaged Trinidad's cotton crop, many of the devastated cotton farmers turned to sugar cultivation. Nonetheless, cotton remained an important crop in Trinidad well into the nineteenth century.[30]

Sugar was initially a French crop in Trinidad, and so did not become important in the island until the 1780s. The first sugar estate was established at

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27 Brereton, p. 17; Hollis, p. 83.

28 De Verteuil, *Trinidad: Its Geography, Natural Resources, Administration, Present Condition, and Prospects*, p. 38.

29 Ibid., pp. 202–3.

30 Ibid., pp. 136, 203.

Tragarete in 1787; within the next ten years, another 150 sugar estates were formed. In the same time, 130 mills for processing sugar, mostly mule driven, were built. Most sugar estates were located in the area west of Port of Spain and along the western coast of the island.[31]

Trinidad's sugar industry received two significant boosts in the last decade of the eighteenth century. In 1792, the Otaheite cane was introduced into the island. At the same time, wars disrupted the supply of sugar to Europe from Martinique, Guadeloupe, and Santo Domingo, thus driving up the price of sugar from 32 shillings per hundredweight in 1793 to 87 shillings per hundredweight in 1798. However, in the beginning of the nineteenth century, East Indian sugar flooded the London market, driving the price of sugar down to 28 shillings per hundredweight.[32]

Draught animals were essential in the processing of sugar: to haul carts of cane and to drive the cane crushers. It was much less expensive to establish an animal-driven mill than a windmill or a water mill for cane crushing: windmills and water mills cost about 6,000 and 6,500 *pesos*, respectively, whereas a cattle mill cost about 2,000 *pesos* to build. However, there was a shortage of draught animals in Trinidad in the latter part of the eighteenth century: each year, 15 percent of the beasts died from overwork and malnutrition.[33] The steam engine was introduced to Trinidad in 1804:

> . . . the steam engine, by Messers Bolton and Watts of Birmingham . . . has replaced the cattle mills on some plantations. This machine is preferable to windmills which cannot work at all times, and it is less expensive; the water mills alone being preferable to it. The engine alluded to is said to have the power of 16 horses and performs in a given time, the work of three oxen or mule mills on a sugar plantation. It is well known what an immense number of those animals are destroyed annually in the colonies; the introduction of this machine in the manufactory of sugar is therefore a very great improvement as well as a saving in colonial agriculture. Sir Stephen Lushington . . . had the honour of being the first to employ it . . . in contempt of the outcry raised against it by the vulgar prejudices of others.[34]

Meat and fish were in chronic short supply in Trinidad. The oceans abounded in fish and shellfish, but dangerous currents made them treacherous. The rivers were too muddy to provide much food. Ranching was not well established in Trinidad during the Spanish era; there was little livestock on the island other than draught animals. Thus meat – salt pork and salt beef – was imported from the mainland and was, consequently, expensive. The shortage of meat on the island was noted by St. Laurent in 1777, who said that the soldiers on the island were starving for lack of it. Following the

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31 Ibid., p. 205; Dauxion-Lavaysse, *A Statistical, Commercial and Political Description of Venezuela, Trinidad, and Margarita*, p. 330.

32 Newson, "Foreign . . . ," pp. 147–8; Hollis, p. 102.

33 Newson, *Aboriginal . . .* , p. 201.

34 Dauxion-Lavaysse, pp. 339–40.

Cédula de Población of 1783, the government attempted to establish cattle on the island: by the middle of the 1790s, at least a thousand cattle grazed on the savannas of Trinidad.[35] Yet the cattle industry never thrived, and in 1814, the governor of Trinidad reported that there were no beef cattle on the island. Beef prices in Trinidad were consequently high: while 18 pence bought 25 pounds of beef in Venezuela, in Trinidad a single pound of beef cost 24 pence.[36]

In March 1793, France declared war on Britain; by the end of the year, France was also at war with Spain. In September 1795, France and Spain made peace, but France and Britain were still at odds. In October 1796, Spain joined her ally France in the war against Britain. The war reached Trinidad on February 17, 1797, when British forces under the command of Sir Ralph Abercromby sailed into the Gulf of Paria. After a minor skirmish in which one British soldier and seven Spanish soldiers were killed, Governor José María Chacón surrendered Trinidad to Abercromby. Five years later, Trinidad was formally ceded to Britain in the Treaty of Amiens.

Abercromby decided that the extant Spanish law should prevail in Trinidad while the island was under British military occupation, so as to minimize disruption and disorder in the colony during the change in government. The newly appointed military governor of the colony, Lieutenant-Colonel Thomas Picton, was instructed to ". . . execute Spanish law as well as you can; do justice according to your conscience, and that is all that can be expected from you."[37]

When Trinidad fell into British hands in 1797, its free population included 1,295 white males, 856 white females, 2,094 colored males, 2,382 colored females, 495 Indian males, and 587 Indian females. There were 5,396 male slaves and 4,613 female slaves.[38] The Trinidadian Commissioners of Population reported 159 sugar estates on the island: 3 had water mills, 1 had a windmill, and 155 had mills driven by animals. Together, these estates produced 7,800 hogsheads of sugar. There were also 130 coffee estates, producing 330,000 pounds of coffee, 103 cotton estates producing 224,000 pounds of cotton, and 60 cocoa estates producing 96,000 pounds of cocoa.[39] Governor Picton estimated that land not yet cultivated could support another 1,293 sugar, 945 coffee, 304 cocoa, and 158 cotton plantations. In 1802, after five years under British military control, the island's 192 sugar estates produced 15,461 hogsheads of sugar. The same year, 128 coffee estates

35 Ibid., pp. 47, 208.

36 Woodford to Bathurst, October 3, 1814. Reproduced in TTHS No. 126.

37 Hollis, p. 98.

38 F. Mallet, "Descriptive Account of the Island of Trinidad," (1801), reproduced in *Map Collectors' Circle*, 10 (1963–4).

39 Dauxion-Lavaysse, p. 330.

produced 358,660 pounds of coffee, 57 cocoa estates produced 97,000 pounds of cocoa, and 101 cotton plantations produced 263,000 pounds of cotton.

> Thus it is seen that in the space of five years the cultivation of sugar had almost doubled. There may also be observed a small augmentation in the produce of coffee, cocoa and cotton, but two coffee, three cocoa and two cotton plantations less: it was because the proprietors of those plantations had found it more profitable to change them into sugar plantations.[40]

Following the formal cession of Trinidad to Great Britain in 1802, British politicians began expressing concerns about the agricultural development of the island. There were two major obstacles to making Trinidad a lucrative possession for Britain: clearing land and finding labor. By 1802, there was strong sentiment in Britain against importing slaves into Trinidad: Parliament had already resolved to abolish the slave trade, and the importation of slaves from Africa to Trinidad violated the spirit of that resolution.[41]

Governor Picton responded to the enquiries from London with a report on the agricultural potential of Trinidad. He noted that only four crops – sugar, cotton, cocoa, and coffee – were worth commercial consideration. "Sugar requires a great capital, a number of hands, and unremitting assiduous cultivation; in my opinion it cannot be advantageously cultivated or manufactured without slaves." Cotton, on the other hand, could be grown with few slaves. The demand for labor on coffee plantations was low throughout much of the year, but during the harvest many hands were required; the same was true for cocoa. For the cultivation of cotton, coffee, and cocoa, the major problem lay in clearing land; Picton speculated that it might be possible to use free colored laborers from Trinidad and the Spanish mainland for this task.[42]

After 1802, new migrants flocked to Trinidad from St. Domingue and from other British colonies. More estates sprang up, but many foundered from a lack of labor. By 1807,

> . . . there were . . . two hundred and fourteen sugar plantations, of which nearly one half made scarcely fifty thousand pounds of sugar each *from want of hands;* but there were many that made from two to three hundred thousand pounds each.[43]

The question of labor plagued Britain's attempts to induce settlers to come to Trinidad. Strict British limits on the number of slaves that could be brought into the island diminished the lure of Trinidad's fertile soils. The British experimented with tying grants of land to the crop raised, shifting

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40 Dauxion-Lavaysse, p. 334.

41 Patrick Lipscomb, "Party Politics 1801–1802: George Canning and the Trinidad Question," *Historical Journal*, 12 (1969), pp. 442–66.

42 C.O. 295/2: Picton to Hobart, April 12, 1802. Reproduced in TTHS No. 160.

43 Dauxion-Lavaysse, p. 335.

grants toward less labor-intensive crops in an attempt to reduce the demand for labor. However, in 1814, the governor of Trinidad reported that, in order to evade this rule, grants of lands for growing food were used instead for commercial cropping, especially the production of sugar. He argued that, because the slave trade had been abolished and a registry of slaves established, the tying of grants to crops was no longer necessary to stem the traffic in slaves. Still, it was widely recognized that Britain would never enjoy the full agricultural potential of Trinidad without an increase in the island's labor force, either slave or free.[44]

At the time of its cession by Spain to Britain, Trinidad was a small but thriving colony. The population was, in British colonial experience, extraordinary. Free colored inhabitants outnumbered whites; many owned both land and slaves. Among whites, the French and the Spanish greatly outnumbered the British. The British were, for the most part, merchants; the French and Spanish were planters. The unusual composition of Trinidad's population became a pivotal issue in the debate about the form of government to be granted Trinidad. In the past, all British colonies in the West Indies had been granted legislative assemblies. However, Britain was reluctant to give Trinidad a legislature because the large non-British population in Trinidad appeared "unreliable": most free inhabitants of Trinidad were unsympathetic to Britain.[45] Thus, until a more suitable form of government could be found, it was decided that Trinidad would be ruled by a governor appointed by the crown; Spanish law would prevail.

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44 Woodford to Bathurst, October 3, 1814. Reproduced in TTHS No. 126.

45 Millette, p. 70.

3

The slave registration order

Trinidad is like a subject in an anatomy school or rather a poor patient in a county hospital . . . on whom all sorts of surgical experiments are tried . . . Stephen is the operator and there are occasional consultations with Drs. Wilberforce and Macaulay on the state of the patient's health and the progress of the Experiments. The poor patient has had to go through some very severe operations; she is now actually bound down for a most painful one, a registration of slaves with penalties upon penalties on those who fail to observe the regulations of an Order in Council prescribed by Dr. Stephen . . . .[1]

The question of which code of law, Spanish or British, should prevail in Trinidad had festered in the island and in London since 1797. At the time of the capture of Trinidad, the British had decided that the laws enacted by the Spanish should continue in force until the form of the island's government could be settled. Thirteen years later the future of the Trinidadian government was still in limbo: the colony had no legislative assembly, and Spanish law was still in force. Trinidad was administered by a royally appointed governor and by fiat from London.[2]

The substitution of British law for Spanish was greatly favored by merchants, both in Trinidad and in Britain. In the spring of 1810 a London association of West Indian merchants and planters, tired of the struggle over the Trinidadian legal and governmental system, resolved to force the hand of the prime minister, Spencer Perceval, by petitioning the House of Commons for British law in Trinidad.[3]

In 1810, the Perceval government was held together by a fragile coalition which, it was feared, could not withstand a parliamentary confrontation on the Trinidad question. Thus Lord Liverpool, the Secretary of State for War

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[1] Goulburn Papers II/13: Peel to Goulburn, August 12, 1812 (cited in D. J. Murray, *The West Indies and the Development of Colonial Government 1801–1834*, p. 82).

[2] James Millette, *The Genesis of Crown Colony Government;* Murray, pp. 67–88.

[3] Murray, pp. 77–8.

and the Colonies, preempted the merchants' parliamentary action by promising that the question of the form of Trinidad's government and laws would be referred to the governor of Trinidad and his advisory council for their recommendations. Liverpool's maneuver infuriated James Stephen, a member of the House of Commons and an ardent abolitionist. Stephen long maintained that Trinidad should be cultivated by free rather than slave labor and firmly believed that, were the governor and council of Trinidad to design a constitution and laws for the island, the use of slave labor in Trinidad would expand. Thus Stephen countered the merchants' move with a ploy of his own: he announced that the African Institution, an abolitionist organization, had resolved that its members in Parliament should introduce a bill for the registration of all slaves in British Caribbean colonies as a means of checking the traffic in slaves.

The fragile Perceval government would fare no better in a debate on slave registration than it would on the question of Trinidadian law. Again Lord Liverpool avoided a parliamentary confrontation by striking a compromise with Stephen and his followers. In lieu of a bill for the registration of slaves in all British Caribbean colonies, Liverpool promised an Order in Council, to be written by Stephen, requiring the registration of slaves in Trinidad.[4]

The slave registration order, drafted by Stephen and promulgated on March 26, 1812, was complex: the printed version was twenty-eight pages long and contained detailed directions for conducting the slave registration. More than half the document was devoted to the description of the penalties that would be incurred by anyone violating the terms of the registration order. In particular, the order stipulated that slaves who were found not registered would be deemed free.[5]

The Order in Council began with instructions to the governor of Trinidad. He was to announce the impending registration of slaves within a week of the arrival of the order in Trinidad, and appoint a Registrar of Slaves who was to immediately begin hiring clerks and preparing books and forms for the slave registration. There were to be two such blank books: one for plantation slaves – slaves permanently attached to a plantation – and one for personal slaves, who were not attached to a plantation, even though they might be hired by plantation owners or managers as day workers.

Each slave owner was required to provide a return, or list, of his slaves to the registrar's office within one month of the proclamation of the registration order, and to swear an oath that the list was an accurate account of the slaves in his possession. Within two months of the proclamation of the order, the returns were to be registered, or entered into the blank books. A duplicate set

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[4] Ibid., p. 79.

[5] C.O. 295/28, f. 250–64: Order in Council for the Registration of Slaves in Trinidad, March 26, 1812.

of the books was to be prepared and sent to London. At the end of three months following the proclamation of the order, the slave registration books were to be closed. In short, the registration of the slaves was to be done quickly in order to preclude the smuggling and subsequent registration of slaves from other colonies.

The slave returns completed by the owners were complicated (Figure 3.1). At the top of each plantation return, the owner gave the name of the plantation and the quarter, or county, in which it was located, the crops grown on the plantation, and the owner's name. If the plantation had changed hands in the past seven years, the names of the previous owners were also given. The description of the plantation was followed by a description of each slave. The entries for the slaves were divided into three groups: first, a list of slaves who lived with other family members, arranged by household; then a list of male slaves who did not live with other family members; and finally a list of females who did not live in households. Within each section of the return,

> The schedule or paper containing each of the said lists [household lists and lists of single slaves] shall be divided into eight perpendicular columns, of convenient breadths, respectively entitled at the heads thereof, names, surnames, colours, employment, age, stature, country and marks; to which shall be added in the lists of families a ninth column, of convenient breadth, entitled Relations; and the more clearly to distinguish the description of each particular slave, as many horizontal lines with convenient spaces between them, shall be drawn across the said perpendicular lines or columns, as are equal in number to the number of slaves to be inserted in each list.[6]

The name of the slave given in the return was the name by which the slave was generally known. If the slave had a surname, it was entered in the second column. If the slave did not have a surname, then he was given a surname at the time the return was made. Families used the surname of the head of the household, provided that there was no other family by the same name on the plantation. If duplication occurred, then each family but one was given a new surname.

Color meant whether the slave was a Negro or had some white ancestors, in which case he was described either by his shares of black and white ancestry – mulatto, cabre, mustaphino – or by a color, such as black, yellow, or copper. Ages were to be recorded, ". . . according to the best of the knowledge and belief of the owner . . . ." Owners were instructed to measure their slaves and record their heights in feet and inches; the heights of children were to be measured at every subsequent registration.

In the country column, owners were to record whether the slave was born in Africa, in which case he was called an African, or born in the New World, in which case he was called creole. If the slave were an African, then the

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[6] Ibid., f. 251.

owner was to report "the name of the country or district of Africa from which he or she was brought," while if the slave were creole, "the name of the island . . . in which the slave was born or from which he or she was brought."[7] Further clues about the specific birthplaces of the slaves were contained under the heading "marks," which included both tribal scars and deformities.

The requirements set forth in the slave registration order for the description of slaves were onerous but not unjustified: height, color, and marks were standard means by which slaves were identified when, for example, they ran away:

> Runaway: A Negro man named John (alias Alick) about five feet eight inches high, 30 years of age, has three of his country marks on each temple; formerly belonging to General Hislop – Whoever will apprehend him or give Information that will lead to his apprehension to the printers of this paper shall receive eight dollars reward.[8]

In addition, the description of each individual served not only as a means of establishing an identity for each slave, but also precluded the surreptitious substitution of newly acquired slaves for slaves that died.

The order provided instructions for the annual revision of the slave registry. Each year, in the first eleven days of January, owners were to report to the registrar all births, deaths, sales, and manumissions among their slaves. Children were to be measured, and their new heights recorded.

Finally, the registration order set the fees: a fixed fee of ten shillings per return made to the registrar, and an additional fee of one shilling per slave listed in the return. For each certificate of ownership provided by the registrar, the fee was ten shillings, as was the fee for making additional entries into the registry; a search of the registry cost five shillings. From these fees, the Registrar of Slaves paid the cost of maintaining the registrar's office and conducting the registration; any excess of revenue over cost belonged to the registrar.

Although the Order in Council for the registration of the slaves in Trinidad was issued in the early spring of 1812, it was late summer before word of the order reached Trinidad. The delay was due, in large part, to the assassination of the prime minister, Spencer Perceval, in May and the ensuing changes in government. At the time the order was drafted, Lord Liverpool was the Secretary of State for War and the Colonies, but in early June he was succeeded by Earl Bathurst. It was the new Secretary of State who, on July 4, 1812, sent the order to Trinidad.[9]

The acting governor of Trinidad, Lt. General William Munro, received Bathurst's despatch and several copies of the order at the end of the summer.

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[7] Ibid., f. 252.

[8] *Trinidad Courant and Commercial Gazette*, January 23, 1813.

[9] C.O. 295/5, f. 15–16: Bathurst to Munro, July 4, 1812.

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[8] *Trinidad Courant and Commercial Gazette*, January 23, 1813.

[9] C.O. 295/5, f. 15–16: Bathurst to Munro, July 4, 1812.

SCHEDULE.

THE RETURN of *A. B.*, for the Plantation called *C. D*, in the Parish (or Quarter) called *E. F.*, a Sugar (or Coffee) Plantation, owned by *G. H.*, of which the said *A. B.* is in possession as Manager (or as Trustee or Mortgagee, &c.), and which was lately owned by (or in the possession of) *J. K.**—(or in Returns of Personal Slaves) †—THE RETURN of *A. B.*, of the Town (or Parish, &c.) of *C. D.*, Esq. of Personal Slaves, being his own Property, (or the Property of *E. F.*, of Esq.) whereof the said *A. B.* is in possession as Attorney (or Lessee, or as Trustee or Guardian, &c.) ‡ (and which Slaves were late the Property of *G. H.*)

Names.	Surnames.	Colour.	Employment.	Age.	Stature.	Country.	Marks.	Relations.
	LIST OF FAMILIES OF SLAVES on the Plantation *A. B.* (or of the said *E. F.*)							
Anthony	Williamson	Negro	Driver	41	5 feet 10 inches	Creole of this island	A scar on the right cheek	Husband of Sarah, and father of John and Samuel Williamson
Sarah	Williamson	Negro	Sempstress	39	5 feet	Same	Has lost the fourth toe of the left foot	Wife of Anthony, and mother of John and Samuel Williamson
John	Williamson	Negro	Labourer	20	5 feet 9 inches	Same	No marks	Son of Anthony and Sarah Williamson
Samuel	Williamson	Negro	In the little grass gang	10	4 feet 3 inches	Same	A deep scar on the left shoulder, from a wound	Son of Anthony and Sarah, and brother of John Williamson
	GENERAL LIST OF MALE SLAVES on the said Plantation, (or of the said *E. F.*)							
Jack	Thomas	Negro	Boiler	35	5 feet 9 inches	Creole of St. Kitt's	Lame in the right leg	
Ned	Smith	Mulatto	Cooper	40	5 feet 10 inches	Creole of St. Vincent's	No marks	

Sampson	Strong	Negro	Labourer	25	5 feet 8 inches	African, from the Windward Coast	Country marks, two seams on each cheek	
George	Ward	Negro	Labourer	29	5 feet 7 inches	African, from the Gold Coast	Has lost the first joint of the middle toe, left foot	
	GENERAL LIST OF FEMALE SLAVES on the said Plantation, (or of the said *E. F.*)							
Phillis	Johnston	Negro	Labourer	42	5 feet 1 inch	African, from Congo	No marks	
Susan	Strange	Negro	Labourer	39	4 feet 11 inches	African, from Gold Coast	Country marks on the arms	
Betty	Edwards	Negro	Washer	29	4 feet 10 inches	Creole of this island	No marks	
Sally	Baker	Mulatto	In the little weeding gang	11	4 feet 3 inches	Same	Cast in the eye	

The whole number of Slaves on the said Plantation *C. D.* (or of the said *E. F.*) is twelve.

A true Return,

A. B. January 1st, 1813.

* This Clause is necessary only when there has been a change of property or possession within seven years.

† It will be more convenient to have different printed forms, for Plantation and Personal Slaves respectively, and to entitle them accordingly. The Plantation Returns, of course, will require, in general, more than a single sheet; and there may be separate printed forms for all but the first sheet, omitting the title.

‡ Necessary only when change of property within seven years.

Figure 3.1. Schedule for the return of slaves in Trinidad in 1813. *Source:* C.O. 295/28, f. 264: Order in Council for the Registration of Slaves in Trinidad, March 26, 1812. Reproduced by courtesy of the Public Record Office, London.

On August 25, Munro convened the *Cabildo* – the local governing council – and presented the document. There appeared to be two tasks demanding the *Cabildo's* immediate attention: first, ". . . within the term of one week from and after the arrival of this present order at Trinidada . . . the same shall be publically notified to the inhabitants of the said island . . . ." Second, the order stipulated that ". . . the said governor . . . shall forthwith proceed to appoint some fit and proper person . . . to the office of Registrar of Slaves . . . ."[10] In the letter that accompanied the order, Bathurst urged Munro to appoint a qualified registrar, notify the inhabitants of Trinidad of the order, and begin the work of the registration as quickly as possible.[11]

On the second point – the notification of the residents of Trinidad of the impending registration of slaves – the *Cabildo* acted swiftly, deciding that in accord with Spanish law the order should be translated into French and Spanish, thus making it more intelligible to the general population.[12] The order was prepared for publication in three languages within the stipulated week.

On the first point – the appointment of a Registrar of Slaves – the *Cabildo* was in a quandary. The order, which was interpreted as requiring that the registrar be appointed within a week of the receipt of the document, stated that the Registrar of Slaves must not be ". . . directly or indirectly, the owner, part owner, or mortgagee of any Slave or Slaves, and that the said Registrar shall be personally resident in the said island . . . ."[13] Finding such a person willing to take on the onerous duties of the Registrar of Slaves was virtually impossible. Finally, Governor Munro turned to Henry Murray, the Deputy Clerk of the *Cabildo*, and asked him to take the job. However, Murray first had to sell his slaves, which meant selling his plantation. The sale was hastily arranged, and Murray received the promise of £36,500 for his property, which he claimed represented a loss to him of £5,000. Furthermore, because of the shortage of cash in Trinidad, he would not receive any payment for his property until 1817.[14]

The *Cabildo* convened again on August 31, six days after the receipt of the order. At that meeting, Munro signed the registration proclamation, issued he noted, ". . . for the purpose of making the said order as public as possible . . . ." The proclamation explained the terms of the order – that all slaves were to be registered within a month, and that any slave found in Trinidad after that time, unregistered, would be freed – and announced that

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10 C.O. 295/28, f. 250: Order in Council, March 26, 1812.

11 C.O. 295/5, f. 15–16: Bathurst to Munro, July 4, 1812.

12 C.O. 298/5, f. 264: Trinidad Council Sessional Papers, Minutes of the Board of *Cabildo*, August 25, 1812.

13 C.O. 295/28, f. 263: Order in Council, March 26, 1812.

14 C.O. 298/5, f. 210.

the office of the Registrar of Slaves, where returns were to be filed, would be on Brunswick Square in Port of Spain. At the same meeting of the *Cabildo*, Murray presented affidavits that he did not own any slaves, and took the oath as the registrar. Shortly thereafter, he began his work, hiring assistants and clerks, procuring blank books, and having return forms printed. In spite of the delays that had plagued the order since its promulgation in March, the slave registration seemed well under way.[15]

Meanwhile in London the new Secretary of State, Bathurst, expressed qualms about the complexity of the registration order Stephen had drafted. The order was difficult to interpret and, it was feared, would prove equally difficult to enforce. Thus, on July 17, less than two weeks after the original order was despatched to Trinidad, a second Order in Council was issued, suspending the order of March 26 and rendering all actions taken in compliance with the March order void. The new order specified that the Registrar of Slaves would be appointed in London where he could be instructed in the complex terms of the registration order and could supervise the preparation of books for the entry of slave returns.[16]

The news of the July 17 order reached Trinidad in the first week of September. Munro and Murray were appalled: their frantic activity during the preceding fortnight was in vain. Murray, who had sold his estate in order to qualify for a job that was no longer his, complained to Munro that, "In short, I may in common language truly say we have turned ourselves out of house and home . . . while my six children may now be said to be disinherited."[17] He commented that, had he realized how onerous the job would be, he would not have accepted the position.

It was decided by Munro that Murray should go to London and state his case for being reinstated as the Registrar of Slaves. He had lost the job before news of his appointment reached London; therefore, he personally had not been deemed objectionable. His chances for being reinstated would be greatly strengthened if he went to London, for there he could comply with the July 17 order by being instructed in the details of the slave registration and by supervising the preparation of the registry books. In the meantime, an annoucement of the temporary suspension of the registration of slaves was published in Trinidad.

Murray sailed on September 12 on the packet *Arrow*, bearing a despatch from Munro designating him Munro's aide de camp. In the covering letter to Bathurst, Munro informed him of Murray's appointment as registrar and asked Bathurst to confirm the appointment. Munro explained that it had been

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15 C.O. 298/5, f. 266–7: Trinidad Council Sessional Papers, Minutes of the Board of *Cabildo*, August 31, 1812.

16 C.O. 296/5, f. 15–16: Bathurst to Munro, July 28, 1812.

17 C.O. 295/28, f. 160–1: Murray to Munro, September 7, 1812.

very difficult to find an appropriate person for the job, and that Murray had undertaken the job at his request, even though it meant that, "... Mr. Murray ... disposed of his property in a Sugar Plantation and Slaves at a very great loss to enable him to hold the office ..."[18] If London preferred to appoint someone else to the position, then Munro suggested that, at the very least, Murray should be compensated both for his losses in the sale of his estate (£5,000) and for expenses he had incurred by hiring clerks and arranging printing (£1,000).[19]

Murray met with Bathurst on October 25 and pleaded his case. He was re-appointed to his post with a generous increase in salary beyond that stipulated in the order:

> It is His Royal Highness's Pleasure that until future direction Mr Murray shall be paid out of the Colonial Revenue a Salary of £500 sterling per annum in addition to the Fees allowed by the Order in Council.[20]

Murray returned to Trinidad in mid-February, 1813, having stayed in London to supervise the preparation of two massive blank books for the slave registration: one for personal slaves and one for plantation slaves. On February 26, Munro once again announced the impending registration of slaves. According to the timetable specified in the order of March 26, which was once again in force, slave owners had one month to prepare lists of their slaves. By the end of the second month, April 26, all the lists were to be entered in the two books Murray had brought from London. Throughout May, owners could inspect the entries and make corrections if necessary. At the end of May, the registration books would be closed.[21]

The announcement of the slave registration in Port of Spain on February 26 evoked a strong protest from slave owners, who argued that the slave registration violated the Spanish law in force on the island.[22] They argued that the registration of slaves was a way of imposing a tax on British subjects without the consent of their representatives and hence also a violation of the laws of Britain. They argued that the power to impose penalties was vested in one man, with little recourse to appeal of his decisions. They argued that the clause of the order that specified freedom for unregistered slaves was illegal because it made no provision for their welfare. They argued that the order endangered the entire population because the slaves would interpret the registration as the first step toward emancipation. But, although owners vowed not to register their slaves, when faced with the prospect of forfeiting their property if they failed to file returns, they ultimately complied:

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18 C.O. 295/28, f.155: Munro to Bathurst, September 11, 1812.

19 Ibid., f. 157.

20 C.O. 296/5, f. 19–20: Bathurst to Munro, November 17, 1812.

21 C.O. 295/34, f. 14: Stephen, "Facts and Observations ..."

22 C.O. 295/31, f. 65–6: Petition of the Proprietors of Slaves to Governor Munro.

In Trinidad an opposition the most general, strenuous and violent was made to the execution of the Order in Council from the moment of its promulgation. The opposition was countenanced even by persons in authority there and many of the largest proprietors, if not a great majority of their body, pledged themselves by public declarations and mutual agreements that they would never make the prescribed returns of their slaves for the purpose of registration. Nothing could be more apparently hopeless than a general compliance; yet before the expiration of the time first limited by public notification a very great majority had sent in their returns to the registry.[23]

Although the registration of slaves was announced in Port of Spain on February 26, it took several weeks for word of the order to reach the distant parts of the island. By March 22, the proclamation had finally spread through the countryside. Thus Murray felt that he ought to accept returns until April 22 – one month following the effective date of notification – and that he had until May 22 to enter the returns in the registration books.[24] But on May 17, Murray told Munro that, ". . . I find it will be utterly impossible to comply with that part of the Royal Order which declares that all the Returns shall be fairly entered and registered within the term of two calendar months from and after the first public notification thereof . . . ." Despite the fact that he had four clerks working two at a time during the daylight hours – about twelve hours per day – six days a week, writing entries in the two big books, Murray believed that it would take four months to make the entries rather than one month. The framers of the order had underestimated the time required to make the entries because, Murray surmised, a clerk in Trinidad could write only half as fast as could a clerk in a cooler climate. Thus Murray asked Munro for an extension until the end of August for making entries of returns he had already received.[25]

Again, Munro was in a quandary: the order made no provision for an extension of the time for the entry of returns into the books, and Murray had not been given instructions in London about what to do in such a case. Munro consulted with Trinidad's solicitor general, who agreed that an extension for the purpose of making entries in the return books would not violate the spirit of the registration order. Hence, on May 22, Munro issued a proclamation permitting the entry of returns until August 31.[26] Although the proclamation did not explicitly give Murray permission to accept new returns, it was later conceded that there had been a tacit understanding allowing late returns in cases where the owner had been ill or otherwise incapable of regis-

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23 African Institution, *Reasons for Establishing a Registry of Slaves in the British Colonies*, pp. 90–1.

24 C.O. 295/29, f. 41: Murray to Munro, May 17, 1813.

25 Ibid., f. 42.

26 Ibid., f. 45–6.

tering his slaves on time.[27] In late September Bathurst acknowledged Munro's decision, saying that the king fully understood the problems that Murray faced in making entries and had granted an extension to August 31 for that purpose. However, Bathurst warned, no new returns were to be accepted since such an action would defeat the purpose of the registration order.[28]

Murray's estimate that he would be able to finish entering the returns by the end of August had been wrong. Sir Ralph Woodford, the new governor of Trinidad, granted Murray yet another extension for the entry of returns, until October 15. At the same time, Woodford gave permission to use the blank duplicate plantation book for entering returns since the original plantation book was already full.[29]

Murray finally completed the entering of returns into the registration books on October 14, 1813; he had accepted returns until August 31. The next day, October 15, Woodford issued a proclamation announcing that the registration books would be open for inspection for one month, during which slave owners could verify their returns, making changes if necessary. Again, because of the difficulties in travel, the effective date of the proclamation was later in the remote parts of the island. Hence, Woodford set the deadline for inspection at November 15 for owners in Port of Spain and December 20 for owners who lived in rural areas.[30] Few owners came forward to inspect the books, and none made changes. During the inspection period, however, a handful of late returns were received, which the governor himself examined in order to ensure that the claims were not fraudulent.

The slave registration books were closed before the governor on December 31, 1813. Deputies of the registrar began the task of verifying the registry, visiting plantations and comparing the owners' returns against the slaves present on the estate. The final tally was 1,882 personal returns, listing 8,633 personal slaves, and 649 plantation returns, listing 17,084 slaves, making a total of 25,717 slaves registered in Trinidad.[31]

The news that returns had been accepted after the end of April elicited a heated reprimand from the Secretary of State:

> This practice, if it has generally prevailed, may have counteracted materially the main object of the original Order in Council, which was to prevent the introduction of fresh Negroes into the Island, and the number now returned when compared with the former estimates of the Slave population gives too much reason to suppose that such has been the effect of this long delay.[32]

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27 C.O. 295/32, f. 78: Woodford to Bathurst, January 22, 1814.

28 C.O. 295/5, f. 54–5: Bathurst to Woodford, September 28, 1813.

29 C.O. 295/30, f. 65: Woodford to Bathurst, September 14, 1813.

30 C.O. 295/32, f. 52: Woodford to Bathurst, January 4, 1814.

31 Ibid., f. 55.

32 C.O. 296/5, f. 73–4: Bathurst to Woodford, February 10, 1814.

As soon as Bathurst expressed his fear that slaves had been brought into Trinidad surreptitiously and registered, others followed suit in denouncing the manner in which the registration of the slaves in Trinidad had been conducted.[33] In constructing their argument that there was prima facie evidence of slave smuggling in Trinidad, Stephen, who had written the order, and his colleagues relied upon comparisons of the numbers of slaves returned in 1813 and the numbers returned to the Commissioners of Population in preceding years. Any apparent changes in the slave population, they argued, would have to be evaluated in light of two considerations: first, legal intercolonial slave traffic had been limited in the recent past and thus could not plausibly account for large changes in the size of the slave population; second, the number of slave deaths had consistently exceeded the number of slave births in the recent past. Hence, any apparent increases in the slave population were suspect.

Before 1813, annual counts of the slaves on the island were made by the Commissioners of Population. The filing of population returns was, according to one Commissioner, an indifferent affair: owners recited lists of slaves from memory, the returns were not made under oath, and the Commandants of Quarters, to whom the returns were made and who in turn filed reports with the Commissioners of Population, had no clear directions for making the population returns.[34]

In 1808, there were 21,983 slaves reported in the Return of Population for Trinidad: 3,680 urban slaves and 18,303 plantation slaves. In 1811, there were 21,228 slaves reported in Trinidad: 3,891 urban slaves and 17,397 plantation slaves.[35] In 1813, however, there were 25,717 slaves registered: 8,633 personal slaves and 17,084 plantation slaves. The slave population had apparently increased by 4,489 slaves in two years.

The framers of the order claimed that the 1813 figure was too large to be credible unless one acknowledged the prevalence of slave smuggling in 1813. Officials in Trinidad had another explanation for the apparent increase in population: the 1811 number was too small and thus, when compared to the more accurate 1813 figure, gave the appearance of a substantial increase in the slave population.

The returns of slaves prepared in 1811 and earlier were made in an offhand manner. There were many incentives for underreporting slaves and no apparent penalties for so doing. The roads in Trinidad were maintained with a road tax levied in proportion to the number of slaves that an individual owned; one Commissioner of Population speculated that the owners of the largest estates understated the number of slaves they owned who were less

33 C.O. 295/34: Stephen, "Facts and Observations . . ."

34 C.O. 295/40, f. 287: Maingot to Woodford, October 4, 1816.

35 C.O. 295/40, f. 120.

than three years old in order to reduce the amount of road tax they were assessed.[36] Slaves were also appropriated by the government for public work in proportion to the number on each estate. Thus, ". . . in order to diminish their contribution, either for keeping the roads in repair or for public works, the planters, particularly those possessing great numbers of slave children, never declared to the Commandants the real quantity of their Slaves."[37] Other owners hid title to their slaves in order to avoid losing their property to creditors.[38]

Charges were levied that the undercount in 1811 was an argument of convenience, created in the wake of the 1813 registration to protect Trinidadian officials from accusations of irresponsibility or fraud. Yet in November 1812, while still in London supervising the preparation of the registration books, Murray estimated the revenues and expenditures that would be incurred in the 1813 slave registration. In the revenues column, he predicted that there would be about 3,000 returns made (at ten shillings each), containing 25,000 slaves: "The Commissary of Population's Return for 1811 says there is 21,000 Slaves in Trinidad, but there is at the least 4,000 never returned making 25,000 slaves at 1/ each."[39] Thus several months before he began collecting slave registration returns, Murray believed that slaves were badly undercounted in 1811, and that about 25,000 slaves would be registered in 1813. Why, however, the books prepared in London were not designed to accommodate 25,000 slaves is unclear.

To bolster his contention that the slaves registered in Trinidad in 1813 included slaves who had been hastily imported into the island, Stephen examined the ratio of personal to plantation slaves. "There is a strange and most unaccountable proportion in the numbers of personal slaves to that of Plantation slaves in Trinidad by the ultimate returns . . . ."[40] Stephen argued that, in an agricultural colony, the ratio of personal to plantation slaves should be 1 to 10; in Trinidad in 1813, the ratio was 1 to 2. However, in 1808 and 1811, the urban slaves in Trinidad had constituted about 18 percent of the slave population. Even if one concedes that 4,000 slaves – plantation slaves – were omitted in 1811, the share of urban slaves was still 15 percent. Trinidad had never had ten times as many plantation slaves as personal slaves.

But why half as many personal slaves as plantation slaves in 1813? The Chief Judge of Trinidad, John Bigge, argued that one could not use the ratio

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36 C.O. 295/33, f. 261–2.

37 C.O. 295/40, f. 288: Maingot to Woodford, October 4, 1816.

38 African Institution, *Reasons for Establishing . . .*, p. 85.

39 C.O. 295/28, f. 377: Murray, "Annual Emoliments of the Registrar of Slave's Office . . . according to the nearest estimate that at present can be made," November 8, 1812.

40 C.O. 295/34, f. 23: Stephen, "Facts and Observations . . ."

of personal to plantation slaves as evidence of smuggling because the definition of personal slave used in 1813 differed from that used previously.[41] The Commissioners of Population had used "personal" and "urban" as synonyms, literally denoting slaves living in Port of Spain. The slave registration order, however, defined personal slaves as ". . . all Slaves employed in domestic labour, or in any handicraft, art or trade within the said island, or in manning or navigating any vessels or boats . . . or which are let or hired by their owners for the purpose of agricultural labour commonly called task work, on plantations not belonging to the owners of such Slaves . . . ."[42] Therefore, Bigge argued, some slaves who would have been called plantation slaves in 1811 because they lived in rural areas would have been called personal slaves in 1813 because of the nature of their employment. Stephen contended, however, that such a reclassification of slaves was not implied by the terms of the Order in Council.[43]

The honesty of Murray, the Registrar of Slaves, was also questioned. It was argued that the registration fees stipulated in the order – a fee for each return and a fee for each slave – would make the registrar particularly vigilant in registering every slave, thus ensuring that the 1813 registration would be complete: the greater the number of slaves registered, the greater the revenues of the registrar.[44] It was later suggested, however, that such a payment scheme gave the registrar incentive to accept late returns and turn a blind eye to slaves smuggled into the island, since the registration of such slaves could only increase his income. Indeed, slave labor was so scarce in Trinidad that the registrar might even solicit bribes for accepting late returns.

There was no question that returns had been accepted after the deadline imposed by the Order in Council. Similarly, there was no question that, when compared to the 1811 figures, the number of slaves registered in 1813 was surprisingly large. The questions that remained were why late returns were made, whether slaves had been brought surreptitiously into Trinidad in 1813, and whether there was any evidence of improper conduct on the behalf of the Trinidadian officials.

In the spring of 1814, the Chief Judge of Trinidad, John Bigge, was ordered by Governor Woodford to begin an enquiry into the registration of the slaves in 1813 and the conduct of the Registrar of Slaves. In particular, Bigge was instructed to investigate the returns made after April 22.[45]

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41 C.O. 295/33, f.328: Report of J. Bigge, October 4, 1814.

42 C.O. 295/28, f. 250: Order in Council, March 26, 1812.

43 C.O. 295/34, f. 23: Stephen, "Facts and Observations . . ."

44 African Institution, *A Review of the reasons given for establishing a registry of slaves in the British Colonies*, pp. 14–15.

45 C.O. 295/33, f. 328–35: *Report of J. Bigge on the 1813 Registration*, October 4, 1814.

Bigge began his enquiry by questioning, under oath, owners who had made their returns after April 22.[46] In examining the people who had made late returns, Bigge had two goals: to find out why their returns were late and to discover why the slave population seemed to have increased.

Invariably, each owner claimed that he had acquired the slaves he registered before February 26, 1813, the day that the registration of slaves was announced. In many cases, people said that they had owned some of their slaves for a dozen years or more; in other cases, they had purchased their slaves within the past two or three years. A few slaves had been acquired within the three months prior to February 26.

Why were late returns made? The answers were varied. In some cases, the owner could not pay the registration fees; in other cases, the owner had been prevented from making the return on time either by illness or lack of transportation to Port of Spain. Others said that the only notice of the order they had received was in English, a language with which they were unfamiliar. Still others were under the impression that returns could be made until the books were closed.

Some of the late returns were the product of the complexity of the registration order itself. Owners complained that they submitted many returns, each time being told that the form was improperly filled in, before their returns were finally accepted:

> . . . a gentleman in Trinidad filled in ten sheets of paper in describing the country marks of a single slave with the accuracy which he considered necessary to distinguish him in the case of any dispute about his identity, and also to comply with the Order in Council. The Registrar, however, probably foreseeing that the whole world would scarcely contain all the books that would be written were he, in every such case, to enter and copy all these particulars, refused to receive his return in that shape.[47]

To some extent, London had created the problem of late returns. The registration of slaves was announced on August 31, 1812 and then suspended a fortnight later. Some owners saw no reason to believe that the same events would not be repeated, and so dawdled in filing their returns, stalling what might prove an unnecessary expenditure of time and money. Thus they testified that there was a general belief that the terms of the order should be disregarded since it would soon be suspended.[48] "Indulgences afforded by the Registrar" exacerbated the problem: owners did not feel compelled to make their returns on time.[49] Bigge noted in his report, ". . . a certain timidity in

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46 C.O. 295/33, f. 244–59: Testimony in the Enquiry of J. Bigge.

47 Marryat, Joseph. *More Thoughts, Occasioned by Two Publications which the Authors call "An exposure of some of the numerous misstatements and misrepresentations contained in a pamphlet commonly known by the name of Mr. Marryat's Pamphlet, entitled Thoughts, etc." and "A Defense of the Bill for the Registration of Slaves,"* p. 135.

48 C.O. 295/33, f. 329.

49 C.O. 295/33, f. 330.

the Acts and Language of the Government . . . at this period," which did not inspire people to comply promptly with the order.

Given such reservations about the slave registration order, why, Bigge asked, had virtually all owners ultimately acquiesced and registered their slaves? He was given two reasons. The first was fear that slaves who were not listed in the returns would be freed: no owner could afford to lose his slaves. The second was the "repeated solicitations of the Registrar."

In his summary to Governor Woodford, Bigge concluded that

> The admission to Registry of those Returns that I have examined and the indiscriminate indulgence to all who presented them seems to be the most objectionable point in the conduct of Mr. Murray. Amongst those so admitted, Your Excellency will find Returns of slaves who had not only been purchased but introduced into the Colony within three calendar months previous to the Proclamation of the Order, and therefore clearly obnoxious to the rule . . . .[50]

Strictly interpreted, the order stipulated that the access of owners who filed late returns to their slaves would be suspended until the next registration. The thought that people who were too sick or poor to make their returns should be so penalized was unpalatable to Murray, and so he interpreted the extensions of the time for entering returns as an extension of the time for receiving returns.[51]

> . . . That the vital principle of the Order was not violated by the operation of these causes seems to have been a circumstance more owing to the Condition of the Colony than to anything else . . . Except in certain instances . . . there could have arisen no suspicion of clandestine importation or that those persons who by delay had the means of doing it with impunity have ever availed themselves of such an advantage . . . .[52]
>
> [Murray believed] . . . that he had been acting rightly. That he had acted erroneously . . . there can be no question; that the benefits intended by the Order in Council were put to hazard by his Conduct and that in some few Instances Negroes newly imported from English Colonies and newly purchased there were admitted to Registry in violation of the Order, is not less clear . . . .[53]

In his report, Bigge ignored the question of slaves brought to Trinidad from Spanish Caribbean colonies in the summer of 1813, accompanying owners seeking refuge from war.[54] The presence of such slaves posed a difficulty for Governor Woodford, who was unsure whether the slaves could be admitted to the island under the laws controlling the intercolonial traffic in

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50 C.O. 295/33, f. 333.

51 C.O. 295/33, f. 334.

52 C.O. 295/33, f. 330.

53 C.O. 295/34, f. 335.

54 Cust. 34/828: Report of the Seizure of the Sloops *Maria* and *El Carmen* off the coast of Trinidad, September 14, 1813.

slaves. Woodford finally decided that refugees who arrived in Trinidad with more than two slaves should post a bond at the Customs House assuring that they would neither sell nor otherwise transfer their slaves while in Trinidad, and that upon request they would produce for inspection all slaves they had brought to the island.[55] In some cases, these slaves, imported into the island after February 26, were entered in the slave registry.[56]

In retrospect, there appears little doubt that slaves were registered in Trinidad in 1813 who had not been on the island on February 26. Some openly accompanied their owners from British colonies, others from Spanish colonies; in all likelihood, slaves were smuggled into the island for sale before the registration books closed. Given Murray's estimate, in November 1812, that there were 25,000 slaves in Trinidad, 4,000 of whom had not been enumerated in 1811, it seems unlikely that the entire increase of 4,500 in the recorded slave population can be attributed to slaves smuggled into Trinidad in 1813 in defiance of the slave registration order.

The degree to which the extensions granted by Murray in making returns exacerbated the problem of slave smuggling is unclear. It is likely that, having been alerted to the possibility of an impending slave registration in August 1812 by Munro's original proclamation, slave traders quietly smuggled slaves into Trinidad in the six months preceding the February 26 proclamation. Where were such slaves registered? If they were sold to plantation owners, they would appear in the lists of plantation slaves. If they had not yet been sold to plantations, they would appear in the lists of personal slaves, thus inflating the ratio of personal to plantation slaves in the island.

Further clues about the number and location of smuggled slaves can be drawn from demographic analysis of the plantation slave returns. Suppose that, as Stephen charged, nearly 4,500 slaves were smuggled into Trinidad in the year preceding the slave registration, and that these slaves appeared in the lists of the plantations that filed late returns because those plantations were still acquiring smuggled slaves as the registration deadline passed. Suppose further that, in selecting slaves to smuggle into Trinidad, a premium was placed on young adult males and females, and not on small children or elderly slaves. Then one would expect to see systematic differences in population structure, mortality, and fertility between the slaves on plantations that filed returns on time, and those that were late. If there were no systematic differences between the two groups of slaves – those who were registered on time and those who were registered late – then there is a strong demographic case that the late slave returns did not contain large numbers of smuggled slaves, but rather were composed, for the most part, of a random sample of the plantation slave population of the island.

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55 C.O. 295/32, f. 54: Woodford to Bathurst, January 4, 1814.

56 C.O. 295/33, f. 244–59: Testimony in the Enquiry of J. Bigge.

4

The population of Trinidad

The males originally registered [in Trinidad] in 1813 were 10,917 adults and 3255 children, together 14,172; the females 8206 adults, and 3339 children – together 11,545; making a difference between the sexes of 2627 . . .

But the case was improved by the returns of 1816; for it will be found . . . that while males have lost 148, the females have gained 302; making a difference in their relative numbers of 450, and reducing the total difference to 2177 . . . [1]

In 1797, Britain's new colony had a population that was novel in British experience: Spanish and French Catholics comprised the bulk of white inhabitants of the island, there were twice as many free colored residents – many of whom owned both land and slaves – as white residents, and nearly two-thirds of the inhabitants of the colony were slaves.

This chapter surveys some of the demographic characteristics of the population of Trinidad between 1783 and 1816 using data drawn from a variety of sources including the annual reports of the Commissioners of Population, the Trinidadian Slave Registration records, and plantation probate records. The sections are arranged in order of increasing detail, moving from consideration of the population of the island as a whole to examination of the population of a single plantation. No attempt is made at elaborate data analysis in this chapter; rather, the data presented here are intended to serve both as background for subsequent detailed analysis of the plantation slave registration data, and as a resource for use by other scholars in comparative studies of slave systems.

The first section of the chapter employs the limited information that is available about the white, Indian, and free colored populations in Trinidad in the late Spanish colonial period and in the early years of British rule in order to establish a setting in which to consider the more detailed information that is available about the slaves in the colony.

[1] African Institution, *A Review of the Colonial Slave Registration Acts . . .*, p. 77.

In the second section, the history of the introduction of slaves into Trinidad is outlined and some characteristics of the Trinidadian slave population as a whole – both personal and plantation slaves – are examined; when possible, comparisons are drawn between those slaves who were registered as personal slaves and those who were registered as plantation slaves.

The third section commences the analysis of the plantation slave registration data by using the detailed information about individual slaves drawn from the the plantation slave registration records to catalog some demographic, economic, and social characteristics of the plantation slave population: for example, the age and sex structure of the plantation slave population, the occupational distribution of the plantation slaves, and the composition of plantation slave households. This descriptive section provides the framework for the detailed studies of plantation slave fertility and mortality patterns and individual variation in mortality presented in subsequent chapters. The chapter concludes by moving from a description of the plantation slave population as a whole to a brief examination of a single plantation, Harmony Hall in North Naparima.

The residents of Trinidad

On the eve of the British capture of Trinidad in 1797, nearly three times as many slaves as free people lived in Trinidad. Among the free inhabitants, the colored greatly outnumbered the whites. The whites were predominantly French and Spanish; there were few British. The Arawak Indians, whose numbers had decreased steadily since initial Spanish contact with the island, constituted slightly more that 5% of Trinidad's total population in 1797.

The growth of the population of Trinidad can be broadly traced. In 1788, Governor José María Chacón instructed the Commissioners of Population in Trinidad to keep a record of the island's inhabitants:

> Those of each quarter will be entered in a separate book showing the classes, nations and countries whence they came, the numbers of individuals composing the same, distinguishing the free from the slaves, any augmentations or diminutions since their arrival in the Island, and the occupations they follow.[2]

Each December, the Commissioners compiled their statistics and presented them to the governor. The reports listed the population of each quarter, or county, by group: white, free colored, Indian, or slave. Within each group, the population was tallied by sex, and loosely by age: children (roughly, less than 15 years old) were distinguished from adults. In some years, the numbers of births and deaths in each quarter were given; in other years, the information was omitted.[3]

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[2] José María Chacón, 28 October 1788, reproduced as TTHS No. 470.

[3] C.O. 295/21, f. 197; C.O. 295/28, f. 9; C.O. 295/31, f. 45; C.O. 295/37, f. 267.

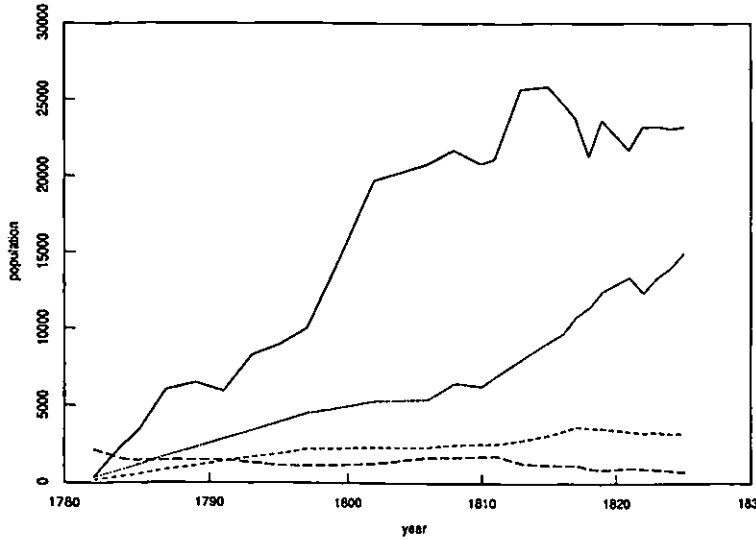


Figure 4.1. Population of Trinidad, 1782–1825: — slave; ··· free colored; - - - white; – – Indian.

During the Spanish colonial period, the slave population grew at an average annual rate of 23% as more and more migrants flocked to Trinidad, bringing their slaves with them: the slave population increased from 310 slaves in 1782 to 10,009 slaves in 1797 (Figure 4.1; Table 4.1). During the same period, the white population grew at an average rate of 19% per annum; the free colored population grew at an average rate of 18% per annum. The Indian population shrank 4% per year.

As a result of the adherence to Spanish law and governmental structure in Trinidad by the British, the Commissioners of Population continued to make annual reports after the island was ceded to the British. In the first decade of British rule – from the capture of Trinidad in 1797 to the abolition of the transatlantic slave trade in 1807 – the population of Trinidad continued to grow, albeit more slowly. The white and free colored populations grew at average annual rates of 0.5% and 1.8%, respectively. The slave population grew at 7% per annum, increasing from 10,009 slaves in 1797 to 20,761 slaves in 1806. By 1807, there were more than 30,000 people in Trinidad, a far cry from the scant 2,811 inhabitants of the island a quarter of a century earlier.

The free white population of Trinidad, which, before 1825, never accounted for more than 11% of the island's population, was predominantly

Table 4.1. *Population of Trinidad: 1782–1825*

Year	White	Free colored	Indian	Slave	Free total[a]	Total
1782	126	295	2,080	310	421	2,811
1784			1,491	2,462	2,550	3,953
1785			1,405	3,300	2,741	4,705
1787			1,414	6,009	4,110	7,423
1789			1,432	6,451	5,170	13,053
1790						13,247
1791			1,398	5,916	4,695	12,009
1793			1,268	8,264	5,212	14,744
1795			1,078	8,944	5,257	15,279
1797	2,151	4,476	1,082	10,009	6,627	17,718
1802	2,261	5,276	1,232	19,709	7,537	28,478
1806	2,274	5,401	1,607	20,761	7,675	30,043
1808	2,470	6,478	1,635	21,733	8,948	32,316
1810	2,495	6,264	1,683	20,821	8,759	31,263
1811	2,516	6,901	1,736	21,143	9,417	32,296
1813	2,776	8,075	1,265	25,717	10,851	37,833
1815	3,108	9,206	1,147	25,871	12,314	39,322
1816	3,368	9,720	1,141	24,868	13,088	39,075
1817	3,650	10,830	1,157	23,828	14,480	39,465
1818	3,569	11,437	939	21,310	15,006	37,255
1819	3,529	12,485	850	23,689	16,014	40,553
1821	3,337	13,388	956	21,719	16,725	39,400
1822	3,222	12,367	893	23,227	15,589	39,709
1823	3,270	13,347	872	23,245	16,617	40,734
1824	3,177	13,995	773	23,117	17,172	41,062
1825	3,214	15,003	727	23,230	18,217	42,174

[a]Whites and free colored.

Sources: C.O. 295/21, f. 107; C.O. 295/28, f. 9; C.O. 295/37, f. 267; C.O. 295/40, f. 289; C.O. 295/55, f. 366; C.O. 295/59; C.O. 297/27, f. 95; Newson, *Aboriginal and Spanish Colonial Trinidad*, p. 184; Lavaysse, *Statistical, Commercial, . . .*, p. 397; Millette, *Genesis of Crown Colony Government*, pp. 7, 15; Brereton, *A History of Modern Trinidad*, p. 16; Williams, *Documents in West Indian History*, pp. 380–3.

male, although the imbalance became less pronounced as the colony matured (Tables 4.2, 4.3). In 1808, there were 1.8 times as many adult white males as adult white females; by 1822, there were only 1.4 white men per white woman. The sexes of the children were roughly balanced, so overall, between 1808 and 1822, there were about 1.3 white males of all ages per

Table 4.2. *Sex ratio for whites, free colored, and all slaves in Trinidad, for all ages and for adults: 1808–22*

	Year	Whites	Free colored	Slaves
All ages				
	1808	1.57	0.88	1.31
	1809			1.31
	1810			1.28
	1811			1.27
	1812	1.49	0.86	
	1813	1.41	0.87	1.22
	1814	1.34	0.86	
	1815	1.29	0.88	1.18
	1816	1.20	0.91	1.18
	1817	1.22	0.89	
	1818	1.48	0.85	
	1819	1.22	0.91	1.14
	1820	1.24	0.89	
	1821	1.30	0.90	
	1822	1.26	0.91	1.11
Adults[a]				
	1808	1.77	0.76	1.37
	1809			1.35
	1810			1.35
	1811	1.60	0.75	1.32
	1813	1.66	0.78	1.24
	1815	1.48	0.79	1.26
	1816	1.33	0.81	1.26
	1819			1.19
	1822	1.39	0.83	1.16

[a]Approximately age 15 and older.

Sources: C.O. 295/21; C.O. 295/28, f. 9; C.O. 295/31, f. 45; C.O. 295/37, f. 267; C.O. 295/40, f. 289; C.O. 295/55, f. 366; C.O. 295/59, f. 26, 247–8; C.O. 297/27, f. 95.

white female; the ratio of males to females at all ages fell from 1.57 in 1808 to 1.26 in 1822.

The free colored population of Trinidad differed substantially from the white: adult colored females outnumbered adult colored males by about 20% during the period 1808–22. In 1808, there were 1.3 colored adult women per colored adult male. In 1822, the ratio had fallen to 1.2 women per man.

Table 4.3. *Adults, children, and children per woman: whites, free colored, and all slaves in Trinidad: 1808–22*

	Year	Adults[a] Men	Women	Children Boys	Girls	Children (0–14) per woman (15+)
Whites						
	1808	1,150	649	359	312	1.03
	1811	1,165	725	389	338	1.00
	1813	1,250	749	445	452	1.19
	1815	1,288	869	531	531	1.22
	1816	1,333	1,000	585	594	1.17
	1822	1,311	942	553	535	1.15
Free colored						
	1808	1,729	2,272	1,310	1,167	1.09
	1811	1,790	2,380	1,456	1,417	1.20
	1813	2,089	2,675	1,685	1,653	1.24
	1815	2,482	3,103	2,045	2,023	1.31
	1816	2,863	3,513	2,215	2,064	1.21
	1822	3,742	4,480	2,669	2,551	1.16
All slaves						
	1808	10,189	7,429	2,168	1,987	0.55
	1809	9,894	7,315	2,210	1,924	0.56
	1810	9,477	7,011	2,128	2,012	0.59
	1811	9,321	7,019	2,506	2,297	0.68
	1813	10,917	8,206	3,255	3,339	0.80
	1815	10,018	7,944	3,161	3,206	0.80
	1816	10,110	7,983	3,914	3,864	0.97
	1819	9,419	7,868	3,239	3,165	0.81
	1822	9,017	7,732	3,225	3,253	0.83

[a]Approximately age 15 and older.
[b]Approximately age 0–14.
Sources: C.O. 295/21, f. 107; C.O. 295/28, f. 9; C.O. 295/31, f. 45; C.O. 295/37, f. 267; C.O. 295/40, f. 289; C.O. 295/59, f. 26, 247, 248; C.O. 297/27, f. 95.

The sex ratio of the adult slaves in Trinidad – plantation and personal slaves together – lay between that of the white adults and the free colored adults. There were more adult male slaves than females, but the imbalance was not as great as for the whites: between 1808 and 1822, there were about 25% more adult male slaves than females, while among the whites, there

were roughly 50% more adult males than females. The sex ratio for the slave population, all ages taken together, was slightly lower than that of the adult slave population.

As the island colony matured, the population of Trinidad was increasingly shaped by the births on the island rather than by immigrants; the initial imbalance between the sexes slowly disappeared. This was true for the white population, the free colored population, and the slave population: the sex ratios moved from 1.6, 0.9, and 1.3 in 1808 to 1.3, 0.8, and 1.1 in 1822, respectively. By 1816, this movement of the sex ratio of the slave population toward 1, and the role played by births of roughly equal number of boys and girls in the change, had been recognized in the data compiled from the slave registry, and been commented upon in London.[4]

The slave population of Trinidad

The numerical dominance of slaves in Trinidad's population in 1797 was a relatively new phenomenon. Just fifteen years earlier, Trinidad had more free inhabitants than slaves: in 1782, the total population of Trinidad was a scant 2,811 people, of whom 2,080 were Arawak Indians and 310 were slaves. However, in 1783, the Spanish government made a deliberate effort to populate the island by announcing generous new terms for settlement in Trinidad.[5] Migration was opened to any Catholic citizen, whether white or colored, of any nation friendly with Spain. As inducement, a grant of land was offered to each new settler; the size of the land grant depended upon the number of slaves each settler brought with him to Trinidad. The incentive for acquiring as many slaves as possible before migrating to Trinidad was tremendous, since slaves were the measure by which land, and hence wealth, was allocated.

In some cases, the premium placed on the possession of slaves by immigrants to Trinidad had unfortunate consequences: slaves were stolen from other colonies and taken to Trinidad, where they were claimed as property of the immigrating free citizen. Slave theft became so rampant that, in 1789, a law was passed in Grenada regulating the traffic of foreign vessels in an attempt to stem the illicit exodus of slaves from the island. Clause VIII stated that ". . . some persons have come from Trinidad and lurked in these Islands for the purpose of seducing and carrying off slaves and . . . other persons

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4 African Institution, *A Review of the Colonial Slave Registration Acts . . . .*, p. 77.

5 James Millette, *The Genesis of Crown Colony Government*, pp. 7–17; Bridget Brereton, *A History of Modern Trinidad*, pp. 11–12. An English translation of the *Cédula* appears in Gertrude Carmichael, *The History of the West Indian Islands of Trinidad and Tobago*, pp. 363–9.

. . . have sent artful Negro and Mulatto slaves for the like purpose . . . ."[6] The law stipulated that visitors to Grenada from Trinidad report to the police within twenty-four hours of arrival and post a bond ensuring their good behavior in Grenada, and that, in particular, they would not steal slaves. Trinidadians could leave Grenada only during specified hours each day, and were required to give the Harbour Master six hours notice prior to their departure. Any slave normally resident in Trinidad but found in Grenada without a plausible errand would be arrested, whipped, and jailed for six months.

Despite the flood of slaves – legal and illegal – that accompanied migrating free settlers, Trinidad remained woefully short of the labor it required to take full advantage of the agricultural potential of the island. Thus, in 1785, Edward Barry, acting as an agent for the Liverpool slave-trading firm of Baker and Dawson, was awarded an *asiento* by the King of Spain to supply 4,000 slaves annually to Caracas and Trinidad. The slaves were selected from the cargoes of slave ships calling at Spanish ports and sold for $150 each to the Spanish government, which then resold the slaves to private citizens for $400–$500 each. Dawson claimed that, between 1785 and 1788, he delivered 12,000 slaves to Caracas and Trinidad. Three-quarters of these slaves, who came from the Gold Coast and Angola, were male. In 1788, Dawson negotiated a new *asiento* with the Spanish government to deliver at least 3,000 slaves a year to the West Indies – Trinidad, Caracas, and Havana – for sale to the government: $200 per adult male, $190 per adult female, $175 per boy, and $145 per girl. Only a small fraction of these slaves remained in Trinidad; most were shipped on to other Spanish ports.[7]

In 1790, Governor Chacón petitioned the King of Spain for a grant from the Royal Exchequer with which to purchase slaves for the colony. The king refused the grant and instead authorized Governor Chacón to arrange a loan of a million dollars from a private source, either another nation or a commercial body. "The object of this loan," Chacón later told the *Cabildo*, "is to favour agriculture and the principle method of so doing is the Provision of Negroes."[8] In 1796 Chacón estimated the annual demand for slaves to be 4,000–5,000 per year, and anticipated a sharp increase in the demand for slaves in the future as more lands were cultivated.[9]

Prospects for supplying the slave population of Trinidad with a steady stream of new recruits from Africa came to an end ten years after Britain acquired the colony. The Slave Trade Abolition Act of 1807 not only ended

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[6] Laws of Grenada. Published at St. Georges, 5 July 1784. Reproduced as TTHS No. 605.

[7] *Parliamentary Papers*, House of Commons, 36 (1789); Millette, p. 15; Linda Newson, *Aboriginal and Spanish Colonial Trinidad*, pp. 200, 217.

[8] Chacón to the *Cabildo*, 13 September 1790: *Parliamentary Papers*, 23 (1826–7), reproduced as TTHS No. 637.

[9] Millette, p. 17.

the transatlantic slave trade, but placed strictures upon the intercolonial slave trade as well: slaves could be moved from one colony to another only under license from the governor or customs house of the exporting colony. If the slaves were destined for a recently acquired colony, such as Trinidad, a license was also required from the governor or customs house of the importing colony. Furthermore, a quota was imposed on the number of slaves that could be imported into a colony, of not more than 3% of the extant slave population of that colony; the number of slaves actually licensed for import also depended upon the rate of change in the size of the slave population. An exception was made for slaves who were fishermen and sailors, but owners of these slaves were required to post bond at the customs house of each port of call, ensuring that these slaves would leave on the ship that had brought them. Another exception was made for domestic servants: slave owners were allowed to travel to other colonies with two personal slaves without licensing the slaves for import or export.[10]

During the four years from 1813 to 1816, nearly 2,000 slaves were imported under license to the Customs House at Trinidad (Table 4.4).[11] Most of the slaves came from Dominica and from Grenada, which had been an important source of slaves for Trinidad during the Spanish period. In 1815, Governor Ralph Woodford wrote that

> . . . the average price of slaves is four hundred dollars for an able Negro, *ready money* . . . small gangs of slaves are procurable from Dominica where the lands are worn out and they are starved by Hurricanes, and they are sold here for 360 dollars at one and 2 years Credit. 600 and 800 and even 1000 dollars are given for Masons, boilers, etc.[12]

Barbados and Guadaloupe also supplied many slaves to Trinidad, especially in 1815 and 1816, when slave imports numbered slightly more than 3% of the island's slave population.

The sexes of the imported slaves were not noted in the Customs House records. An African Institution summary of the Trinidadian slave registration data, written in 1820, stated that, from 1814 to 1816, 1,151 slaves were imported into Trinidad from British colonies; of these slaves, 611 were male

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10 David Eltis, "Traffic in Slaves between British West Indian Colonies, 1807–1833," *Economic History Review*, 25 (1972), pp. 55–64; Barry W. Higman, *Slave Populations of the British Caribbean*, pp. 79–82; George W. Roberts, "Movements in Slave Population of the Caribbean during the Period of Slave Registration," in *Comparative Perspectives on Slavery in the New World Plantation Societies*, eds. V. Rubin and A. Tuden, pp. 145–60; Eric Williams, "The British West Indian Slave Trade after Its Abolition in 1807," *Journal of Negro History*, 27 (1942), pp. 175–91.

11 C.O. 295/55, f. 356.

12 C.O. 295/37: Woodford to Goulburn, 15 October 1815.

Table 4.4. *Number of slaves imported into Trinidad, under license from the Customs House, by port of origin: 1813–16*

	1813	1814	1815	1816
Antigua	2		20	18
Barbados	4	11	41	65
Baltimore			1	
Bermuda	7	3	11	1
Cumana		1		
Curiacou		2		
Curacoe			1	
Demerara	1			6
Dominica		67	413	167
Guinia	1			
Grenada	15	44	245	324
Guadaloupe	5	38	24	159
Montserrat				1
Martinique	6	91	11	2
Nevis	3	1		
St. Vincent	5	5	18	29
St. Bartholomew's	2	1	3	
St. Christopher's			11	5
St. Lucia		11	35	20
St. Martin's		12	2	5
St. Thomas		2		
Santa Cruz		1		
Tobago		3	6	11
Turks Island		1		
Total	51	294	842	813

Source: C.O. 295/55, f. 356.

and 540 were female.[13] Between 1813 and 1816 only 139 slaves – 88 males and 51 females – were recorded by the Registrar of Slaves as exported (Figure 4.2). The exportation of slaves from Trinidad was strongly discouraged: in October 1813, Governor Woodford wrote to Lord Bathurst, the Secretary of State for War and the Colonies, asking that the intercolonial slave trade laws for Trinidad be modified so that no slaves be allowed to leave the island except at the discretion of the governor.[14]

An important distinction among the slaves in Trinidad in 1813 was that of

[13] African Institution, *A Review of the Colonial Slave Registration Acts . . .*, p. 77.

[14] C.O. 295/30, f. 151–2: Woodford to Bathurst, 18 October 1813.

Trinidad

A Return shewing the number of Slaves Exported from this Island from the Year 1813 to the Year 1818 Inclusive; as far as the same can be made up from the Books of this Office.

			Males	*Females*
From the Year 1813 to the Year 1815			*63*	*31*
From	*1815*	*1816*	*25*	*20*
From	*1816*	*1818*	*34*	*33*
Total Number Exported of each Sex			*122*	*84*

Grand Total Exported from the Year 1813 to 1818: 206

Figure 4.2. Registrar of Slaves' report of slave exports from Trinidad: 1813–18. *Source:* C.O. 295/55, f. 356.

personal versus plantation slave. The Order in Council for the registration of slaves in Trinidad stipulated that slaves were to be registered either as "plantation" slaves, if they were normally employed on a plantation, or as "personal" slaves; the basis of the distinction was the slave's normal form of employment. In the earlier Returns of Population prepared by the Commissioners of Population, a distinction was made between "rural" and "urban" slaves; the urban slaves lived in either Port of Spain or St. Joseph.

The distinction between personal and plantation slave became central in the controvery that ensued over the 1813 slave registration. The number of slaves registered in 1813 was roughly 4,500 greater than the number of slaves listed in the report of the Commissioner of Population for 1811, an increase that seemed impossible given an excess of slave deaths over births. Nor could the difference be attributed to legally imported slaves. Hence, questions were voiced: were 4,500 slaves covertly imported into Trinidad during 1812 and 1813? And if so, were they registered as personal or plantation slaves?[15]

In 1808, there were 3,680 urban slaves and 18,303 plantation slaves recorded by the Commissioners of Population in Trinidad. Thus, plantation slaves constituted 83% of the total slave population. In 1811, there were 3,891 urban slaves and 17,397 plantation slaves in Trinidad, so plantation slaves constituted 82% of the total slave population.[16] At the end of 1813, however, the share in total population of plantation slaves had fallen to 66%:

15 C.O. 295/34: James Stephen, "Facts and Observations as to the Execution of the Order in Council of March 26, 1812," February 1814.

16 C.O. 295/40, f. 120.

Table 4.5. *Age distribution of all slaves in Trinidad, plantation slaves and personal slaves: 1813*

	Males			Females		
Age	All	African	Creole	All	African	Creole
All slaves						
0–4	1,415		1,415	1,495		1,495
5–9	984		984	1,062		1,062
10–14	829	69	760	772	40	732
15–19	1,261	711	550	914	417	497
20–24	1,947	1,426	521	1,645	1,113	532
25–29	2,287	1,847	440	1,910	1,434	476
30–34	1,975	1,586	389	1,361	1,020	341
35–39	1,246	1,010	236	811	582	229
40–44	878	716	162	609	424	185
45–49	519	396	123	388	271	117
50–54	339	244	95	272	178	94
55–59	143	108	35	102	73	29
60–64	135	102	33	108	75	33
65–69	43	30	13	30	19	11
70+	72	50	22	49	27	22
Total	14,073	8,295	5,778	11,528	5,673	5,855
Plantation slaves						
0–4	951		951	981		981
5–9	668		668	707		707
10–14	538	34	504	478	17	461
15–19	754	423	331	452	161	291
20–24	1,230	901	329	939	640	299
25–29	1,557	1,268	289	1,146	903	243
30–34	1,462	1,202	260	897	721	176
35–39	964	802	162	561	436	125
40–44	689	582	107	386	301	85
45–49	434	340	94	258	187	71
50–54	286	218	68	192	133	59
55–59	126	99	27	73	58	15
60–64	110	86	24	71	53	18
65–69	38	28	10	21	14	7
70+	44	27	17	36	23	13
Total	9,851	6,010	3,841	7,198	3,647	3,551
Personal slaves						
0–4	464		464	514		514
5–9	316		316	355		355

Table 4.5 *(cont.)*

Age	Males			Females		
	All	African	Creole	All	African	Creole
Personal slaves (cont.)						
10–14	291	35	256	294	23	271
15–19	507	288	219	462	256	206
20–24	717	525	192	706	473	233
25–29	730	579	151	764	531	233
30–34	513	384	129	464	299	165
35–39	282	208	74	250	146	104
40–44	189	134	55	223	123	100
45–49	85	56	29	130	84	46
50–54	53	26	27	80	45	35
55–59	17	9	8	29	15	14
60–64	25	16	9	37	22	15
65–69	5	2	3	9	5	4
70+	28	23	5	13	4	9
Total	4,222	2,285	1,937	4,330	2,026	2,304

Sources: T. 71/501–2: Trinidad Slave Registers, 1813; Higman, *Slave Populations of the British Caribbean*, p. 467.

17,087 plantation slaves and 8,630 personal slaves. The number of plantation slaves did not differ much from either the 1811 or 1808 figures, whereas between 1811 and 1813, the number of personal slaves rose by about 4,500. However, the definition of plantation slave used in 1813 differed from that used in 1811. Nonetheless, if a large number of slaves were indeed hastily imported into Trinidad in 1812 and 1813, it appears that most of them must have been registered as personal slaves rather than as plantation slaves.

The ages of the slaves registered as personal slaves were similar to those of the registered plantation slaves. In both populations, 25% of the slaves were less than 15 years old, and 40% of the slaves were between ages 20 and 35 (Table 4.5).[17] There were 1.37 male plantation slaves per female plantation slave; among the Africans and among the creoles, there were 1.64 and

[17] Many slave ages were misreported. Because the age and sex composition of the slave population was skewed by the slave trade, the extent of age misreporting above age 5 cannot be estimated. If there was no systematic tendency to report ages of personal slaves correctly and plantation slaves incorrectly, or vice versa, comparisons of the age distributions of the two populations are useful.

Table 4.6. *Sex ratio (males per female) for all slaves in Trinidad, plantation slaves, and personal slaves: 1813*

Age	All	African	Creole
All slaves			
0–4	0.94		0.94
5–9	0.92		0.92
10–14	1.07	1.72	1.03
15–19	1.37	1.70	1.10
20–24	1.18	1.28	0.97
25–29	1.19	1.28	0.92
30–34	1.45	1.55	1.14
35–39	1.53	1.73	1.03
40–44	1.44	1.68	0.87
45–49	1.33	1.46	1.05
50–54	1.24	1.37	1.01
55–59	1.40	1.47	1.20
60–64	1.25	1.36	1.00
65–69	1.43	1.57	1.18
70+	1.46	1.85	1.00
Total	1.22	1.46	0.98
Plantation slaves			
0–4	0.96		0.96
5–9	0.94		0.94
10–14	1.12	2.00	1.09
15–19	1.66	2.62	1.13
20–24	1.30	1.40	1.10
25–29	1.35	1.40	1.18
30–34	1.62	1.66	1.47
35–39	1.71	1.83	1.29
40–44	1.78	1.93	1.25
45–49	1.68	1.81	1.32
50–54	1.48	1.63	1.15
55–59	1.72	1.70	1.80
60–64	1.54	1.62	1.33
65–69	1.80	2.00	1.42
70+	1.22	1.17	1.30
Total	1.36	1.64	1.08
Personal slaves			
0–4	0.90		0.90
5–9	0.89		0.89
10–14	0.98	1.52	0.94
15–19	1.09	1.12	1.06

Table 4.6 *(cont.)*

Age	All	African	Creole
Personal slaves (cont.)			
20–24	1.01	1.10	0.82
25–29	0.95	1.09	0.64
30–34	1.10	1.28	0.78
35–39	1.12	1.42	0.71
40–44	0.84	1.08	0.55
45–49	0.65	0.66	0.63
50–54	0.66	0.57	0.77
55–59	0.58	0.60	0.57
60–64	0.67	0.72	0.60
65–69	0.55	0.40	0.75
70+	2.15	5.75	0.55
Total	0.97	1.12	0.84

Sources: T. 71/501–2; Trinidad Slave Registers, 1813; Higman, *Slave Populations of the British Caribbean*, p. 467.

1.08 plantation males per female, respectively (Table 4.6, Figure 4.3). Among the registered personal slaves, however, females outnumbered males: there were 0.97 male personal slaves per female slave. Of these, there were 1.13 African males per African female, and 0.84 creole males per creole female.

There were far more African slaves on the estates than among the personal slaves: on plantations, there were 1.3 Africans per creole, while among the personal slaves, African and creole slaves were equal (Table 4.7).[18] Creole females constituted 21% of the plantation slave population, and 27% of the personal slave population. On the other hand, African males, who were deemed best suited for field labor, made up 35% of the plantation slave population, but only 27% of the personal slave population.

There were few colored slaves – slaves with white ancestry – in Trinidad in 1813. In a well-established slave colony such as Jamaica, many color gradations had evolved over the generations: mulatto, quadroon, sambo, mustee, mustaphino.[19] In Trinidad, however, slaves had been present in the

[18] Other than checks of internal consistency – such as making sure there are no Africans less than 6 years old – there is no way to check the accuracy of the reported place of origin or birthplace in the slave registration data.

[19] Barry W. Higman, *Slave Population and Economy in Jamaica, 1807–1834*, p. 139.

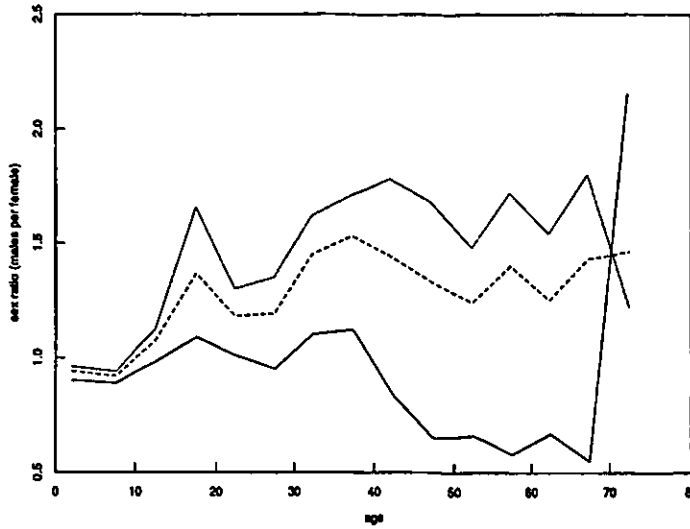


Figure 4.3. Sex ratio (males per female) by age for plantation and personal slaves, 1813: ··· plantation slaves; - - - all slaves; — personal slaves. *Source:* T. 71/501-2: Trinidad Slave Registers, 1813.

island for only thirty years at the time of the initial registration: there had not yet been the opportunity for a large colored population to develop. Overall, only 6% of the Trinidadian slaves were colored (Table 4.8). Among the personal slaves, 10% were colored – primarily mulatto (half Negro, half white) and cabre (three-quarters Negro, one-quarter white) – while among the plantation slaves, only 4%, or 699 slaves, were colored.

The plantation slaves

It was argued by some of the parties involved in the parliamentary slave debates in the early nineteenth century that the slave trade was absolutely necessary in order to ensure a steady supply of plantation labor to the British Caribbean colonies. Hence much attention was focused on the plantation slave population and on its capacity to reproduce itself, and data gleaned from the plantation slave returns from Trinidad featured prominently in subsequent debates about the emancipation of British Caribbean slaves.

Plantation slave returns were similar in format to those for personal slaves. At the top of each plantation slave return given to the Registrar of Slaves in 1813 was a description of the plantation; its name and the quarter in which it

Table 4.7. *African–creole ratio for all slaves in Trinidad, plantation slaves, and personal slaves: 1813*

Age	All	Males	Females
All slaves			
10–14	0.07	0.09	0.05
15–19	1.07	1.29	0.83
20–24	2.41	2.73	2.09
25–29	3.58	4.19	3.01
30–34	3.56	4.07	2.99
35–39	3.42	4.27	2.54
40–44	3.28	4.41	2.29
45–49	2.77	3.21	2.31
50–54	2.23	2.56	1.89
55–59	2.82	3.08	2.51
60–64	2.68	3.09	2.27
65–69	2.04	2.30	1.72
70+	1.75	2.27	1.22
Total 10+	2.09	2.45	1.72
Plantation slaves			
10–14	0.05	0.06	0.03
15–19	0.93	1.27	0.55
20–24	2.45	2.73	2.14
25–29	4.08	4.38	3.71
30–34	4.41	4.62	4.09
35–39	4.31	4.95	3.48
40–44	4.59	5.43	3.54
45–49	3.19	3.61	2.63
50–54	2.76	3.20	2.25
55–59	3.73	3.66	3.86
60–64	3.30	3.58	2.94
65–69	2.47	2.80	2.00
70+	1.66	1.58	1.76
Total 10+	2.36	2.70	1.95
Personal slaves			
10–14	0.11	0.13	0.08
15–19	1.28	1.31	1.24
20–24	2.34	2.73	2.03
25–29	2.89	3.83	2.27
30–34	2.32	2.97	1.81
35–39	1.98	2.81	1.40
40–44	1.65	2.43	1.23
45–49	1.86	1.93	1.82

Table 4.7 *(cont.)*

Age	All	Males	Females
Personal slaves (cont.)			
50–54	1.14	0.96	1.28
55–59	1.09	1.12	1.07
60–64	1.58	1.77	1.46
65–69	1.00	0.66	1.25
70+	1.92	4.60	0.44
Total 10+	1.66	1.97	1.41

Sources: T.71/501–2: Trinidad Slave Registers, 1813; Higman, *Slave Populations of the British Caribbean*, p. 467.

Table 4.8. *Distribution by color of all slaves in Trinidad, plantation slaves, and personal slaves: 1813*

	All		Personal		Plantation	
Color	No.	Prop.	No.	Prop.	No.	Prop.
Negro	24,154	0.93	7,770	0.90	16,384	0.95
Mulatto	864	0.03	469	0.05	395	0.02
Mustee	38	0.00	25	0.00	13	0.00
Cabre	574	0.03	324	0.04	250	0.02
Sambo	43	0.00	18	0.00	25	0.00
Other	23	0.00	7	0.00	16	0.00
Total	25,696	1.00	8,613	1.00	17,083	1.00

Sources: T.71/501–2: Trinidad Slave Register, 1813; Higman, *Slave Populations of the British Caribbean*, p. 155.

was located were recorded, as were the crops grown on the plantation and the owner's name and nationality. More than half of the 649 plantations in Trinidad were owned by French planters; British owned 31% and Spanish owned 12%. Among the sugar plantations, nearly half were owned by British planters, while French planters owned 41% and Spaniards owned fewer than 10%. Sugar plantations were the largest: the mean size of all plantations was 26 slaves, while the mean size for sugar plantations was nearly 56 slaves.[20]

The cultivation of sugar dominated agriculture in Trinidad in 1813: of the

[20] The mean is calculated with one observation per plantation rather than one observation per slave.

Table 4.9. *Characteristics of single-crop plantations, 1813*

	Sugar	Coffee	Cocoa	Cotton	Provisions
Number of slaves	12,256	1,146	1,040	605	779
Proportion male	0.585	0.537	0.591	0.555	0.551
Proportion creole	0.418	0.470	0.440	0.535	0.483
Mean age	25.35	24.69	22.63	22.38	26.41
Number of estates	221	165	75	51	87
Share of all estates	0.335	0.250	0.113	0.007	0.132

Source: T.71/501–2: Trinidad Slave Registers.

17,087 plantation slaves on the island, 12,256 worked on plantations that grew sugar as their sole commercial crop (Table 4.9). Coffee was tended by 1,146 plantation slaves; 1,040 plantation slaves grew cocoa, 779 plantation slaves grew provisions, and 506 plantation slaves grew cotton. Eighty-four percent of the plantations in Trinidad were single-crop plantations, producing sugar, coffee, cocoa, cotton, or provisions. There were a few two-crop plantations, which grew coffee and cocoa, sugar and cocoa, or sugar and coffee.

The main body of the plantation slave return listed the slaves who lived on the estate. The first section contained entries for slaves who lived in family groups, arranged by household; the second section listed slaves who did not live in households, giving first the males and then the females.

The plantation slave registration data are, in many ways, deficient. For example, owners reported the ages of their slaves ". . . to the best of their knowledge or belief . . . ."[21] There is clear evidence of the heaping of ages on multiples of five, but because the age and sex composition of the slave population was so skewed by the slave trade, the bumps and hollows cannot be simply smoothed away: the true irregularities in the age distribution cannot be distinguished from the false.

Other than checks of internal consistency, and in some cases comparison against corroborative narrative materials, there is no way to ascertain the accuracy of other information included in the slave registration data. There is no outside standard by which to judge whether or not slave birthplaces were accurately reported. There was no rule guaranteeing consistency in the description of slave occupations: a "carter" on one plantation might be listed as a "laborer" on another. An examination of the distribution of reported slave

21 C.O. 295/28, f. 250–64: Order in Council for the Registration of Slaves in Trinidad, March 26, 1812.

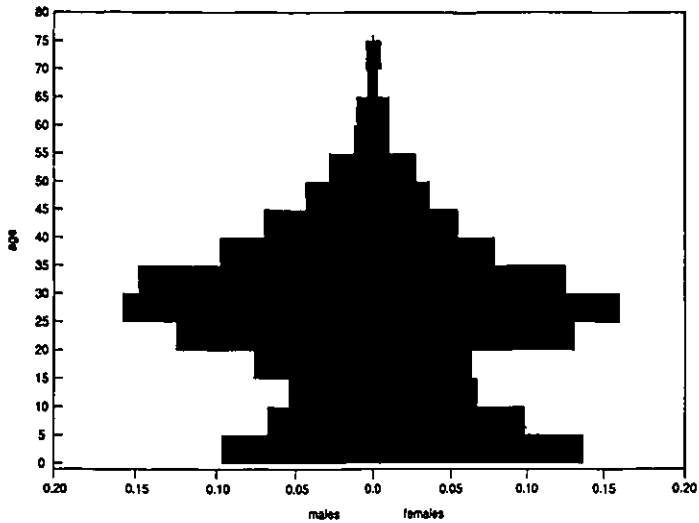


Figure 4.4. Age distribution of all plantation slaves, 1813: males by age as proportion of male population and females by age as proportion of female population. *Source:* T. 71/501–2: Trinidad Slave Registers, 1813.

heights indicates that net errors in height measurement were not great, but gives no indication about the extent of gross errors.

There is also no means of checking the completeness of the slave registration data. The Registrar of Slaves and the Governor of Trinidad believed that, with the exception of the systematic exclusion of some slave children less than 3 years old, virtually all the slaves present in Trinidad in 1813 were duly registered. The postregistration examination of the slave returns, conducted by deputies of the registrar who visited various plantations, indicated that the returns were quite complete. The random omission of slaves, however, would not affect the picture of the plantation slave population portrayed by the slave registration: only the systematic omission of select groups of slaves would distort the records.

In 1813, the plantation slave population was composed largely of young adults: 42% of the plantation slaves were reported between 20 and 35 years old. The peculiar age structure was a vestige of the slave trade that had ended six years earlier: young slaves had the highest market value, and thus dominated imports. In 1813, among the plantation slave children, most of whom were born in Trinidad, boys (less than 15 years old) made up 21% of the male plantation slave population, while girls accounted for 30% of the female plantation slave population (Figure 4.4).

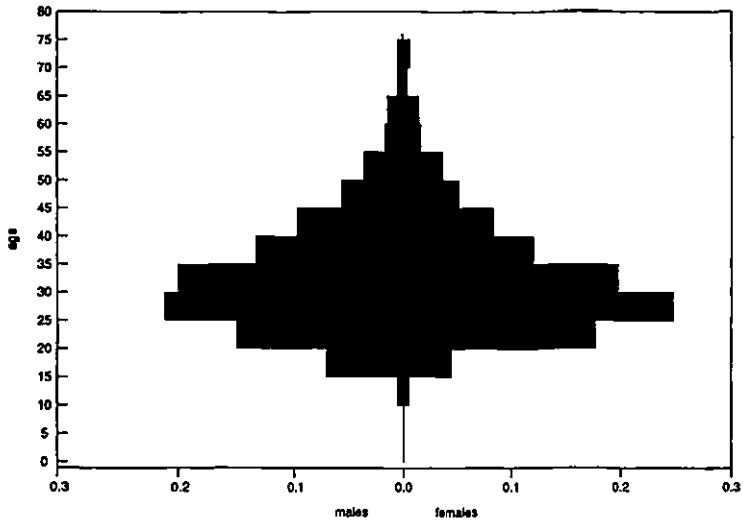


Figure 4.5. Age distribution of African plantation slaves, 1813: males by age as proportion of male population and females by age as proportion of female population. *Source:* T. 71/501–2: Trinidad Slave Registers, 1813.

The age distribution of the African plantation slaves differed greatly from that of the creole slaves. The differences in the age distributions stemmed from the slave trade and from nomenclature. Because the transatlantic slave trade was closed in 1807, no African-born slave enumerated in the 1813 registration could be less than 6 years old. Few African slaves were less than 14 years old; those who were had come from Africa when they were less than 8 years old. Thus the African plantation slave population was largely an adult population: 56% of the African males and 62% of the African females were between the ages of 20 and 35 (Figure 4.5).

All slaves born in the New World, whether of creole or African parents, were called "creole." Hence, once the transatlantic slave trade ended, the African slave population necessarily aged, devoid of additions to the youngest ages. At the same time, the ranks of the youngest creoles grew rapidly, gaining the children both of Africans and creoles: in a large number of cases, creole children were unrelated to any creole adults. The creole plantation slave population was thus extremely young. Only 23% of the creole males and 20% of the creole females were between 20 and 35 years old. Creole boys and girls – children less than 15 years old – comprised 55% and 60% of the creole male and female populations, respectively (Figure 4.6).

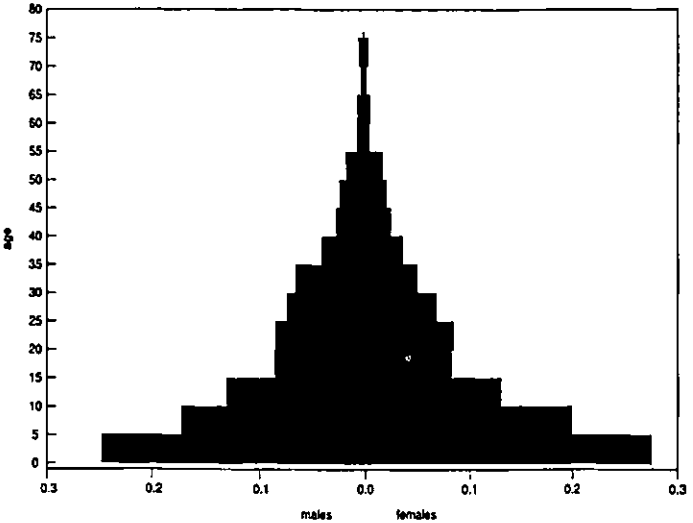


Figure 4.6. Age distribution of creole plantation slaves, 1813: males by age as proportion of male population and females by age as proportion of female population. *Source:* T. 71/501–2: Trinidad Slave Registers, 1813.

A special group of the creole slaves were slaves who were born in Trinidad. There were 4,993 such slaves, or 20% of the plantation slave population (Table 4.10). The Trinidad-born slaves were young: any slave allegedly born in Trinidad and more than 30 years old was born *before* Trinidad was opened to immigration in 1783. Thus, more than 80% of the slaves born in Trinidad were less than 15 years old. There were only 477 women born in Trinidad who were between 15 and 49 years old in 1813.

The adult plantation slaves present in Trinidad in 1813 had, for the most part, been born in Africa (see Table 4.7). At all ages above 20, there were more Africans than creoles, both among men and among women. Among the men between the ages of 35 and 45, there were five times as many Africans as creoles; at the same ages, there were only 3.5 times as many African women as creole women. The population less than 20 years old, on the other hand, was overwhelmingly creole, a result of the end of the slave trade in the previous decade.

The plantation slave population was overwhelmingly male. In 1813, there were 136 male slaves per 100 female slaves on the estates in Trinidad (Figure 4.7). Both the transatlantic slave trade and the intercolonial slave trade had brought many more male slaves than females to Trinidad. The sex ratio of

Table 4.10. *Age distribution of plantation slaves born in Trinidad, and share in creole plantation slave population by age: 1813*

	Males		Females		Proportion of creole slaves	
Age	No.	Prop.	No.	Prop.	Males	Females
0–4	919	0.37	967	0.38	0.96	0.98
5–9	634	0.25	685	0.27	0.94	0.96
10–14	424	0.17	389	0.15	0.84	0.84
15–19	223	0.09	213	0.08	0.67	0.73
20–24	150	0.06	144	0.05	0.46	0.48
25–29	75	0.03	68	0.02	0.25	0.27
30–34	29	0.01	31	0.01	0.12	0.17
35–39	9	0.00	13	0.00	0.05	0.10
40–44	4	0.00	6	0.00	0.03	0.07
45–49	2	0.00	2	0.00	0.02	0.02
50–54	2	0.00	1	0.00	0.02	0.01
55–59	1	0.00	0	0.00	0.03	0.00
60–64	0	0.00	1	0.00	0.00	0.05
65–69	0	0.00	0	0.00	0.00	0.00
70+	1	0.00	0	0.00	0.08	0.00
Total	2,473	1.00	2,520	1.00		

Source: T. 71/501–2: Trinidad Slave Registers, 1813.

African plantation slaves was especially high: 165 males per 100 females. The sex ratio of the creole population was considerably lower – 108 males per 100 females – reflecting less the effect of the slave trade and more the impact of births in Trinidad, in a ratio of approximately 103 male births to 100 female births.

The color of the slave – whether he was Negro or appeared to have some white ancestry – was recorded in the third column of the return. Colored slaves were rare among the plantation slaves: only 4% of the plantation slaves were registered as something other than Negro in 1813 (Tables 4.11, 4.12).[22] Ninety-eight percent of the colored slaves were creole; 8% of the creoles were colored. Fourteen of the 9,721 African slaves were registered as colored. If correct, then these slaves were the product of racial mixing in Africa rather than the New World. Mulattoes – the offpsring of a Negro

22 Other than checks of internal consistency and plausibility (for example, the child of a mulatto woman could not be a Negro), there is no way of ascertaining the accuracy of the color data.

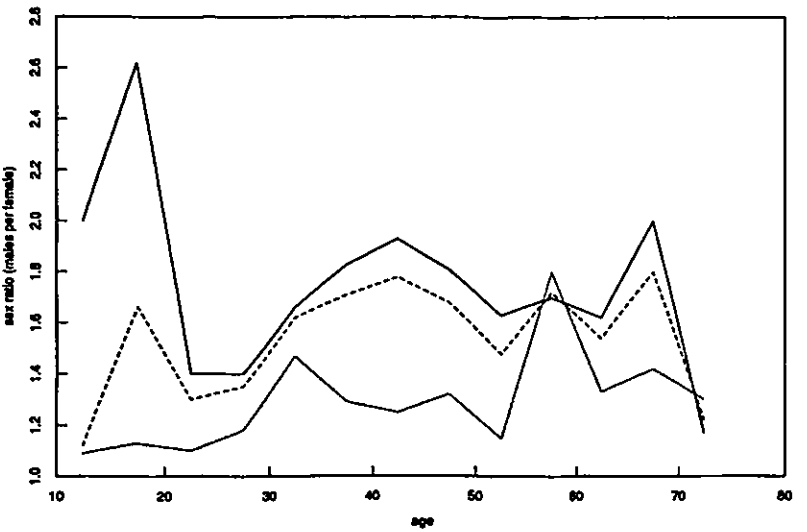


Figure 4.7. Sex ratio (males per female) by age and birthplace for plantation slaves, 1813: — African; - - - all; ··· creole. *Source:* T. 71/501–2: Trinidad Slave Registers, 1813.

mother and a white father – constituted the largest group of colored slaves: about 2.3% of the total plantation slave population.

The slave's occupation was given in the fourth column of the 1813 return. Several dozen different occupations were recorded for men, women, and children (Tables 4.13, 4.14, and 4.15). Plantations varied greatly in the extent to which the youngest children were alleged to have jobs. Perhaps in order to stem further charges of cruelty or abuse, owners may have underreported jobs among the youngest children who worked (Table 4.16). Among the older children (ages 5–14), 60% of the boys and 45% of the girls were registered with jobs.

Each slave's height was reported in the sixth column of the plantation return.[23] The adult Trinidadian plantation slaves were short: the mean height for adult males (age 15 and older) was 64.1 inches, and the mean height for adult females was 60.5 inches. The median heights for males and females

[23] The heights of the Trinidadian slaves are approximately normally distributed, indicating little *net* error in the reporting of heights; there is no way of ascertaining the extent of *gross* errors in the height data. Slaves listed as less than 18 inches tall or more than 86 inches tall were discarded from the sample.

Table 4.11. *Distribution of plantation slaves by color and place of birth, and share in plantation slave populaton: 1813*

	African		Creole			
Color	Male	Female	Male	Female	Total	Prop.
Negro	6,054	3,653	3,447	3,230	16,384	0.95
Mulatto	3	1	217	174	395	0.02
Mustee[a]	1	0	6	6	13	0.00
Cabre	1	2	127	120	250	0.01
Sambo	3	2	10	10	25	0.00
Other[b]	1	0	10	5	16	0.00
Total[c]	6,063	3,658	3,817	3,545	17,083	1.00

[a]Includes two creole males and two creole females registered as "costee."
[b]Includes black, yellow, copper and mongrel.
[c]Excludes four slaves whose color was not specified.
Source: T. 71/501–2: Trinidad Slave Register, 1813.

Table 4.12. *Age distribution of colored plantation slaves, and share in plantation slave population by age: 1813*

	Males		Females		Proportion of plantation slaves	
Age	Number	Proportion	Number	Proportion	Males	Females
0–4	76	0.20	70	0.22	0.07	0.08
5–9	50	0.13	60	0.18	0.07	0.08
10–14	27	0.07	40	0.12	0.05	0.08
15–19	28	0.07	22	0.06	0.03	0.04
20–24	43	0.11	38	0.11	0.03	0.04
25–29	49	0.13	19	0.05	0.03	0.02
30–34	35	0.09	23	0.07	0.02	0.03
35–39	30	0.08	18	0.06	0.03	0.03
40–44	19	0.05	11	0.03	0.02	0.02
45–49	12	0.03	8	0.02	0.02	0.03
50–54	6	0.01	8	0.02	0.02	0.04
55–59	3	0.00	1	0.00	0.02	0.01
60–64	3	0.00	1	0.00	0.02	0.01
65–69	1	0.00	0	0.00	0.02	0.00
70+	1	0.00	0	0.00	0.03	0.00
Total	380	1.00	311	1.00		

Source: T. 71/501–2: Trinidad Slave Registers, 1813.

Table 4.13. *Job classification by reported occupation for adult male plantation slaves, 1813*

Field		
Laborer	Small weeding gang	
Outside		
Stockkeeper	Water carrier	Crook carp
Deserter	Cartman	Cattleherd
Sailor and laborer	Pastureman	Carrier
Pasture boy	Muleboy	Hedge cutter
Mule boy	Hosteler	Pasture
Watchman	Fisherman	Gardener
Groom	Refiner	Mulekeeper
Jobber	Wood square	Mule driver
Sailor	Cotton ginner	Huntsman
Shepherd	Wood cutter	Fireman
Boatman	Ranger	Ploughman
Skilled		
Carpenter and laborer	Boatswain	First carpenter
Boiler and laborer	Engineer	Blacksmith
Cooper and laborer	Ropemaker	Master cooper
Carter and laborer	Shoemaker	Distiller
Distiller and laborer	Brickmaker	Carter
Distiller and carp	Wheelwright	Apprentice cooper
Sawyer	Boiler and distiller	Mason
Carter and carpenter	Carpenter and boiler	Apprentice carpenter
Carpenter	Third carpenter	Cooper
Boiler	Mill boatswain	Mill carpenter
Domestic		
Tailor	Washer	Servant
Sugar baker	Domestic	House servant
Baker	Sick nurse	Housekeeper
Cook	Seamstress	Attending hospital
Head Slave		
Driver	Head driver	Top cutter
Driver of boys	Driver and mason	Head boiler
Second driver	Captain of the mill	Chief of the mill
Overseer	Boat captain	Mill driver
Driver and boiler		

Table 4.14. *Job classification by reported occupation for adult female plantation slaves, 1813*

Field		
Laborer	Small grass gang	Weak gang
Attending grass gang		
Outside		
Watchman	Water carrier	Stockkeeper
Jobber	Groom	Swine keeper
Deserter	Huckster	In the watch house
Fireman		
Domestic		
Confectioner	Midwife	Washery house
Hospital nurse	Domestic	Midwife's nurse
Head nurse	Yaws' nurse	Waiting maid
Keeps children	Children's nurse	Dry nurse
Taking care of children	Sick nurse	House servant–seamstress
Cook	Seamstress	Servant
Nurse		
Infirm		
Infirm	Invalid	Superannuated
Useless	Deranged	

Table 4.15. *Occupational distribution for adult male and female plantation slaves by crop, 1813*

	Sugar	Coffee	Cocoa	Cotton	Provisions
Males					
Field	0.650	0.843	0.799	0.846	0.728
Skilled	0.204	0.042	0.039	0.036	0.132
Head	0.041	0.032	0.038	0.012	0.025
Domestic	0.024	0.072	0.056	0.024	0.054
Other	0.071	0.049	0.068	0.082	0.061
Females					
Field	0.860	0.801	0.603	0.621	0.722
Domestic	0.126	0.183	0.297	0.210	0.238
Other	0.014	0.015	0.100	0.169	0.04 0

Source: T. 71/501–2: Trinidad Slave Registers.

Table 4.16. *Job classification by reported occupation for plantation slave children, 1813*

Field		
Laborer	Small grass gang	Small garden gang
Little or small gang	Small weeding gang	
Outside		
Shepherd	Herdsman	Jobber
Sheep driver	Watching the cattle	Mule driver
Stock keeper	Stock boy	Cattle herd
Cattle keeper	Pasture boy	Cattle boy
In the pastures	Mule boy	Gate keeper
Carter	Watchman	
Domestic		
Cook	Nurse	Housemaid
Domestic	Washer	Housekeeper
Houseboy	Children's nurse	Taking care of children
Servant	Seamstress	Around the house
House servant		

were 63.5 inches and 60.5 inches, respectively. Africans were slightly shorter than creoles.[24]

The body of the slave return distinguished three groups of slaves: the Order in Council for the registration of the Trinidad slaves stipulated that slaves living in households, ". . . either by actual marriage, or known and constant cohabitation, or who had parents or children, brothers or sisters, among the slaves of the said plantation," be listed in the returns by household. A plantation's return thus consisted first of a list of slaves living in households, arranged by household, and then separate lists of male slaves and female slaves who did not live in households.[25] Altogether, forty-seven different types of households were recorded in the plantation returns, ranging from simple nuclear households (man, woman, and their children), to complex families consisting of, for example, the head of household, other adults, nieces, nephews, children, and grandchildren (Table 4.17).[26]

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[24] Barry W. Higman, "Growth in Afro-Caribbean Slave Populations," *American Journal of Physical Anthropology*, 50 (1979), pp. 373–85.

[25] C.O. 295/28, f. 250–64: Order in Council for the Registration of Slaves in Trinidad, March 26, 1812.

[26] Michael Craton, "Changing Patterns of Slave Families in the British West Indies," *Journal of Interdisciplinary History*, 10 (1979), pp. 1–35; Barry W. Higman, *Slave Populations of the British Caribbean*, pp. 364–77; idem, "African and Creole Slave Family

Table 4.17. *Classification of reported family types for Trinidadian plantation slaves: 1813*

Nuclear family (one union)
Man, woman, their children

Nuclear family (more than one union)
Man, woman, their children, her children
Man, woman, their children, his children
Man, woman, his children
Man, woman, her children, his children
Man, woman, his children, her children, their children

Truncated nuclear family
Woman, her children
Man, his children
Man, woman

Polygamous family
Polygamist and children
Man, wives
Man, wives, his mother, their children

Extended households
Woman, her children, her grandchildren
Man, woman, their children, their grandchildren
Siblings
Man, woman, their siblings, their children
Woman, her children, her siblings
Woman, her son, his wife, their children, wife's children, her siblings
Woman, her daughter, daughter's husband
Woman, her daughter, daughter's husband, their children, her children
Man, his son, son's wife, their children
Man, woman, their children, child's spouse, their grandchildren
Man, woman, her mother, their children
Man, woman, her mother or his mother
Man, woman, her children, his children, grandchildren
Man, his brother, brother's wife, brother's children
Man, woman, their children, her siblings
Man, woman, her siblings
Man, woman, his siblings *(cont.)*

Patterns in Trinidad," *Journal of Family History*, 3 (1978), pp. 163–80; idem, "The Slave Family and Household in the British West Indies 1800–1834," *Journal of Interdisciplinary History*, 6 (1975), pp. 261–87; John S. MacDonald and Leatrice D. MacDonald, "Transformation of African and Indian Family Traditions in the Southern Caribbean," *Comparative Studies in Society and History*, 15 (1973), pp. 171–98.

Table 4.17 *(cont.)*

Man, his son, son's wife
Woman, her sister, sister's child
Man, his children, his grandchildren
Woman, her children, her siblings, her nephew
Woman, son, son's child
Man, woman, his children, his siblings
Man, woman, their children, his siblings
Man, woman, her siblings
Man, his nephew, nephew's siblings
Woman, grandchildren
Woman, children, grandchildren, great-grandchildren
Man, his siblings, his niece
Woman, her daughter, daughter's siblings, daughter's child
Man, woman, her children, his sibling
Woman, her children, her niece

Source: T. 71/501–2: Trinidad Slave Registers, 1813.

Nearly half of the plantation slaves registered in Trinidad in 1813 appeared in the lists of slaves not living in households rather than in the lists of slaves living in households (Table 4.18). Whether this accurately reflects the family structure of the plantation slave population is unknown. Certainly, as a matter of convenience, owners might be tempted to list as single slaves whose living arrangements they were uncertain of; this would be especially true on the large plantations. A slave owner suffered no penalty if he failed to report slave households accurately; penalties were incurred only if he omitted slaves in his possession. Hence, there was no incentive to make an effort to record household composition accurately. In fact, the converse may have been true: in the face of laws prohibiting the dissolution of slave families by sale, owners may have had incentive *not* to register their slaves by household, thus protecting the future salability of the slaves.

Twenty percent of the Trinidad plantation slaves were listed in nuclear households that represented a single reproductive union: a man, his wife, and their children. Another 5% lived in nuclear households containing the offspring of more than one reproductive union: a man, his wife, and the children of either one or both of the adults. The most common household type among the Trinidad plantation slaves was a truncated nuclear family: one adult and children, or two adults and no children; 25% of slaves were registered in such households. Three percent of plantation slaves were listed in extended, or multigeneration, households, and 1% were listed in polygamous households.

Table 4.18. *Number of plantation slaves by registered type of household, and distribution of household types: 1813*

Household type	African		Creole		All	
	No.	Prop.	No.	Prop.	No.	Prop.
Nuclear family (1 union)	1,474	0.15	1,897	0.25	3,371	0.19
Nuclear family (>1 union)	353	0.03	554	0.07	907	0.05
Truncated nuclear family	1,633	0.16	2,726	0.37	4,359	0.25
Extended household	77	0.01	602	0.08	679	0.03
Polygamous family	17	0.00	7	0.00	24	0.00
No family	6,167	0.63	1,580	0.21	7,747	0.45
Total	9,721	1.00	7,366	1.00	17,087	1.00

Household type	Adults[a]				Children[b]			
	Men		Women		Boys		Girls	
	No.	Prop.	No.	Prop.	No.	Prop.	No.	Prop.
African								
Nuclear family (1 union)	715	0.11	758	0.20	1	0.01		
Nuclear family (>1 union)	173	0.02	176	0.04	2	0.02	2	0.07
Truncated nuclear family	531	0.08	1,094	0.30	4	0.04	4	0.14
Extended household	26	0.00	51	0.01				
Polygamous family	6	0.00	11	0.00				
No family	4,525	0.75	1,540	0.42	80	0.91	22	0.78
Total	5,976	1.00	3,630	1.00	87	1.00	28	1.00
Creole								
Nuclear family (1 union)	219	0.12	180	0.12	715	0.34	783	0.36
Nuclear family (>1 union)	78	0.04	59	0.04	213	0.10	204	0.09
Truncated nuclear family	356	0.20	603	0.43	882	0.39	885	0.41
Extended family	178	0.10	161	0.11	134	0.06	129	0.06
Polygamous family			1	0.00	3	0.00	3	0.00
No family	887	0.51	398	0.28	154	0.07	141	0.06
Total	1,718	1.00	1,402	1.00	2,101	1.00	2,145	1.00

[a]Age 15 or older.
[b]Age 0–14.
Source: T.71/501–2: Trinidad Slave Registers, 1813.

There were marked differences in African and creole household structure, but many of these differences stemmed simply from the definitions of African and creole. Creole slaves were, or had been, related to at least two other slaves in the New World: their parents. African slaves need not have been related to any other slave in the Caribbean. Thus, for example, the chances of finding an adult creole slave with a family were greater than the chance of

finding an adult African slave with a family. Household composition also depended upon age structure: children, most of whom were creole, were more likely to be found living in households with one or both parents than to be found living alone. Thus it was almost inevitable that the creole plantation slave population had a larger share of its population living in households than did the African plantation slave population.

Even among the adult slaves, there were differences between African and creole household structures. While roughly the same proportion of adult male Africans and creoles were found in nuclear households (about 15%), 9% more of the African women than of the creole women were in nuclear households. On the other hand, both creole women and creole men were more likely to be found in truncated nuclear households – households with two adults and no children, or one adult and children – than were African men and women. The share of adult African slaves not in households was considerably greater than the corresponding share of the adult creole population.

The most common household structure registered among the Trinidad plantation slaves was the truncated nuclear family, particularly families consisting of a woman and her children. This was in part a result of the widowhood implicit in the high mortality among the Trinidad slaves. "Visiting" unions, either permanent or casual, were also common. Married slaves, whose spouses lived on another plantation, would appear in the registration returns as members of truncated nuclear households if living with children or other family members, or as single slaves if living alone. The prevalence of such split families is unknown, although it was a possibility recognized in the *Code Noir* of 1789:

> Neither must [the owners] hinder [slaves] from marrying with the slaves of other masters; in which case if the estates were distant from one another so that the new married couple cannot fulfil the object of marriage, the wife shall follow her husband whose master shall buy her at a fair valuation . . . If the master of the husband does not agree to the purchase, the master of the wife shall have the same faculty.[27]

It is, perhaps, surprising that so many adult female slaves did not live in households. Following the end of the transatlantic slave trade, owners quickly perceived it to be in their best interests to encourage stable slave marriages. Clergy admonished slave owners to "encourage matrimony" and "to explain to them the Christian Doctrine," but in fact few slave marriages were solemnized in the Church. William Burnley, a Trinidadian planter, reported resistance by the slaves to the notion of marriage:

> I may safely say that the encouragement of Marriage amongst slaves has been a primary object with every Planter in this Colony within my recollection; that these endeavors have not been more successful is not to be ascribed to any forced

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27 Trinidad Slave Laws: *Code Noir*, 1789.

separation of husband and wife by the hand of the Master or at the Process of the Creditor . . . but to the Negro Character alone . . .

As a Proprietor of Slaves, I am disposed to attend to any suggestions for the encouragement of Marriage amongst them, but . . . it is my duty to declare my belief that more than one generation must pass away before the sanctity of the Marriage tie can be generally understood and its sacred Ordinances practised by the Slave population of this Colony.[28]

The plantation slave population of Trinidad in 1813 was thus very much the product of the Spanish immigration policy for Trinidad and of the slave trade. A large proportion of the slaves were reported to be between 20 and 40 years old, the ages at which, in the short run, slaves were economically most valuable; there were nearly twice as many male slaves as females on the plantations, reflecting the need for male field hands to undertake the back-breaking labor of cultivating crops in virgin soil. Nonetheless, these peculiar effects of the slave trade on the structure of the plantation slave population were slowly disappearing as slaves born in Trinidad comprised an increasing share of the plantation slave population: among the youngest children, there were roughly equal numbers of boys and girls.

The peculiar settlement history of Trinidad also left its stamp on the plantation slave population. There were few slaves on the island before 1783. Hence, in 1813, slaves who were more than 30 years old and who had been born in Trinidad were indeed rare. Among the adults, colored slaves were also rare because most of the slaves who had been born in Trinidad were children in 1813, and most of the children in Trinidad in 1813 had been born on that island.

Harmony Hall plantation

The quarter of North Naparima, which lay on the southwest coast of Trinidad and had been one of the first quarters settled by immigrants after 1783, was an important area of sugar production. In 1813, the thirty-nine estates in the quarter produced 13% of Trinidad's sugar, 8% of the rum, and 12% of the island's molasses. The 1,184 acres planted in cane in North Naparima accounted for 11% of the total land devoted to sugar in Trinidad in 1813. Cocoa and coffee were minor products of the quarter, each accounting for less than 2% of the island's total production of these crops in 1813.[29] Six percent of the Trinidad plantation slaves, or 1,148 slaves, lived on estates in North Naparima. The average estate had 30 slaves: the largest holding had

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28 William H. Burnley, *Two Letters and an Address to his Excellency Sir R. Woodford, Bart., and the Honorable the Board of Council*, p. 25.

29 C.O. 295/31, f. 45.

Inventory and apprisment of Harmony Hall estate in Naparima, the property of the late William Jack deceased. Taken this ninth day of October 1805 by the desire of Alexr Reach, William Penny and Peter Morison executors to the last will of the said William Jack deceased, viz:

50 acres in Canes – at 115-10 per acre	*£ 5775*
20 acres in Pasture – at 82-10 per acre	*1650*
10 acres in Negro gardens – at 115-10 per acre	*1155*
5 acres in Plantains – at 115-10 per acre	*577-10*
171 acres in Woodlands – at 16-10 per acre	*2821-10*
256 total number of acres supposed	

a boiling house and a set of boilers compleat		*1200-*
5 skimers	*at 18 sh. each*	*4-10*
3 ladls	*at 18 sh. each*	*2-14*
2 strainers	*at £4-10 sh. each*	*9-*
1 molasses sistem	*at £19-16 sh.*	*19-16*
1 cattle mill	*at £396–*	*396-*
1 moyast	*at £99–*	*99-*
1 mule press	*at £9-18sh.*	*9-18*
1 cooper's shape	*at £16-10 sh.*	*16-10*
Hospitall kitchen wl storehouse		*£ 82-10*
1 pigeon house with do.	*at £39-12 sh.*	*39-12*
20 Negro Houses	*at £16-10 sh. each*	*330-*
1 mule cart and harness	*at £16-10 sh.*	*16-10*
1 sailing boat and tackle	*at £66-*	*66-*
A quantity of hard wood logs intended to build a mill		*82-10*
40 bills	*at 3 sh. each*	*6-*
12 cutlasses	*at 4 sh. and 6 d. each*	*2-14*
1 dwelling house and outhouse containing 2 chambers		*247-10*

Household Furniture

3 tables	*at £1-4 sh. each*	*3-12*
3 bedsteads and 2 matrases		*23-2*
12 chairs	*at 9 sh. each*	*9-8*
1 spy glass	*at £5-8 sh.*	*5-8*
1 knife case, 6 silver spoons and 6 knives and forks		*9-18*
a medeicen chest with medeicens		*3-6*
1 beam and weights		*33-*
brass scales and weights	*4-10*	
2 boiling house lamps	*at £1-7 sh. each*	*2-14*
9 empty hogsheads without heads	*at £1-7 sh. each*	*12-3*
400 staves and 15 m hardwood shingles		*108-*
4 strap and cut saws and corn mill		*16-4*
1 grind stone	*at £1-16 sh.*	*1-16*
2 sets of truss hoops	*at £4-1 sh. each*	*8-2*
26 hogsheads 26,000 lbs	*at 45 sh per cwt*	*585-*
16000 gallons Molasses	*at 1 sh. 6 per gallon*	*120-*
3 sugar coolers	*at £13-4 sh. each*	*39-12*

Negroes and stock attached to the estate

20 mules	*at £49-10 each*	*990-*
1 horse	*at £26-*	*26-*
45 slaves, men, women and children	*at £176 each*	*7919-10*
	total amount in currency	*£ 24,527-7*

Figure 4.8. Inventory of Harmony Hall plantation: 1805. *Source:* Muniments of Gordon Castle: GD 44/34/54. Family Papers Bundle 54, piece 6.

114 slaves, while the smallest had only 2. The median estate size was 17 slaves; a third of the estates in North Naparima had fewer than 10 slaves.

One of the North Naparima sugar estates was Harmony Hall, owned in the first part of the nineteenth century by a Scot, William Jack. The estate was modest: 50 acres were planted in sugarcane, 20 acres were used for pasture for mules, and 10 were planted in provisions for the estate's forty-five slaves; 171 acres of Jack's land were untilled (Figure 4.8).[30]

In 1805, Jack died, bequeathing his estate, valued at £24,547, jointly to several heirs. None lived in Trinidad; none was willing to move to the island and run the estate. In 1806, Joshua Graham and Robert Mitchell offered to rent the estate from Jack's heirs for seven years. They proposed that each year the rent be set at 8% of the appraised value of the property. At the end of their tenure as tenants, the estate would be reappraised. If there had been a net gain in the value of the estate, then the owners would pay that sum to the tenants; if there had been a net loss, the tenants would pay the owners.

The request to rent the property was rejected. In 1810, Harmony Hall was sold to J. R. Purcell, who arranged to pay for the property in regular installments of £750 over a number of years. Purcell owned Harmony Hall until his death in 1814, when it passed into the hands of Stephen Lushington.

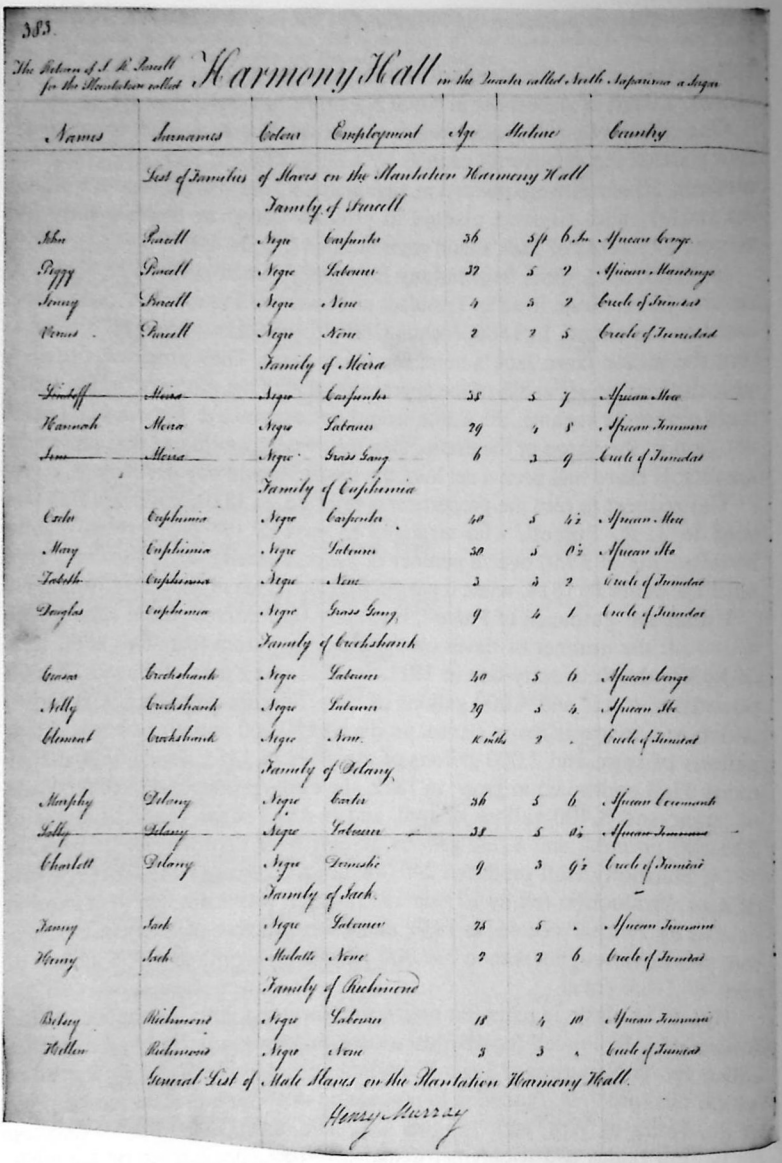
Under the guidance of Purcell, Harmony Hall thrived. More slaves were acquired: the number of slaves on the estate rose from forty-five at the time of Jack's death to sixty-one in 1811. In 1811, the estate produced 100,000 pounds of sugar and 4,000 gallons of rum. Neighboring Marabella estate, which had twice as many slaves, produced 150,000 pounds of sugar, 3,000 gallons of rum, and 2,000 gallons of molasses in 1811. Production at Harmony Hall continued to grow: in 1812, the estate produced 125,000 pounds of sugar and 8,400 gallons of rum, and in 1813 sugar production rose to 220,000 pounds, and 8,000 gallons of rum were distilled. At its peak, in 1814, Harmony Hall produced 240,000 pounds of sugar and 8,400 gallons of rum. Production fell by 10% in 1815, which was attributed to disruption caused by Purcell's death. In 1816, under the direction of Stephen Lushington, production again rose to 237,000 pounds of sugar and 9,700 gallons of rum.[31]

The 1813 slave registration return for Harmony Hall was headed, "The Return of J. R. Purcell for the Plantation called Harmony Hall in the Quarter called North Naparima, a Sugar Plantation owned by the said J. R. Purcell of which the said J. R. Purcell is in possession as Proprietor, late the Property of the Heirs of Wm. Jack" (Figure 4.9). The return listed fifty-six slaves: thirty-four males and twenty-two females.[32] The nine children on the estate

30 GD/44/34/54: Muniments of Gordon Castle.

31 C.O. 295/43, ff. 7, 13.

32 T.71/501–2: Trinidad Slave Registers, 1813.



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The Return of Slaves belonging to Mr. Russell for the Plantation called Harmony Hall in the District called North Naparima a Negra

Names	Surnames	Colour	Employment	Age	Stature		Country
	List of Females	of Slaves on the Plantation	Harmony Hall				
		Family of Russell					
Abba	Russell	Negro	Carpenter	36	5	6 In.	African Congo
Peggy	Russell	Negro	Labourer	37	5	7	African Mandingo
Jenny	Russell	Negro	Nurse	4	3	7	Creole of Trinidad
Venus	Russell	Negro	Nurse	2	2	5	Creole of Trinidad
		Family of Meira					
~~Jemboff~~	~~Meira~~	Negro	Carpenter	38	5	7	African Moco
Hannah	Meira	Negro	Labourer	29	4	8	African Timmana
~~Jem~~	~~Meira~~	Negro	Grass Gang	6	3	9	Creole of Trinidad
		Family of Euphemia					
Cato	Euphemia	Negro	Carpenter	40	5	4½	African Moco
Mary	Euphemia	Negro	Labourer	30	5	0½	African Mo
Isabella	Euphemia	Negro	Nurse	3	3	2	Creole of Trinidad
Douglas	Euphemia	Negro	Grass Gang	9	4	1	Creole of Trinidad
		Family of Cruckshank					
Cæsar	Cruckshank	Negro	Labourer	40	5	6	African Congo
Nelly	Cruckshank	Negro	Labourer	29	5	4	African Mo
Clement	Cruckshank	Negro	Nurse	Knife	2	.	Creole of Trinidad
		Family of Delany					
Murphy	Delany	Negro	Carter	36	5	6	African Coromantee
~~Polly~~	~~Delany~~	Negro	Labourer	38	5	0½	African Timmana
Charlett	Delany	Negro	Domestic	9	3	9½	Creole of Trinidad
		Family of Sack					
Fanny	Sack	Negro	Labourer	28	5	.	African Timmana
Henny	Sack	Mulatto	Nurse	2	2	6	Creole of Trinidad
		Family of Richmond					
Betsey	Richmond	Negro	Labourer	18	4	10	African Timmana
Nellee	Richmond	Negro	Nurse	3	3	.	Creole of Trinidad

General List of Male Slaves on the Plantation Harmony Hall.

Henry Russell

Figure 4.9. Slave registration ledger entry for Harmony Hall plantation, 1813. *Source:* T. 71/501–2, f. 383: Trinidad Slave Registers, 1813. Reproduced by courtesy of the Public Record Office, London.

Hawkshaw owned by the said S. P. Sewell of which the said S. P. Sewell is in possession as aforesaid, late the property of the [illegible] 265

Marks	Relations	Corrections.			
		1815	1816	1817	1822
Marks on the temples					
No marks	Wife of John Sewell				
No marks	Daughter of John & Jeggy Sewell	3. 4	3. 10	4. 4½	5 0
No marks	Daughter of John & Jeggy Sewell	2. 7	2 10	3. 6	4. 2
Marks on his Temples					Dead
No marks	Wife of Lindoff Mesra				
No marks	Son of Lindoff & Hannah Mesra	Gone			
Marks on the body					
Marks on the forehead	Wife of Cesler Cuphamia				
No marks	Daughter of Cesler & Mary Cuphamia	2 4	3 0½	4 0 2½	Dead
No marks	Son of Mary Cuphamia	4. 3	4. 6	4. 8½	5. 2
Marks on the breast & belly					
Marks on the Chest	Wife of Fraser Cruickshanck				
No marks	Son of Fraser & Selly Cruickshanck	2. 4	3. 7½	3. 8½	4. 3½
Marks on his body					
No obt. on the right arm	Wife of Murphy Delany				Dead
No marks	Daughter of Murphy & Sally Delany	2. 1	4. 3		5 0
No marks					
No marks	Son of Fanny Sack	1. 7½	3. 3½	3. 11	4 3½
Marks on the left Arm					
No marks	Daughter of Betsy Richmond	3. 2	3. 8	4. 2½	4. 6

Henry Murray

Figure 4.9 *(cont.)*.

and two adult male field laborers were creole; the other forty-five slaves were African. All of the slaves were Negro except one: the 2-year-old son of an African woman, Fanny Jack, was registered as mulatto.

Twenty-one of the fifty-six slaves at Harmony Hall in 1813 were registered in the plantation's seven slave households. All of the children on the estate lived with at least one of their parents. Only two types of households were recorded: five nuclear families – father, mother, and children – and two households containing a mother and one child.

The largest families at Harmony Hall had four members. One was the Purcell family, named perhaps after the owner of the estate. The head of the household was John, a 36-year-old carpenter. His wife, Peggy, age 32, was listed as a laborer. They had two daughters, Jenny and Venus, ages 4 and 2. The other four-member family was named Euphimia. Like John Purcell, Exeter Euphimia was a carpenter, age 40; his 30-year-old wife, Mary, was a laborer. Their 9-year-old son, Douglas, was listed as a member of the "small grass gang," which did light fieldwork. He had a 3-year-old half-sister, Sabeth, the daughter of Mary; Sabeth later died sometime between her ninth and twelfth birthdays.

The other member of the small grass gang was 6-year-old Jim Moira. His father, Lindoff, age 38, was a carpenter and his mother, Hannah, age 29, was a laborer. Between March 1813 and January 1815, Jim died; his father died between 1819 and 1822. The only girl listed with a job was 9-year-old Charlot Delany, who was a domestic servant. Her 36-year-old father, Murphey, was a carter and her mother, Sally, two years senior to her father, was a laborer. Sally died betwen the 1819 and 1822 registrations. Caesar Crookshank, 40, and Nelly Crookshank, 29, both laborers, had a 10-month-old son, Clement.

Twenty-six male slaves were not registered in households at Harmony Hall. Fifteen of these men, whose ages ranged from 17 to 42, were laborers. Two of the laborers were creole, one each from Barbados and Tobago. The skilled slaves included yet another carpenter, three coopers, two masons, a mill boatswain, two watchmen, and a driver. The driver, Fabian Pomfrey, who was 36 years old in 1813, was sold between the 1815 and 1816 registrations. In the same interregistration period, one of the watchmen, Sandy McSween, age 38, and one of the laborers, Fraser O'Rourke, age 27 – a Negro with a "yellow complexion" – died. The other death among the males was a 30-year-old slave named Johnny Newcome, whose occupation was simply listed as "deserter."

There were nine slave women not registered in households at Harmony Hall in 1813, seven of whom were laborers. The ages of the women ranged from 25 to 40. Two of the women had skilled occupations: MaryAnn Stewart, age 34, was a washer, and Jenny Clapham, age 38, was the hospital

nurse. Between the 1813 registration and the 1815 registration, Bell Watend, a 27-year-old laborer, died.

Between March 31, 1813 and January 5, 1815, eight slaves – six men and two women – were purchased for Harmony Hall plantation. Nelly Crookshank bore a daughter in early 1815. In November 1815, a son was born to Peggy Purcell, and a daughter, Agnes, was born to Betsey Richmond; by January 1819, Agnes was dead. Between 1813 and 1816, ten slaves – nine adults and one child – died. One slave ran away. Thus, although the composition of the slave labor force at Harmony Hall had changed considerably by 1816 as the result of the addition of eleven new slaves and the deletion of eleven slaves, there were still fifty-six slaves on the plantation.

Summary

By 1813, the population of Trinidad was peculiar by the standard of other Caribbean colonies. Its structure had been shaped by an an extraordinary Spanish immigration policy that permitted free colored people to own land and slaves, and that encouraged the importation of large numbers of slaves to the frontier island: land grants were given in proportion to the plantation labor force available, so slaves were the means to wealth by land. Thus the population of Trinidad had extraordinarily high proportions of slaves and free colored people in contrast to other, more mature colonies.

The structure of the slave population of Trinidad in 1813 was also shaped by the forces of the transatlantic slave trade. Given a goal of short-run economic profitability rather than an incentive to ensure the long-run reproductivity of the slave population, slaves brought to the New World were predominantly young adult males. The intercolonial slave trade reinforced this skewedness in the age and sex structure of the plantation slave population, since young adult males were best suited to clearing the virgin lands of Trinidad.

5

Plantation slave mortality: methods

In Trinidad . . . it is considered very fortunate when of thirty young negroes bought in the course of a year, there may be six in good health five years afterwards. On the greater part of the plantations, the negroes have few children; a third of those children do not reach the age of one year, and the half of another third never arrive at the age of four, the period at which they are considered escaped, according to the expression of the country.[1]

The belief that mortality among the plantation slaves in Trinidad was high was universally held: both the proslavery and antislavery factions in Parliament acknowledged the fact that slaves in Trinidad fared less well than did slaves in the more developed colonies of Jamaica or Barbados. It was reckoned, for example, that one-third of slaves who cleared new land in Trinidad died in the process; many of the survivors were left severely debilitated.[2] Instead, the debate about slave mortality centered on the causes of the high death rates. Was, as the slave owners alleged, the high mortality of slaves in Trinidad merely an unfortunate consequence of the harsh frontier environment in which the slaves lived and worked – an environment that proved equally inimical to European survival? Or, as the opponents of slavery contended, was high mortality among the slaves the result of the brutal overwork endemic in a slave labor system?

The ensuing debate was replete with numbers, but few of the statistics had a solid basis in fact, leaving many questions unanswered. How many years did the average slave live? Did women live longer than men? What proportion of newborn slave infants survived to their first birthdays? What proportion of newborn slaves survived to adulthood? How many additional years would the average 15-year-old slave live? What was the average number of years that an adult slave would be productive? Was the mortality of creole slaves –

[1] J.-F. Dauxion-Lavaysse, *A Statistical, Commercial and Political Description of Venezuela, Trinidad, and Margarita*, p. 389.

[2] Bridget Brereton, *A History of Modern Trinidad 1783–1962*, p. 27.

slaves born in the New World – different than that of slaves born in Africa? Was mortality higher on sugar plantations than elsewhere?

The discussion of slave mortality is presented in two chapters. In this chapter the details of the estimation of slave life tables – both univariate and multivariate – are explained, and problems inherent in the construction of life tables of the Trinidadian slaves are discussed. Chapter 6 surveys aspects of slave life that may have influenced the mortality of plantation slaves and presents the findings of the mortality analysis.

The presentation in this chapter of the methods used in studying plantation slave mortality begins with a description of the data from the plantation slave returns used in the mortality calculations. In the following section, the methods used to estimate upper and lower bounds for the plantation slave life tables are given in detail; the section includes discussions of model life tables and relational systems, relationships between survival functions and between survivor ratios, and the method of choosing a life table standard on which to base the estimated plantation slave life tables. In the final section, techniques for estimating life tables with covariates – hazard models – using a logistic formulation are presented.

Slave registration data

In the spring of 1813, each slave owner in Trinidad submitted to the Registrar of Slaves a list of the slaves in his possession, giving the age of each slave ". . . to the best of the knowledge or belief of the owner."[3] Twenty-one months later, in January 1815, each slave owner reported the status of each slave he had registered in 1813: whether the slave had died in the intervening period, whether the slave was still alive and still owned by the same master, or whether the slave was no longer in the possession of the original registrant, having been freed, sold, exported, or having run away. In the case of children still in the possession of the original owner, the child's height in 1815 was recorded. One year later, in January 1816, each owner was required to report yet again the status of the slaves in his possession, noting any changes that had occurred in the preceding year and again recording the heights of the children.

The 1813 registration returns listed 25,717 slaves in Trinidad. Between the initial registration and January 31, 1816, 1,007 of the 10,917 registered adult male slaves in Trinidad died; 552 of the 8,206 adult females died. Of the 3,255 boys and 3,339 girls less than 15 years old in 1813, 377 and 432 died, respectively.

Of the 25,717 slaves registered in Trinidad in 1813, 17,087 were plantation slaves. Of these, 944 were reported as having died before January 1815;

[3] C.O. 295/28: Order in Council, March 26, 1812.

Table 5.1. *Male slaves by age in 1813, numbers dead and censored between 1813 and 1815, and between 1815 and 1816, and 1.75-year and 2.75-year survivor ratios*

1813		1815			1816		
Ages	Number	Dead	Censored	${}_nS_x^{1.75}$	Dead	Censored	${}_nS_x^{2.75}$
All							
1–4	761	75	37	0.8990	26	12	0.8629
5–9	668	28	35	0.9570	13	33	0.9353
10–14	538	10	27	0.9809	6	23	0.9688
15–19	754	25	43	0.9659	14	17	0.9461
20–24	1,230	68	71	0.9431	31	38	0.9158
25–29	1,557	75	78	0.9506	54	50	0.9136
30–34	1,462	87	84	0.9387	31	43	0.9156
35–39	964	51	77	0.9444	32	23	0.9092
40–44	689	62	44	0.9070	27	17	0.8648
45–49	434	35	21	0.9174	19	19	0.8696
50–54	286	25	4	0.9120	14	10	0.8602
55–59	126	13	2	0.8960	6	4	0.8455
60–64	110	15	1	0.8630	6	3	0.8056
65–69	38	6	2	0.8378	13	0	0.4865
70+	44	7	2		3	1	
Creole							
1–4	761	75	37	0.8990	26	12	0.8629
5–9	668	28	35	0.9570	13	33	0.9353
10–14	504	8	27	0.9837	6	22	0.9708
15–19	331	7	20	0.9782	3	9	0.9684
20–24	329	4	24	0.9874	4	17	0.9741
25–29	289	14	24	0.9495	9	16	0.9145
30–34	260	11	28	0.9553	3	8	0.9421
35–39	162	12	20	0.9211	3	6	0.8992
40–44	107	10	8	0.9003	4	3	0.8621
45–49	94	6	9	0.9330	1	2	0.9209
50–54	68	8	3	0.8797	4	4	0.8140
55–59	27	3	1	0.8868	3	0	0.7736
60–64	24	5	1	0.7872	0	0	0.7872
65–69	10	1	0	0.9000	2	0	0.7000
70+	17	1	0		2	0	
African							
1–4							
5–9							
10–14	34	2	0	0.9412	0	1	0.9403
15–19	423	18	22	0.9563	11	8	0.9289

Table 5.1 *(cont.)*

1813		1815			1816		
Ages	Number	Dead	Censored	${}_nS_x^{1.75}$	Dead	Censored	${}_nS_x^{2.75}$
African (cont.)							
20–24	901	64	45	0.9271	27	22	0.8951
25–29	1,268	61	54	0.9508	45	34	0.9134
30–34	1,202	76	56	0.9353	28	37	0.9100
35–39	802	39	57	0.9496	29	17	0.9111
40–44	582	52	36	0.9078	23	14	0.8654
45–49	340	29	11	0.9133	18	17	0.8558
50–54	218	17	1	0.9218	10	6	0.8741
55–59	99	10	1	0.8985	3	4	0.8653
60–64	86	10	0	0.8837	6	3	0.8107
65–69	28	11	2	0.5926	2	0	0.5185
70+	27	6	2		1	1	

Source: T.71/501–2: Trinidad Slave Registers 1813, 1815, 1816.

an additional 474 died between January 1815 and January 1816. In January 1815, 864 slaves were no longer possessed by their 1813 owners; hence their status at the time of the 1815 registration – dead or alive – was not recorded in the slave registers. For example, Fabian Pomfrey, a driver on Harmony Hall plantation in 1813, was sold between January 1815 and January 1816; it is not known whether he survived until January 1816. Similarly, Johnny Newcome ran away from Harmony Hall between March 1813 and January 1816; when he died is unknown. The status in 1816 of 544 slaves who left their 1813 owners between January 1815 and January 1816 is not recorded (Tables 5.1 and 5.2). Such slaves, whose fate – whether they were still alive – in 1815 and 1816 is unknown, are "censored."

The Trinidadian slave registry thus provides information, albeit limited, on the fate in 1815 and 1816 of most of the slaves registered in 1813: whether they survived, or whether they died. The actual dates of slave deaths were not recorded. Furthermore, the registration data do not provide any information on slaves who entered Trinidad after the 1813 registration but died or left before the 1815 registration (Figure 5.1). In particular, there is no account of slave infants who were born and who died between the registrations, which means that there is no direct information on infant mortality during the inter-registration period, and only partial information on early childhood mortality for the same time.

Table 5.2. *Female slaves by age in 1813, numbers dead and censored between 1813 and 1815, and between 1815 and 1816, and 1.75-year and 2.75-year survivor ratios*

1813		1815			1816		
Ages	Number	Dead	Censored	${}_nS_x^{1.75}$	Dead	Censored	${}_nS_x^{2.75}$
All							
1–4	791	94	36	0.8784	33	29	0.8326
5–9	707	25	39	0.9636	14	24	0.9423
10–14	478	18	23	0.9614	4	21	0.9518
15–19	452	13	28	0.9703	5	20	0.9579
20–24	939	36	43	0.9608	18	25	0.9403
25–29	1,146	42	63	0.9623	28	36	0.9362
30–34	897	41	43	0.9532	16	26	0.9339
35–39	561	25	18	0.9547	17	22	0.9224
40–44	386	28	15	0.9260	9	21	0.8995
45–49	258	16	9	0.9369	11	8	0.8918
50–54	192	10	6	0.9471	9	7	0.8976
55–59	73	7	3	0.9021	4	3	0.8429
60–64	71	4	7	0.9407	5	3	0.8636
65–69	21	1	0	0.9524	2	2	0.8500
70+	36	2	3		4	4	
Creole							
1–4	791	94	36	0.8784	33	29	0.8326
5–9	707	25	39	0.9636	14	24	0.9423
10–14	461	15	23	0.9666	4	21	0.9567
15–19	291	8	19	0.9716	1	16	0.9671
20–24	299	7	19	0.9758	5	11	0.9577
25–29	243	5	24	0.9784	3	9	0.9647
30–34	176	5	10	0.9708	0	11	0.9698
35–39	125	4	8	0.9669	9	5	0.8903
40–44	85	6	7	0.9264	0	3	0.9250
45–49	71	8	3	0.8849	3	3	0.8382
50–54	59	3	3	0.9478	2	2	0.9115
55–59	15	1	0	0.9333	0	0	0.9333
60–64	18	2	2	0.8824	1	2	0.8125
65–69	7	1	0	0.8571	0	1	0.8462
70+	13	0	1		2	0	
African							
1–4							
5–9							
10–14	17	3	0	0.8235	0	0	0.8235
15–19	161	5	10	0.9679	4	4	0.9416

Table 5.2 *(cont.)*

1813		1815			1816		
Ages	Number	Dead	Censored	${}_nS_x^{1.75}$	Dead	Censored	${}_nS_x^{2.75}$
African (cont.)							
20–24	640	29	24	0.9538	13	14	0.9324
25–29	903	37	41	0.9581	25	27	0.9287
30–34	721	36	35	0.9488	16	15	0.9253
35–39	436	21	11	0.9512	15	17	0.9147
40–44	301	22	8	0.9259	9	18	0.8924
45–49	187	8	6	0.9565	8	5	0.9118
50–54	133	7	3	0.9468	7	5	0.8915
55–59	58	6	3	0.8938	4	3	0.8182
60–64	53	2	5	0.9604	4	1	0.8800
65–69	14	0	0	1.0000	2	1	0.8519
70+	23	2	2		2	4	

Source: T.71/501–2: Trinidad Slave Registers 1813, 1815, 1816.

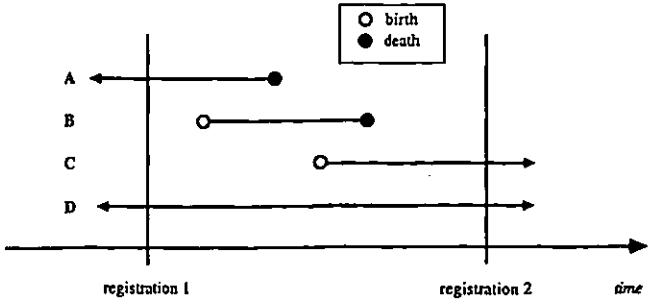


Figure 5.1. Slave registration samples. Slaves whose lifelines cross time = registration 1 (A,D) are included in the first registration; slaves whose lifelines cross time = registration 2 (C,D) are included in the second registration. Slave who were born and who died between the registrations (B) were never recorded.

Also missing from the Trinidadian slave registration data is any information about slaves who were omitted from the original registration. Only 140 slaves – 108 adults and 32 children – were subsequently acknowledged by the Registrar of Slaves to have been omitted in the 1813 registration, and records of these slaves were entered in later returns.[4]

Life tables

Comparison of the mortality of several populations, or of subpopulations within a population, requires an index of mortality that, unlike the crude death rate, is independent of the age and sex structure of the population. One such measure is the expected length of remaining life beyond a given age; another is the probability of surviving from birth to a given age, such as the probability of surviving from birth to age 25. Both of these measures are derived from a population's life table.[5]

It is important to distinguish between period and cohort life tables. A *cohort life table* describes the mortality of a real birth cohort: the cohort members are followed until all are dead, and then a life table is calculated. A *period life table* describes the mortality of a hypothetical birth cohort: deaths at all ages in a fixed period are recorded, and from these a life table is calculated. Thus, the death rate calculated for 5 year olds refers to a different birth cohort than does the death rate for 60 year olds. The period life table describes the mortality of an imaginary cohort, subject through their lives to the age-specific mortality that prevailed in the period in which the data were collected. Unless mortality remains unchanged for several decades, no real birth cohort will experience the mortality embodied in a period life table.

Survivor ratios and the survival function

One use of the mortality data in the Trinidad slave registers is the calculation of the proportion of slaves who survived the 1.75-year (1813–15) and 2.75-year (1813–16) interregistration intervals. These proportions are the 1.75-year and 2.75-year survivor ratios. For such calculations, the data are customarily divided into five-year age groups for ages greater than 5; in the first five years, infancy is distinguished from early childhood (ages 1–4) because mortality in infancy is typically somewhat higher than mortality in

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[4] C.O. 295/40, f. 293.

[5] For examples of other work with slave life tables, see Michael Craton, *Searching for the Invisible Man*, pp. 112–15; Barry W. Higman, *Slave Populations of the British Caribbean*, pp. 30–2; George W. Roberts, "A Life Table for a West Indian Slave Population," *Population Studies* 5 (1952), pp. 238–43.

early childhood. The 2.75-year survivor ratio, ${}_nS_x^{2.75}$ for slaves age x to $x+n$ in 1813, is defined as

$$ {}_nS_x^{2.75} = \frac{[{}_nP_x - {}_nD_x - 0.5\,{}_nC_x]2.75}{[{}_nP_x - 0.5\,{}_nC_x]2.75}, \qquad [5.1] $$

where ${}_nP_x$ is the number of slaves alive in 1813 between ages x and $x+n$, ${}_nD_x$ is the number of slaves in that age group who are known to have died between the 1813 and the 1816 registrations, and ${}_nC_x$ is the number of slaves in that age group who were censored during the interregistration period. Thus, the numerator of this expression is an estimate of the number of person-years lived by the individuals who survived the interregistration period. The denominator is an estimate of the number of person-years of exposure to the risk of dying during the same interval.

From the Trinidadian plantation slave registration data, the 1.75-year survivor ratios ${}_nS_x^{1.75}$ and the 2.75-year survivor ratios ${}_nS_x^{2.75}$ can be calculated from reported numbers of slaves initially enumerated, slave deaths, and slaves who were censored. In order to calculate life tables, however, these survivor ratios must be transformed into a life table function such as l_x, the survival function.

The general form of the 2.75-year survivor ratio for a five-year age group can be written in terms of life table functions as

$$ {}_nS_x^{2.75} = \frac{{}_nL_{x+2.75}}{{}_nL_x}, \qquad [5.2] $$

where ${}_5L_x$ denotes the number of people alive between ages x and $x+5$ in the life table. If it is assumed that the survival function l_x is linear over five-year intervals, then the survivor ratio can be rewritten as

$$ {}_nS_x^{2.75} = \frac{0.45l_x + l_{x+5} + 0.55l_{x+10}}{l_x + l_{x+5}}. \qquad [5.3] $$

Suppose that everyone in the population dies by age 75, so that $l_{75} = 0$. Then an expression of this form given above exists for the survivor ratios for ages x, $5 \le x \le 65$. The survivor ratios for infants and for young children are given by

$$ {}_1S_0^{2.75} = \frac{0.4375l_1 + 0.5625l_5}{0.25l_0 + 0.75l_1} \qquad [5.4] $$

and

$$ {}_4S_1^{2.75} = \frac{0.3125l_1 + 1.1375l_5 + 0.55l_{10}}{l_1 + l_5}, \qquad [5.5] $$

respectively.

If $l_{75} = 0$ and $l_{70} > 0$, then there are fifteen separate equations for ${}_5S_x^{2.75}$, each of which depends upon three successive values of the l_x function. The expression for ages 5 and above may be rewritten as

$$({}_nS_x^{2.75} - 0.45)l_x + ({}_nS_x^{2.75} - 1)l_{x+5} - 0.55l_{x+10} = 0 \qquad [5.6]$$

or more simply as

$${}_na_x \cdot l_x + {}_nb_x \cdot l_{x+5} + {}_nc_x \cdot l_{x+10} = 0 \qquad [5.7]$$

where the coefficients ${}_na_x$, ${}_nb_x$, and ${}_nc_x$ depend only upon the observed survivor ratios. The expressions for the survivor ratios for infancy and early childhood may be similarly rearranged. Together with the two identities, $l_0 = 1$ and $l_{75} = 0$, these fifteen equations may be arranged in a system of seventeen simultaneous equations:

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 & \cdots & 0 \\ {}_1a_0 & {}_1b_0 & {}_1c_0 & 0 & 0 & \cdots & 0 \\ 0 & {}_4a_1 & {}_4b_1 & {}_4c_1 & 0 & \cdots & 0 \\ & & & & & \vdots & \\ 1 & 0 & 0 & 0 & 0 & \cdots & 0 \end{bmatrix} \begin{bmatrix} l_0 \\ l_1 \\ l_5 \\ \vdots \\ l_{75} \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \\ 0 \\ \vdots \\ 0 \end{bmatrix} \qquad [5.8]$$

or more compactly as

$$S \cdot l = m, \qquad [5.9]$$

where S is a 17 × 17 matrix and l and m are 17 × 1 column vectors. The l_x values corresponding to the observed survivor ratios are thus given by the solution to the equation

$$l = m \cdot S^{-1}. \qquad [5.10]$$

A similar set of simultaneous equations can be derived for the relationship between the 1.75-year survivor ratios and the life table survival function.

Model life tables and relational systems

The mortality data in the the Trinidadian slave registers are deficient: infants who were born and who died between the registrations are omitted, slave ages are misreported, and there was probably some failure to report deaths among those slaves present in the initial registration. Together, these problems imply that life tables taken directly from the slave registration data may not be an accurate representation of the actual life table of the population.

Typically, the survivor ratios of a well-behaved life table are a smooth concave function of age; such is the case, for example, of the 2.75-year survivor ratios derived from Coale–Demeny model life tables. The survivor ratios calculated directly from the slave data do not constitute a smooth concave function of age, but rather appear as an erratic series, albeit of a plausible

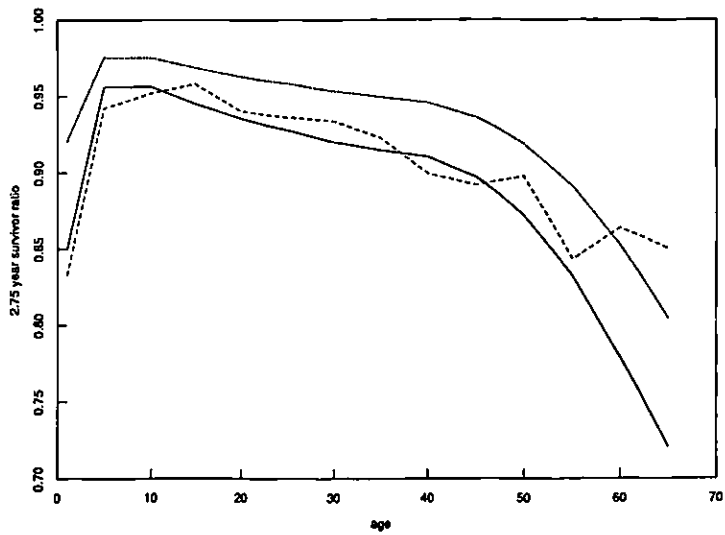


Figure 5.2. 2.75-year survival ratios for female plantation slaves (1813–16) and from Coale–Demeny model life tables. — West A; ··· West 5; - - - female slaves.

shape (Figure 5.2). Age heaping renders some survivor ratios too low and others too high; small numbers of elderly slaves make the calculated survivor ratios at the highest ages sensitive to slight mistatements of deaths or ages.

Given the shortcomings of the slave registration data – age misreporting, and omission of births and deaths – additional tools must be used in constructing the life tables of the slave populations. One such tool is the model life table. Model life tables are based upon empirical regularities common to the mortality patterns of most populations and are hence particularly useful when the data at hand are incomplete or otherwise deficient: the models provide a systematic means of compensating for flaws in the data by serving as a skeletal framework upon which a life table can be constructed.

There are, of course, drawbacks to the use of models as a tool in the construction of life tables. Because the model life table provides the basic structure upon which the estimated life table is built, the shape of the final life table will depend in large part on the shape of the model life table upon which it is based: if, for example, the model has high infant mortality relative to adult mortality, so too will the estimated life table based on that model. Another drawback of models is that they smooth away irregularities in the data indiscriminately: good information is thrown away with the bad, real

phenomena are purged as well as artifacts. For example, an apparent surge in mortality at ages 30–35 may be an illusion created by the heaping of reported ages; on the other hand, unusually high mortality at ages 15–20 may be a true reflection of increased mortality as slaves entered the adult labor force. Similarly, an apparent increase in female mortality at ages 20–25 might be the result of age heaping, or it may reflect significant maternal mortality. There is no way to distinguish the real bumps and hollows from spurious but plausible irregularities in the data; models purge both indiscriminately.

Model life tables can be related to the slave registration data in two ways. In the first, the observed survivor ratios are transformed into the equivalent survival function (eq. [5.10]), the logit of which is then modeled as a linear function of the logit of the survival function of a standard life table (eq. [5.15]). In the second approach, the relationship between the logits of the survivor ratios taken from the slave data and from a standard life table is modeled using a logistic function (eq. [5.19]); the smoothed survivor ratio is then transformed into the corresponding survival function (eq. [5.10]).

(i) Relationships between survival functions. In a life table, the probability of surviving from birth to age a is given by

$$p(a) = \frac{l_a}{l_0}, \qquad 0 \le a \le \omega. \qquad [5.11]$$

Thus $[1 - p(a)]$ is the probability of dying at or before age a. The logarithm of the ratio of the cumulative probability of dying by age a to the probability of surviving to age a,

$$Y(a) = \ln\left[\frac{1-p(a)}{p(a)}\right], \qquad 0 \le a \le \omega, \qquad [5.12]$$

is the *logit* of the life table's survival function.

One life table can be expressed in terms of another (standard or model) life table by using a function that is linear in the logits of the survival functions. If s denotes a standard life table, then

$$Y(a) = \alpha + \beta \cdot Y^s(a). \qquad [5.13]$$

The parameter α denotes the "level" of mortality prevailing in the life table; variations in α generate a nested set of survival functions. β governs the slope of the generated life table, or more formally, denotes the relationship between adult and child mortality; variations in β generate a set of survival functions which intersect at a^*, where a^* is defined as the age at which $p^s(a) = 0.5$.[6]

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[6] William Brass, Ansley J. Coale, Paul Demeny, Don F. Heisel, Frank Lorimer, Anatole Romaniuk, and Etienne van de Walle, *The Demography of Tropical Africa*, pp. 127–8.

The relationship between the logits of survival functions forms the basis for one approach to estimating a life table from the slave registration data. The observations for 17,087 slaves are used to calculate "observed survivor ratios," ${}_4S\hat{}_1^{.75}$; there are twenty-eight such ratios, fourteen for each sex (eq. [5.1]). (Survivor ratios for male and female infants are not calculated from the registration data since infants were underreported and infant deaths often unrecorded.) These survivor ratios are used, in turn, to solve for "observed survival functions" l_x, one each for males and females (eq. [5.10]). The observed survival function begins with age 1 ($l_1 = 1$) since there is no direct information on infant mortality; thus it gives the conditional probability of surviving to age x given survival to the first birthday.[7] The only assumptions made in constructing the observed survival function from the slave registration data are that the distribution of censoring times during the interregistration period was uniform, the survival function l_x is piecewise linear across five-year intervals, and no slave survived past age 75.

There is no reason that the observed survival function, derived from the observed survivor ratios, need be well behaved: nothing constrains the observed survival function to decrease monotonically from 1 to 0. The only requirement is that the observed survival function be consistent with the observed survivor ratios; if the latter are irregular, so too will be the former (Figure 5.3). However, the irregularities of the observed survival function can be smoothed by employing the linear relationship between the logits of the survival functions of two life tables:

$$Y_1(a) = \alpha + \beta \cdot Y_1^s(a), \qquad [5.14]$$

where the subscript 1 denotes that $Y_1(a)$ is the logit of the survival function normalized on age 1. The relationship can be estimated by ordinary least squares regression. The smoothed l_x function can then be calculated from the parameter estimates, $\hat{\alpha}$ and $\hat{\beta}$, and the logits of the standard survival function by

$$\hat{l}_a = \frac{1}{1 + e^{(\hat{\alpha} + \hat{\beta} Y^s(a))}}. \qquad [5.15]$$

The advantage of this approach to fitting the slave life table – smoothing the logit of the observed l_x function using linear regression – is that the estimated $\hat{l}_x$ function will be well-behaved: it will decrease monotonically from 1 to 0. The disadvantage is that information about thousands of individual slaves is reduced to fourteen grouped observations ${}_nS\hat{}_x^{.75}$ for each sex, and so the smoothing is based on only fourteen points.

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[7] Normalization on age 1 means that, in the system of equations [5.10], the first equation is $l_1 = 1$; there is no equation for l_0.

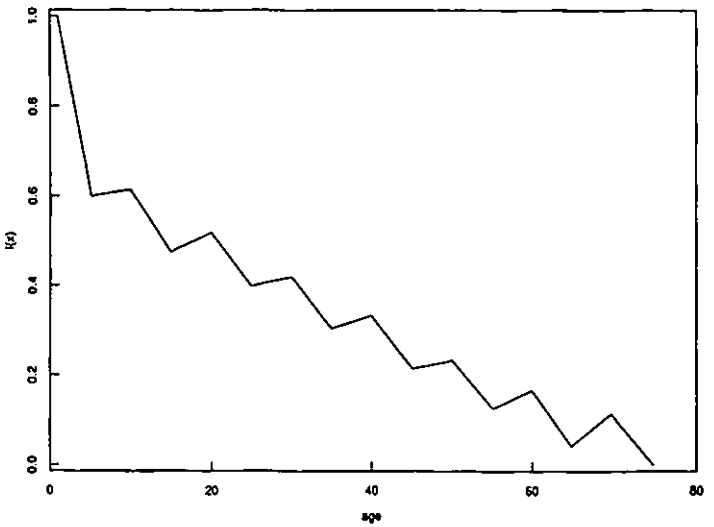


Figure 5.3. Survival function calculated from the observed 2.75-year survivor ratio for female plantation slaves.

(ii) Relationships between survivor ratios. The logit relation among life tables is based on the premise that the logit of the probability of surviving from birth to age a in one life table can be expressed as a linear function of the corresponding logit in another life table. The logit of the probability of surviving from exact age x to exact age $(x + a)$ in one life table can also be written as a linear function of the corresponding logit in another life table; x need not be equal to zero for the relationship to hold. In addition, the logit of the z-year survivor ratio ${}_nS_x^z$ either by single year or for grouped ages, can be expressed as a linear function of the corresponding logit in a standard life table,

$$\ln\left[\frac{1 - {}_nS_x^z}{{}_nS_x^z}\right] = \alpha + \beta \cdot \ln\left[\frac{1 - {}_nS_x^z}{{}_nS_x^z}\right]^s. \qquad [5.16]$$

As is the case of the conventional logit transform of the l_x function, the accuracy with which the unknown life table can be recovered depends upon how closely the standard life table reflects the underlying structure of the life table being estimated.[8]

An equivalent way of expressing the relationship between the logits of the survivor ratios of two life tables uses a logistic model, in which the unit of observation is the individual rather than the survivor ratio for an age group.

[8] A. Meredith John, *The Slave Population of Nineteenth Century Trinidad*, pp. 210–11.

In the logistic formulation, the response variable for each individual i, age a, is binary:

$$y_{i,a} = \begin{cases} 1 \text{ if individual } i \text{ survives from age } a \text{ to } a+z \\ 0 \text{ if individual } i \text{ dies between ages } a \text{ and } a+z \end{cases}.$$

The probability that an individual survives from age complete age a to complete age $a+z$, the z-year survivor ratio, is simply the probability that $y_{i,a}$ equals 1. This survivor ratio can be expressed in terms of the corresponding survivor ratio from a standard life table as:

$$\Pr(y_{i,a}=1) = \frac{1}{1+e^{-(\alpha+\beta Z_a)}}, \qquad [5.17]$$

where Z_a is the logit of the survivor ratio from age a to $a+z$ in the standard population.

In this approach, logistic regressions models are used to smooth the observed proportion surviving in each five-year age group; in this case, the model is estimated from several thousand observations:

$$y_{i,a} = \frac{1}{1+e^{-(\alpha+\beta\, {}_5Z_a)}}, \qquad [5.18]$$

where ${}_5Z_a$ is the logit of ${}_nS_x^{2.75}$ in the standard table. The estimated, or smoothed, ${}_n\hat{S}_x^{2.75}$ values are then calculated from

$$ {}_n\hat{S}_x^{2.75} = \frac{1}{1+e^{(\hat{\alpha}+\hat{\beta}\, {}_5Z_a)}}, \qquad [5.19]$$

where $\hat{\alpha}$ and $\hat{\beta}$ are the estimated parameters. The smoothed set of survivor ratios ${}_n\hat{S}_x^{2.75}$ are then solved for the corresponding survival function $\hat{l}_x$ (eq. [5.10]).

The advantage to this approach to fitting the slave life table – smoothing the ${}_nS_x^{2.75}$ function using logistic regression models – is that the smoothing procedure is based upon several thousand observations. Furthermore, each age group is represented in the regression models in the same proportion as it is in the slave population: the mortality experience of the relatively numerous slaves in their thirties will have greater influence on the estimated life table than will the mortality experience of the scarce slaves in their sixties. The disadvantage to this approach is that the estimated $\hat{l}_x$ function, obtained from the smoothed ${}_n\hat{S}_x^{2.75}$ function, is not constrained to decrease monotonically from 1 to 0: the estimated $\hat{l}_x$ function may fluctuate over the [0,1] range.

In summary, there are two ways to impose structure on, or smooth, the life tables taken directly from the slave mortality data. In the first, the logit of the survival function l_x obtained from the slave data, is modeled as a linear function of the corresponding logit in a standard life table. In the second, the

survivor ratio taken from the slave data is modeled as a logistic function of the logit of the survivor ratios in a standard life table.

The standard life table

There is no a priori means of choosing one smoothing strategy over the other: each has advantages and disadvantages. One option is to use each of the two techniques to estimate life tables for the slaves, and then see if the methods give similar results. In other words, the question is, "How sensitive is the estimated life table to the smoothing technique employed?"

The final form of the smoothed life table also depends heavily on the form of the standard life table: for example, high infant mortality in the standard life table will produce high infant mortality in the estimated life table. Thus the next task is to select the most appropriate standard life table on which to base the estimated life tables.

The life tables used as standards in the construction of the slave life tables are drawn from the set of Coale–Demeny Regional Model Life Tables. This set of 200 model life tables – 100 for each sex – are grouped into four families or "regions": West, North, East, and South, each characterized by a distinctive age pattern of mortality. Within each region, there are life tables for twenty-five levels of mortality, corresponding to a female expectation of life at birth ranging from 20 to 80 years in 2.5-year increments. Thus selecting a Coale–Demeny model life table requires the choice first of the most appropriate age pattern of mortality (region) and then of the appropriate level of mortality.

In their study of African demography, Brass et al. considered the question of which families of Coale-Demeny model life tables were best suited to serve as standards in logit models of African mortality. The North family bore the closest resemblance to child mortality in tropical Africa; the West family seemed well suited to adult mortality. On this basis, the choice of standard life tables for the Trinidadian plantation slave population was confined to the West and North families of Coale–Demeny model life tables.

The next issue is the level of mortality in the population: ideally, the level of mortality in the standard should be reasonably close to the level of mortality prevailing in the observed population. There is little doubt that mortality in Trinidad was high, higher perhaps than the mortality implied by a life table with a female expectation of life at birth of 20 years. Therefore, using the Coale–Demeny algorithms, two more levels of model life tables were generated, corresponding to female expectations of life at birth of 17.5 and 15 years, denoted levels B and A, respectively. If the most appropriate standard life table is between level A and level 5, then there are fourteen candidate life tables for the standard: seven each from the North and West families.

The criterion for selecting the most appropriate standard is simply that of choosing the best fitting regression model. In the first case, that of smoothing the observed l_x function using ordinary least squares regression, two standards were chosen: the West life table that produced the highest R^2 statistic among the seven West models, and the North life table that produced the highest R^2 statistic among the seven North models. Thus, two estimated life tables were produced, one based on a North standard, denoted l_xN, and one based on a West standard, l_xW.

In the second case, smoothing the ${}_nS_x^{2.75}$ function using logistic regression models, a different strategy was followed for choosing the most appropriate standard life table. Because the mortality data appear as several thousand observations, it is possible to estimate separate models for adults and for children. (This is not possible in the linear regression models, which smooth the l_x function, since in these the children are represented by only three observations: l_1, l_5, and l_{10}.) One can then ask whether or not the standard life table that best describes child mortality is the same as the standard that best describes adult mortality, or whether, as in the case of contemporary tropical Africa, they differ. Thus, three sets of fourteen logistic regression models were estimated: one set for observations of children, one set for observations of adults, and one set for the pooled data of children and adults. The goodness-of-fit criterion in each case is the model χ^2 statistic, on the basis of which three best standards were chosen: one for children, one for adults, and one for all ages taken together. A "spliced" smoothed ${}_n\hat{S}_x^{2.75}$ function was formed from the ${}_nS_x^{2.75}$ values estimated separately for children and adults; another ${}_n\hat{S}_x^{2.75}$ series, the "pooled" series, was estimated from the data for all ages. The smoothed ${}_n\hat{S}_x^{2.75}$ functions were then solved for the corresponding l_x functions. Two life tables were thus estimated: one based on separate regression models for children and adults ("spliced") and one based on regression models using all ages ("pooled").

Upper and lower bounds on mortality

The four estimated $\hat{l}_x$ functions (two each from the linear and the logistic models) are similar but certainly do not provide an unequivocal picture of slave mortality (Figure 5.4). Two problems are immediately obvious: the $\hat{l}_x$ functions obtained by smoothing the survivor ratios are not monotonically decreasing, and the four $\hat{l}_x$ functions imply rather different levels of infant mortality.

There is no a priori way to determine the actual level of infant mortality among the slaves: infants were underreported in the 1813 registration, and children who were born and who died between the 1813 registration and the subsequent registrations never appeared in the slave records. The best that can be said is that the prevailing infant mortality rate probably lay somewhere

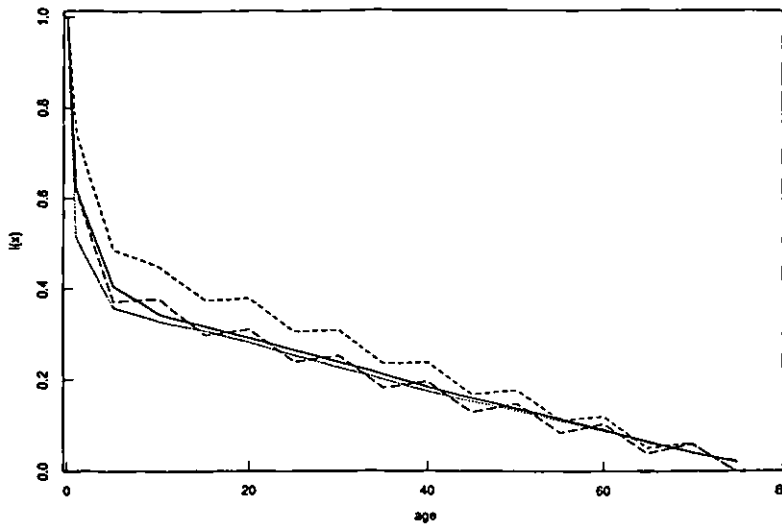


Figure 5.4. Estimated survival functions for female plantation slaves. Two functions are based on logistic models ("spliced" and "pooled") and two on linear models (one using a West level 5 standard and one using a North level 5 standard). — N5, ···W5; - - - pooled; – – spliced.

between the highest and lowest estimated infant mortality rates. Thus, the question is no longer whether *the* life table for slaves can be estimated, but rather whether reasonable upper and lower bounds for the slave life tables can be established.

Conservative bounds – a high upper bound and a low lower bound – can be drawn by a simple graphical enveloping procedure. Assume that the greatest $\hat{l}_x$ value estimated at each age represents the upper limit of the probability of surviving to that age; then the locus of these points (smoothed by linear interpolation where necessary) gives an upper bound of the l_x function. Similarly, the locus of the smallest $\hat{l}_x$ values estimated at each age gives a lower bound for the l_x function. The mean $\hat{l}_x$ function is defined by the average of the upper and lower $\hat{l}_x$ at each age x. The mortality of the slaves is thus described in terms of three life tables: one representing an upper bound on mortality, one representing a lower bound on mortality, and one describing a mean level of mortality (Figure 5.5).

The impact of the uncertainty about the level of infant mortality on the estimated life tables can be demonstrated by normalizing the $\hat{l}_x$ function on $\hat{l}_1$ (that is, by dividing each $\hat{l}_x$ value by $\hat{l}_1$; the normalized $\hat{l}_x$ function gives the

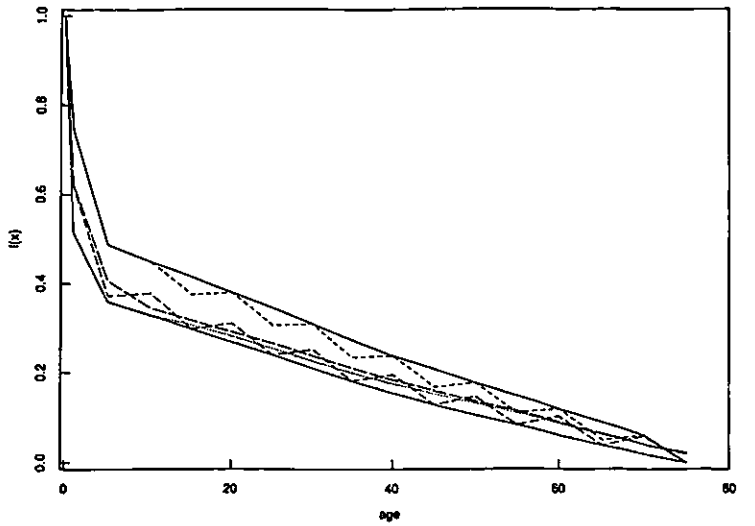


Figure 5.5. Upper and lower bounds for estimated survival functions for female plantation slaves. — upper and lower bounds; - - - estimated survival functions (compare Figure 5.4).

conditional probability of surviving to age x given survival to age 1). The normalized $\hat{l}_x$ functions for the upper and lower bounds of the life table give a very consistent picture of the age pattern of mortality after infancy, indicating that the apparent discrepancies in the estimated life tables lie largely in the estimates of infant mortality (Figures 5.6 and 5.7).

Life tables with covariates

The life table is an example of a model of mortality in which the probability of dying depends only upon an individual's age. It may be, however, that an individual's probability of dying depends not only upon the individual's age but upon personal and environmental characteristics as well: for example, a male slave age a working on a sugar plantation may have had a higher probability of dying before age $a + n$ than did a male slave age a working on a coffee plantation. One way of ascertaining whether or not this was true would be to split the population into two groups – slaves on sugar estates and slaves on coffee estates – and estimate a life table for each group. If it were further supposed that, on any given type of plantation, fieldworkers were more likely to die than nonfieldworkers, the sample could be further divided,

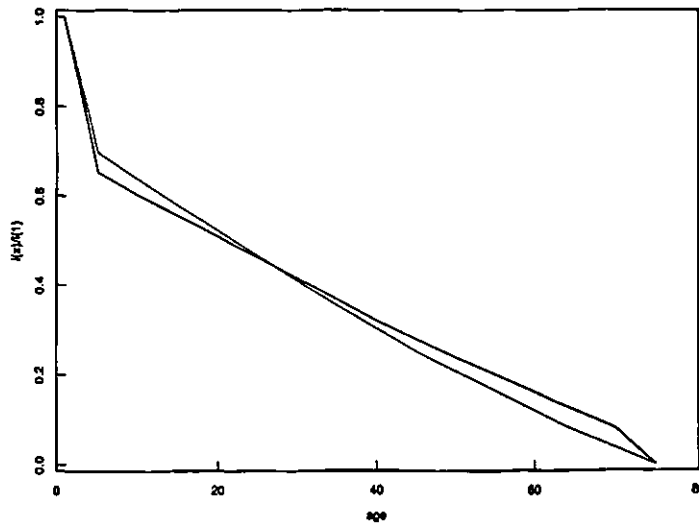


Figure 5.6. Upper and lower bound for the estimated survival function for female plantation slaves, conditioned on survival to age 1. — upper; - - - lower.

and several life tables estimated: sugar fieldworkers, coffee fieldworkers, sugar nonfieldworkers, coffee nonfieldworkers, and so on. Controlling for the effects of several variables simultaneously in this manner would require the estimation of dozens of life tables, each based on a very small sample of slaves.

Rather than dividing the observed population into many subgroups on the basis of several characteristics and estimating a life table for each group, the characteristics of the individual – whether he or she lived on a sugar plantation, was African, was a field laborer – can be incorporated into logistic regression models of mortality. In the case of the slaves, the regression model would include an observation for each slave i in the population and would have the form

$$y_i = \frac{1}{1 + e^{-(\alpha + \gamma x_i)}}, \qquad [5.20]$$

where the dependent variable y_i takes the value 1 if the slave survives the 2.75-year interregistration interval, and 0 if he dies between registrations. The independent variable x_i or variables (in a vector) x_i describe the slave and his or her environment at the time of the 1813 registration. The predicted

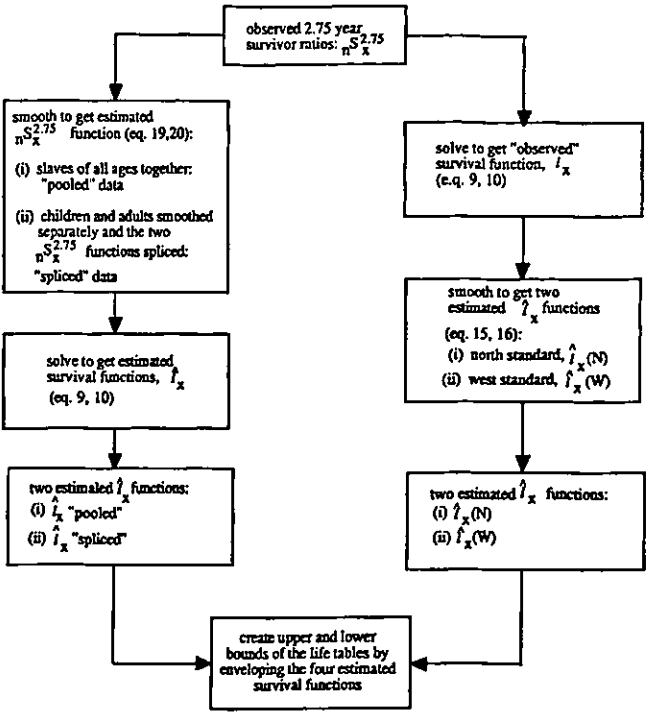


Figure 5.7. Schematic representation of the life table estimation procedure.

value of the dependent variable y_i is interpreted as the probability that a slave with a given set of characteristics x_i will survive 2.75 years.

One obvious source of variation in the probability of survival among individuals is age, which is the basis of the life table. The relationship between probabilities of dying and age is complex: there is no simple closed form expression – for example, a polynomial in age – that both describes the dependence of mortality on age well and has interpretable meaning.

However, instead of using a closed form expression for the dependence of mortality on age, an empirically derived relationship between mortality and age can be used. That is, rather than including terms for age and the square of age in the model, a life table probability of dying at each age can be used as the independent variable. The question then answered by the logistic regression model changes from "How does the probability of surviving depend on age, when age is described by this particular functional form?" to "How well does this life table, which expresses one of many possible relation-

ships between mortality and age, describe mortality in the observed population?"[9]

The independent variable used in logistic regression models of slave mortality is the logit Z_a of the life table probability of surviving from age a to age $a + 2.75$:

$$Z_a = \ln\left[\frac{1 - S_a^{2.75}}{S_a^{2.75}}\right]. \qquad [5.21]$$

The logit Z_a of the probability of surviving from age a to $a + n$ in the observed population can be expressed in terms of the corresponding logit in a standard life table Z_a^s either as

$$Z_a = \alpha + \beta Z_a^s \qquad [5.22]$$

or, equivalently, as

$$y_{i,a} = \frac{1}{1 + e^{-(\alpha + \beta Z_a^s)}}, \qquad [5.23]$$

where $y_{i,a}$ denotes the observation for individual i, age a.

If the standard life table from which the values for Z_a^s are taken described the mortality in the observed population perfectly, then the value of α would be zero and the value of β would be -1.0. If α is not equal to zero, then overall mortality – the "level" of mortality – in the observed population differs from that in the standard life table population. If β is not equal to -1.0, then the level of child mortality relative to adult mortality is not the same in the observed population as in the standard life table population: the observed population survival function has a different slope.

If the characteristics of individual i other than age are described by a vector x_i, the probability that individual i will survive from age a to $a + n$ can be written as

$$y_{i,a} = \frac{1}{1 + e^{-(\alpha + \beta Z_a^s + \gamma x_i)}}. \qquad [5.24]$$

The γ's are the coefficients of the characteristics: if every value of γ were zero, then mortality would depend only upon age. If, on the other hand, the coefficient of some characteristic were not zero, then it could be concluded that that characteristic had an impact upon mortality. If the coefficient were positive, then the probability of surviving would increase in the presence of that characteristic. If the coefficient were negative, then the probability of surviving would decrease.

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[9] Ibid., pp. 212–18.

Suppose, for example, that one wished to test the hypothesis that the mortality of African males differed from that of creole males. There would be an observation in the sample for each male slave. The dependent variable $y_{i,a}$ would take the value 1 if the slave survived the interregistration period, and 0 if he died. The independent variable Z_a would be the logit of the life table probability of an individual age a surviving the interregistration period. The independent variable x_i would denote the birthplace of the slave, taking the value 1 if the slave were creole, 0 if the slave were African.

Suppose that in this model the estimated values of the coefficients $\hat{\alpha}$, $\hat{\beta}$, and $\hat{\gamma}$ were 0.4, –0.7, and 0.2, respectively, and that the estimated value of $\hat{\gamma}$ was statistically significantly different than zero. Then one would conclude that a slave's birthplace had an effect on his probability of surviving, and that slaves born in the New World ($x_i = 1$) were more likely to survive than were slaves born in Africa.

The odds of survival

Let p be the probability that an individual i with a given set of characteristics x_i and of a given age a survives the interregistration period. The estimate of his or her probability of surviving the interregistration period is given by

$$\hat{p} = \frac{1}{1 + e^{-(\hat{\alpha} + \hat{\beta} Z_a^s + \hat{\gamma} x_i)}}. \qquad [5.25]$$

Then $(1 - \hat{p})$ is the estimated probability of not surviving the interregistration period, and the ratio

$$\hat{\Pi} = \left[\frac{\hat{p}}{1 - \hat{p}}\right] \qquad [5.26]$$

is the estimated *odds* of surviving. This can be rewritten as

$$\hat{\Pi} = e^{(\hat{\alpha} + \hat{\beta} Z_a^s + \hat{\gamma} x_i)}. \qquad [5.27]$$

Let x_i represent a single characteristic describing the slave: for example, let x_i equal 1 if the slave is creole, and 0 if the slave is African. Then the odds of a creole slave of age a surviving are

$$\hat{\Pi}_C = e^{(\hat{\alpha} + \hat{\beta} Z_a^s + \hat{\gamma} x_i)} \qquad [5.28]$$

while the odds of an African slave surviving are

$$\hat{\Pi}_A = e^{(\hat{\alpha} + \hat{\beta} Z_a^s)}. \qquad [5.29]$$

Table 5.3. *Probability of surviving and corresponding odds of surviving*

Probability of surviving p	Odds of surviving $p/(1/p)$
0.9	9.00
0.8	4.00
0.7	2.33
0.6	1.50
0.5	1.00
0.4	0.66
0.3	0.42
0.2	0.25
0.1	0.11

Thus

$$\hat{\Pi}_C = \hat{\Pi}_A e^{\hat{\gamma}} \qquad [5.30]$$

and $e^{\hat{\gamma}}$ gives the estimated multiplicative change in the odds of surviving associated with a unit change in a characteristic. In the example given above, $\hat{\gamma} = 0.2$: the odds that a creole age a would survive are estimated to be 1.22 times greater than the odds that an African, identical in all other respects relevant to mortality, would survive (Table 5.3).

Suppose that the characteristic under consideration is not dichotomous, but rather is continuous: for example, the number of slaves on an estate. Then $e^{\hat{\gamma}}$ gives the multiplicative change in the odds of surviving per additional slave on the estate.

Associated with each estimated coefficient, $\hat{\beta}$ or $\hat{\gamma}$, is a probability. This is the probability of observing the estimated coefficient if the true value is 0. If, for example, the probability associated with a parameter estimate $\hat{\gamma}$ were 0.96, then one would conclude that there is a good chance that the true value of the parameter is 0. If, on the other hand, the associated probability were 0.04, then one would conclude that the true value of the parameter is probably not 0, and that characteristic in question influenced the probability of surviving.

Summary

Because the slave registration data are flawed, it is not possible to estimate a precise period life table for the plantation slaves in Trinidad between 1813 and 1816. In particular, the absence of direct information on infant mortality

between 1813 and 1816 indicates that model life tables should be employed to aid in the reconstruction of the slave life tables where the data are deficient.

There are two ways of linking the slave mortality data to model life tables. In the first, the logit of the slave survival function is modeled as a linear function of the logit of the survival function of a standard life table. In the second, the slave survivor ratios are modeled as a logistic function of the logit of the survivor ratio of a standard life table. These estimated life tables can then be enveloped to produce upper and lower bounds for the slave survival function. The divergence between the upper and lower bounds for the slave survival functions stems largely from the uncertainty about the infant mortality rate. A mean life table can be calculated as the mean value of the upper and lower bounds at each age.

The influence of characteristics of the slave and his or her environment (e.g., birthplace, crop grown on the plantation) on the slave's chances of dying can be examined using logistic regression models. The advantage of such models is that they allow for the simultaneous effect of several factors on mortality. Thus, for example, the effect on mortality of living on a sugar plantation estimated by a logistic regression model is not confounded by, say, the occupational structure of the plantation as it would be if one simply calculated a life table for slaves living on sugar plantations.

6

Plantation slave mortality

To Proprietors of Slaves, as to Mankind in general, no incentive can be so great as their own Interest. It is not in their Powers now to replace a slave whose Physical Powers are exhausted by a short service, therefore the value of a slave of good character is greatly enhanced beyond the value of his ordinary appraisement and proportionate efforts are made to keep up his natural health and vigour.[1]

Life in Trinidad was precarious; mortality was high among the British troops stationed on the island, and newly arrived Europeans in Trinidad were prey to fatal fevers. Negroes survived the fevers, but were felled by injury, gastrointestinal disease, and other infectious diseases.

This chapter focuses on the analysis of mortality among plantation slaves in Trinidad between 1813 and 1816. There are two facets of the analysis: the first involves setting the level of mortality (estimating life tables), and the second involves examining patterns of individual variation in mortality (estimating life tables with covariates).

In the first section of the chapter, the context is set for the consideration of the statistical analysis of plantation slave mortality with a discussion of various aspects of the lives led by plantation slaves: the laws governing their treatment by their owners, the food they ate, the illnesses to which slave succumbed and the medical care they received, the plantation work régimes under which they toiled. Then, given this description of the lives of plantation slaves, the second section considers the estimated upper and lower bounds of plantation slave life tables, addressing such questions as "How long did the average male slave live?" and "Did Africans live as long as creoles?" The third section moves beyond the simple life table analysis of plantation slave mortality to examine the role played by different factors – slave birthplace, occupation, and plantation characteristics – in determining the odds that a slave would survive. Thus the third section addresses such

[1] C.O. 295/44, f. 15: Woodford to Goulburn, August 3, 1817.

questions as "Was sugar cultivation especially inimical to slave survival?" and "Were slaves owned by Protestants more likely to die than slaves owned by Catholics?"

The lives of plantation slaves

In an effort to ameliorate the conditions under which the slaves in Trinidad lived and worked, Governor José María Chacón published a set of slave laws, the *Code Noir*, in 1789; the code was widely hailed as the most benign set of slave laws in force in the Spanish empire. The code stated that slaves were to be instructed in Catholicism and were not to be worked on Sundays and holy days. Local judges were to set the quantity and quality of food and clothing received by slaves. Each slave was to have his or her own bed and there were to be no more than two slaves per room. Female slaves were to be given "appropriate" jobs. Owners could not free old or ill slaves merely to be rid of them. Slaves were to be allowed two hours each day to work for themselves. In punishment, a slave could receive no more than twenty-five lashes and those lashes were not to draw blood. Slave owners who failed to comply with the provisions of the *Code Noir* would be heavily fined. So benign was this code that, in 1793, an Englishman observed,

> Whatever guilt Spain may incur by perseverance in a barbarous traffic, it must be admitted that her code of slave laws . . . deserves to be mentioned with the highest praise. Its mildness and equity are honorable to the feelings of the framers of it and of the sovereign by whom it was sanctioned. Nor is there any reason to believe that it is not faithfully executed.[2]

Thomas Picton, the first British governor of Trinidad, was responsible for the slave laws prevailing in Trinidad in the nineteenth century: in 1800, he published a new slave code, which superseded the old *Code Noir*. The slave code, sometimes described as humane in comparison to other British slave codes, nonetheless led to a deterioration of the conditions the slaves had enjoyed under Spanish law. Most important, under the new code, there was no provision allowing slaves to buy their own freedom, as there had been under the *Code Noir*. Slaves were no longer allowed to tend their own provision grounds on Saturday as this was deemed to "cause idleness"; owners whose slaves did not work on Saturdays as they had during the week were fined $50. Owners were granted the discretion to give their slaves up to thirty-nine lashes as corporal punishment, with no limit on the severity of the whipping. There were other strong new provisions for disciplining slaves: for example, for a fee, unruly slaves could be jailed, whipped, and chained.[3] The re-

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[2] Sir Claud Hollis, *A Brief History of Trinidad under the Spanish Crown*, p. 83.

[3] Bridget Brereton, *A History of Modern Trinidad*, p. 47; James Millette, *The Genesis of Crown Colony Government*, pp. 64–5.

sponsibility for enforcing the new slave laws was vested in the commandants of quarters and their constabulary forces.

The *Code Noir* of 1789 had stipulated that rations of provisions were to be set by local authorities for the slaves living in their districts, ". . . according to their ages and sexes and conformable to the custom of the country . . . ." In particular, Governor Chacón noted that variations in the environments in which slaves lived and in the job done by slaves made setting colonywide allocations of food futile. This clause of the *Code Noir* duplicated instructions issued to the Commissioner of Population in 1788:

> The First Comissioner will ensure that every one plants the provisions requisite and adequate for the maintenance of his slaves, indicating the quantity of land necessary for each kind of provision, according to the number of slaves. In this respect, the First Comissioner is to be firm and unyielding in his decision.[4]

In contrast, the Slave Code of 1800, promulgated by Governor Picton, gave explicit instructions for the feeding of slaves. On each estate, there were to be three acres of provisions planted for every ten slaves; each slave 14 or more years old was to have a plot of land on which he could raise provisions or keep fowl. Slaves were to be given each Saturday afternoon for half of the year to work their gardens: January through June for those who belonged to a cocoa or coffee plantation, or July through December for those who belonged to a sugar plantation. The onus of responsibility lay upon owners to ensure that their slaves did, in fact, tend their gardens.

In some instances, plantations that were small or marginal could not support provisions grounds. In such cases, owners were required to provide their slaves with sixty plantains or six quarts of cassava meal per week. If plantains or cassava were unavailable, then the owners were to give their slaves "three bits" each week with which they could try to buy food.

The slave code also stipulated that each adult slave was to be given each week, either on Monday or on Saturday, ". . . three pounds of salt meat, or four pounds of salt fish . . . ," with children receiving a proportionately smaller allocation. The code specified that there were to be no exceptions to this rule.

There may have been a fair degree of compliance with the requirements of the slave code, although the Spanish and French may not have been as conscientious about complying as were the British. In 1817, Governor Woodford reported that

> The Ordinance of General Picton required 3 lbs and 1/2 of salt cod fish to be given to the slaves weekly. On all large Estates this is to the best of my knowledge obeyed: that is 3 lbs are generally given and half of Saturday to work their grounds, but the smaller French and Spanish estates prefer giving the whole Saturday to the Negro

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[4] José María Chacón to the Comissioners of Population. Reproduced in TTHS No. 470.

instead of the Salt Fish, and as the industrious Negro can easily earn 2 dollars in making a basket of Charcoal, he prefers it.

Where the land is good it is the fault of the slaves if they have not extensive gardens: it is however acknowledged that one of the most important Duties of a Planter is to see that the Negroes really work in their grounds at the times given to them for the Purpose.[5]

Both the *Code Noir* of 1789 and the Slave Code of 1800 required that a hospital for slaves be established on each plantation, and that a nurse, drawn from the ranks of the slaves, should tend the hospital. It was perceived to be important, especially in the case of yaws (a highly infectious skin disease), that ill slaves be isolated from the healthy. In addition, at one time, it had been common practice in Trinidad to contract for the medical care of plantation slaves, but by 1816, this practice was becoming less common because, ". . . they are casual and accidental and cannot therefore be contracted for . . . ."[6]

Among the slaves in Trinidad, dysentery, yaws, leprosy, fevers, diphtheria, whooping cough, "putrid sore throat," ulcerated sores, and consumption were all fatal maladies. Neonatal tetanus, the result of the manner in which the umbilical cord was cut and dressed, took a heavy toll of infants in the two weeks following birth. Infestations of parasites, especially worms, were also common. The ability of malnourished and overworked slaves to survive the ravages of disease was greatly impaired.[7]

Trinidad, a harsh frontier environment, proved deleterious to Europeans as well as to slaves. The prevalence of fatal fevers was high in Trinidad: in 1796, members of the Spanish Navy were afflicted by severe fevers that were attributed to the marshes along the coasts:

Immediately to the windward of [Port of Spain] is a vast swamp . . . The air which is blown from [the swamp] to Port of Spain is extremely injurious but cutting down and clearing [the swamp] unless by very small pieces annually would be a dangerous experiment as nothing proves more fatal in the West Indies than the effluvium of the putrefying vegetable matter on newly cleared land.[8]

The fevers often proved fatal among the Europeans.[9] In 1799, the British troops stationed on the outskirts of Port of Spain were severely debilitated by

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[5] C.O. 295/44: Woodford to Goulburn, August 3, 1817.

[6] C.O. 295/39, f. 70: Woodford to Bathurst, March 13, 1816.

[7] L. A. A. De Verteuil, *Trinidad: Its Geography, Natural Resources, Administration, Present Condition, and Prospects*, pp. 132–9.

[8] Adm. 7/764: Notes by an officer of HMS Ulysses, 1803. Reproduced in TTHS No. 204.

[9] C.O. 295/8: Report of Dr. Alexander Williams, November 20, 1796. Reproduced in TTHS No. 501.

fevers, which the commander attributed to the location of the barracks.[10] That year, Governor Picton reported that,

> The sickly [wet] season is nearly over and the mortality among the troops has not been so great as was apprehended. Slow fevers, Agues and Fluxes had been general and nearly one half of the garrison was then unfit for actual service but most of the patients are expected to recover on the approach of the favorable season.[11]

Not only the marshlands along the coast were hazardous to Europeans and slaves; Port of Spain was equally inhospitable to inhabitants of the island:

> Puerto España has been very fatal to innumerable Europeans. I have seen five or six coffins carried through the streets almost every morning. Some gentlemen arrived from Bristol about three weeks before me and they were all buried within a month. Half the crews of the ships have died in fact it is nothing new to see funerals. The ship I came on stay'd only a week and lost two men and more since . . . a young man with a florid complection seldom escapes . . . when the fever terminates fatally it generally carries off the patient on the second or third day . . . The second day of my arrival I had an attack of the fever and was resolved not to give up to it. An eminent Physician attended me and prescribed medicine, but I was never a great amateur of Physic. I resolved to put my confidence in the bottle and happy to say that it did not confound me but enabled me in three days to find the use of my legs and I thank my Soverign Madeira.[12]

The plantation slaves were rendered especially susceptible to infectious maladies by undernutrition and onerous work loads, both of which varied by plantation and crop. That the condition of the slaves in Trinidad varied with their environments was a contention made by the opponents of slavery who claimed that, in particular, the cultivation of sugar was detrimental to the health of slaves:

> The advocates of the Colonial slaves have always alleged the causes of the decline in the Slave population to be chiefly two – the excess of forced labour and the insufficiency of food; to both of which abuses there are far the strongest temptations on the sugar estates . . . .[13]

The Governor of Trinidad reported that among the factors influencing the welfare of slaves were characteristics of the plantations on which they lived: ". . . the situation of the estates, the soil, the length of time that has elapsed

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10 C.O. 296/1: Commander in Chief to the Secretary of State, March 20, 1799. Reproduced in TTHS No. 552.

11 C.O. 296/1: Picton to the Secretary of State, November 11, 1797. Reproduced in TTHS 510.

12 B.M. Add. Ms. 36499, f. 93–105: Anonymous (in Port of Spain) to Cumberland, May 23, 1802.

13 African Institution, *A Review of the Colonial Slave Registration Acts . . .* (1820), pp. 78–9.

since the establishment of the estate . . . ."[14] Some hazards were common to all plantations: in 1784, it was estimated that one-third of slaves clearing land died in the process.[15]

E. L. Joseph, a Trinidadian sugar plantation manager, described the way in which sugarcane was grown in Trinidad. He wrote that the mode of cultivation of sugar, the result of a humid climate, rich soil, and a shortage of labor, was unique to Trinidad:

> The planters [of neighboring colonies] . . . declare our method slovenly in the extreme, and think they can introduce better; yet it universally is the case that when any of what are called Old Island Planters take charge of a sugar estate in Trinidad, they reduce the crops most woefully . . .
>
> We do not expend more than one-third the labour in weeding our canes that they do in the Caribbean Isles. Often in our rich soil the ratoons are allowed to shoot up and ripen with little or no assistance from the hoe.
>
> . . . nearly the whole of the irksome labour of holeing, which comes so hard on the negroes of the Antilles and of Jamaica is in Trinidad avoided; the deep cane holes . . . would be absolutely injurious – in our rich alluvial planes [sic] these holes would retain so much water as to kill the plants; the object of the cultivator of our soil is to drain off, not to embank the rain.
>
> In general our mode of planting the cane is merely to loosen the soil with the hoe sufficient to allow the plants to be placed in the ground.[16]

Despite the relatively lackadaisical manner in which sugar was grown in Trinidad, planting, hoeing, and cutting the canes was nonetheless onerous work, undertaken for ten hours a day, six days a week:

> At sunrise or six oclock [slaves] are summoned to the field [and] works till 9. Half an hour is allowed at breakfast then they work till 12, they have two hours at dinner, at 2 get to their work till 6, or sunset. The days and nights are always nearly equal; an old slave carries a whip to keep the rest at work, he has the priviledge of giving two lashes and no more without orders, lazy slaves who do [not] keep up sometimes get a lash.[17]

Limitations were placed on the length of the slave's workday in the Slave Code of 1800:

> The field slave shall have half an hour in the morning for breakfast and two hours at noon for dinner . . . Field slaves are not to go to the field before five o'clock in the morning, nor to work there after six in the evening, except in bringing grass at noon and night for the sick, but it is not meant that this regulation should interfere with

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14 C.O. 295/44, f. 18: Woodford to Goulburn, August 3, 1817.

15 Linda A. Newson, *Aboriginal and Spanish Colonial Trinidad*, p. 185.

16 E. L. Joseph, *History of Trinidad*, pp. 92–3.

17 B.M. Add. Ms. 36499, f. 93–105: Anonymous (in Port of Spain) to Cumberland, May 23, 1802.

the night work on sugar estates in crop time, which cannot possible be dispensed with.[18]

Not only was the cultivation of the cane detrimental: the processing of the cane – the manufacturing of sugar – was fraught with dangers for slaves, who could be injured in the cane-crushing machinery or scalded by the sugar syrup:

The sugar cane is similar to the cat-tails or cabbage stalks which grow in the heaths about six to ten feet long and from Inch [and a] half to two Inches in diameter . . . the stalk [is] squeezed between in a Millwork [which] has three longitudinal rollers sheath'd with Iron and turn'd by cogs. The mill is kept in motion by water wheel if near a current; if on a hill by wind; and if neither of these advantages offer, it must be done by mule which is expensive. The canes are then put between two of the rollers and returned between the other; this completely presses the juice out which is conveyed by a tube to a furnace and a small quantity of temper lime put to it. It is boiled here till part is evaporated and then it is emptied into another furnace by the side and still more evaporated, consequently thicker. From this it is emptied into a third and a fourth before it becomes sugar. When it is brought to the consistency of treacle or rather new honey, it is emptied while hot into a tub to cool; when completely cold it is put up in cask with hole in the bottom, and in the course of three weeks becomes dry [and] ready for shipping. The drainage from them is molasses, or treacle. This is the whole process of making sugar.[19]

Once the cane was harvested, the cut canes had to be processed quickly, before the wet season. In most cases this meant that the sugar mills were run twenty-four hours a day. The practice of night work, during which slaves worked shifts as long as thirty hours, was believed to be particularly harmful to slaves:

The greatest benefit his Lordship could confer on the Negroes would be to abolish night work upon all Estates . . . but this could not be done without some considerable indemnification to the Proprietor who is now quite unable to part with any proportion of his crop, so great is his debt from the ruinous prices of his supplies for many years past . . . .[20]

In comparison to sugar cultivation, the cultivation of cocoa was relatively easy for slaves. The work was largely "task work" – slaves were given jobs to complete, and any spare time was theirs – and there was no night work. Furthermore, the cocoa plantations usually had good provision grounds for the slaves and, because of the task work scheme, the slaves had ample time to tend the gardens.[21]

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18 Slave Code of 1800, Article 7.

19 Ibid.

20 C.O. 295/44, f. 19: Woodford to Goulburn, August 3, 1817.

21 C.O. 295/55, f. 28–9: Woodford to Bathurst, April 2, 1822.

It was argued by some that the cultivation of coffee was even more inimical to slave survival than was the cultivation of sugar:

> In the cultivation of coffee, the general labour is very light and easy only it requires many hands to gather in the crop. This culture requiring great exposure in the wet season, is the most unhealthy and deleterious of employments in these climates and the mortality on these estates far surpasses that of the others.[22]

In addition to variations in slave welfare by the plantation characteristics, such as the crop grown, there may have been systematic variations in the treatment, both conscious and unconscious, of slaves by their owners: in particular, it has been suggested that Catholic owners – French and Spanish – were more benign in their treatment of slaves than were Protestant owners. To some extent, such differences stemmed from differences in the perception of slaves: to Catholics, slaves were human beings, albeit of a very inferior sort, whereas to Protestants, slaves were merely property.[23] Certainly, there were differences in the formal religious treatment of the slaves:

> Nothing can contribute more to the improvement of the Negroes than the custom of evening prayers, it renders them submissive, orderly and devout. The Spaniards invariably attend to this and their Negroes are much more obedient and well ordered than others. On the French estates the Sunday evening is rarely passed over without prayers but on the English it is seldom if ever observed.[24]

Governor Woodford noted that the laws regarding the provision of weekly allowances of salt fish to slaves were, for the most part, obeyed by the British slave owners, but that French and Spanish owners, especially those with smaller holdings, gave their slaves additional free time in lieu of a portion of fish. These slaves were thus in a stronger position to vary their diets, either by the purchase or by the cultivation of additional foods; on the other hand, they consumed less protein than did slaves who received fish each week.

The plantations established by the French and Spanish were, in general, older than those established by the British. Whether the plantations *owned* in 1813 by the French and Spanish were, on the whole, older than those owned by the British in 1813 is less clear because it was not unusual for plantations to be sold or abandoned. On the older plantations, the onerous work of clearing land would be a thing of the past, and provision grounds would be well established. By the same token, however, it was the older plantations that were abandoned because their soil was "depleted."

British estate owners were more often absentee planters than were the French and the Spanish: the estates of the British were run by managers and

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22 Picton to the Secretary of State, April 12, 1802. Reproduced in TTHS No. 160.

23 H. S. Klein, "Anglicanism, Catholicism, and the Negro Slave," in A. J. Lane, ed., *The Debate over Slavery: Stanley Elkins and His Critics* (1971), pp. 137–90.

24 C.O. 295/44, f. 15–20: Woodford to Goulburn, August 3, 1817.

attorneys who were charged with the task of making a profit. Hence the incentive for extracting the maximum work per slave, regardless of the effect on the health of the slave, was strong, particularly in those cases in which managers were paid according to the profitability of the estate. To counteract this tendency, and to ameliorate the conditions under which the slaves of absentee owners lived, it was occasionally suggested that the remuneration of managers should be pegged to the number of births and deaths on the estate rather than to the annual crop; better yet, owners should be induced to live on their plantations:

> Any means that could be devised to induce the residence of the Proprietor on an estate would tend I conceive to the improvement of the Condition of the Negroes by keeping them under the personal observation of the person most interested in their Preservation . . . .[25]

Plantation slave life tables

It is misleading to speak in terms of *the* period life table for male slaves or for female slaves: the registration data provide a picture of slave mortality that is at best fuzzy. It is therefore more appropriate to speak in terms of estimated upper and lower bounds on slave mortality and of the mean period life table within those bounds; together, these give a sense of the general level and age pattern of mortality in the population (Figure 6.1). Nonetheless, for simplicity, when comparing the mortality of various slave subpopulations in the following discussions, values of the *mean* life tables will be used.[26]

There are at least three ways in which mortality at various ages in different populations can be compared. First, one can compare the l_x function at different ages. Since the l_x function gives the probability of surviving from birth to age x, one can ascertain in which population an individual has the greater chance of surviving to any given age. A second way of comparing mortality in two or more populations is to consider conditional probabilities of surviving, such as the probability of surviving to age 60 given that one has survived to age 15: l_{60}/l_{15}. This measure of mortality is independent of the level of mortality during childhood and hence is useful for comparing the experiences of adults.

The third way of comparing mortality among populations is to use the expectation of remaining life at age x: the average number of years beyond age x lived by an individual who survives to age x. Like the conditional probability of surviving beyond age x, the expectation of remaining life at age x is independent of mortality before age x, which renders it useful for comparing

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25 Ibid.

26 See Chapter 5, section entitled "Upper and lower bounds on mortality."

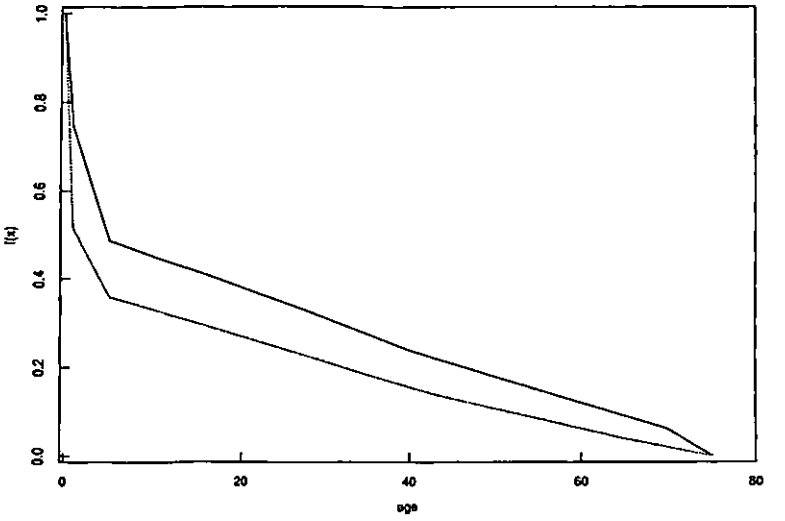


Figure 6.1. Upper and lower bounds for the estimated survival function for female plantation slaves. — upper; - - - lower.

the mortality of adults when the estimates of child mortality are dubious or unavailable.

It should be noted that these three measures of mortality – the probability of surviving from birth to age x, the conditional probability of surviving to age x given survival to a specified earlier age, and the expectation of remaining life after age x – are not independent. In particular, the expectation of remaining life at age x is defined in terms of the survival function. Thus the measures should all tell the same story, although in different ways: the first two measures are expressed as probabilities, while the last is expressed in years of life.

Was mortality among the male slaves higher than among the female slaves? It appears that adult male slaves fared less well than did their female counterparts: for example, the expectation of remaining life for a male slave age 15 was at least three years less than for a female slave of the same age (Figure 6.2; Tables 6.1 and 6.2). In fact, at every age above 15, the expectation of remaining life for males was less than for females, reflecting perhaps the more arduous conditions under which the male plantation slaves labored.

Unlike the adults, the mortality of girls may have been slightly higher than the mortality of boys: according to the mean estimated life tables, the probability that a girl would survive to age 15 was about 3 percent lower than the probability that a boy would survive to age 15. However, the range of

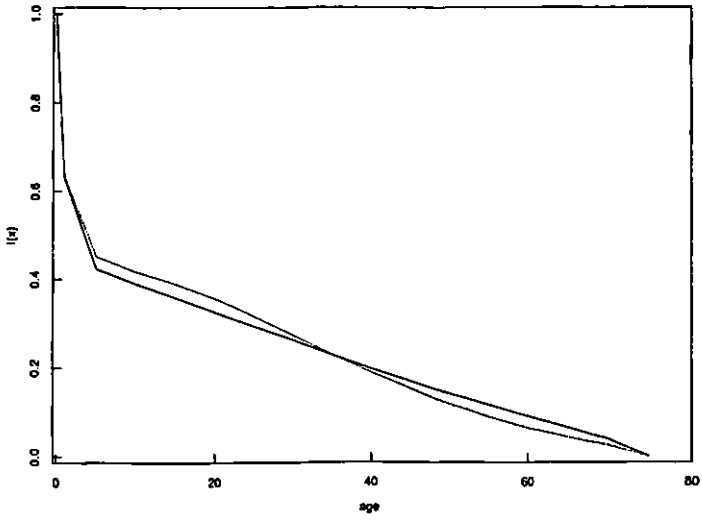


Figure 6.2. Mean estimated survival functions for male and female plantation slaves. - - - male; — female.

plausible life tables, denoted by the estimated upper and lower bounds on the life table, suggest the possibility that the mortality of girls may have been lower than that of boys: the upper bound for girls implies a higher probability of surviving to any given age than does the upper bound for boys.

Infant mortality was extremely high among the plantation slaves. The estimated infant mortality rate for male slaves ranged between 287 and 443 deaths per thousand live births with a mean estimate of 365 deaths per thousand live births. For female infants, the estimated range was 256 to 485 deaths per thousand live births, with a mean estimate of 370 deaths per thousand live births. Thus, it appears than more than one-third of newborn plantation slaves in Trinidad died before their first birthdays, presumably largely the result of neonatal tetanus stemming from infection of the umbilical cord stump.[27]

Young slaves became economically useful on the estates at about age 5, when some were put to work in the small grass gang and others became

[27] The infant mortality rate is misnamed: as defined, it is not a central death rate (number of deaths in infancy per thousand person-years exposure, or ${}_1m_0$ in life table notation), but rather a probability (number of deaths in infancy per thousand live births, or ${}_1q_0$). Because the denominator of ${}_1m_0$ is smaller than the denominator of ${}_1q_0$, the central death rate in infancy overstates the true infant mortality rate.

Table 6.1. *Life tables for female plantation slaves, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Upper bound						
0	1.0000	0.2555	0.2555	0.8084	20.5766	20.58
1	0.7455	0.2574	0.3457	2.4621	19.7682	26.55
5	0.4871	0.0381	0.0782	2.3403	17.3050	32.52
10	0.4490	0.0347	0.0772	2.1584	14.9648	33.32
15	0.4144	0.0347	0.0836	1.9851	12.8064	30.90
20	0.3797	0.0347	0.0914	1.8118	10.8213	28.49
25	0.3450	0.0347	0.1006	1.6383	9.0095	26.11
30	0.3103	0.0359	0.1157	1.4618	7.3713	23.75
35	0.2744	0.0359	0.1308	1.2823	5.9095	21.53
40	0.2385	0.0304	0.1275	1.1165	4.6273	19.40
45	0.2081	0.0304	0.1461	0.9645	3.5108	16.87
50	0.1777	0.0288	0.1621	0.8165	2.5463	14.32
55	0.1489	0.0288	0.1934	0.6725	1.7298	11.61
60	0.1201	0.0296	0.2465	0.5265	1.0573	8.80
65	0.0905	0.0296	0.3271	0.3785	0.5308	5.86
70	0.0609	0.0609	1.0000	0.1523	0.1523	2.5
75	0.0000	0.0000		0.0000	0.0000	
Mean						
0	1.0000	0.3704	0.3704	0.7222	17.2451	17.25
1	0.6297	0.2067	0.3283	2.1052	16.5228	26.24
5	0.4230	0.0341	0.0806	2.0295	14.4176	34.08
10	0.3889	0.0326	0.0839	1.8627	12.3881	31.85
15	0.3562	0.0318	0.0892	1.7017	10.5254	29.54
20	0.3245	0.0318	0.0980	1.5428	8.8238	27.19
25	0.2927	0.0318	0.1087	1.3837	7.2810	24.87
30	0.2608	0.0324	0.1243	1.2231	5.8973	22.61
35	0.2284	0.0312	0.1367	1.0639	4.6743	20.46
40	0.1972	0.0285	0.1444	0.9147	3.6103	18.31
45	0.1687	0.0265	0.1568	0.7774	2.6956	15.97
50	0.1423	0.0257	0.1803	0.6471	1.9183	13.48
55	0.1166	0.0257	0.2204	0.5188	1.2711	10.90
60	0.0909	0.0261	0.2871	0.3893	0.7524	8.27
65	0.0648	0.0246	0.3792	0.2626	0.3631	5.60
70	0.0402	0.0402	1.0000	0.1006	0.1006	2.50
75	0.0000	0.0000		0.0000	0.0000	
Lower bound						
0	1.0000	0.4852	0.4852	0.6361	13.9136	13.91
1	0.5148	0.1560	0.3030	1.7472	13.2775	25.79
5	0.3588	0.0301	0.0839	1.7188	11.5303	32.14

Table 6.1 *(cont.)*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Lower bound (cont.)						
10	0.3287	0.0306	0.0931	1.5670	9.8115	29.84
15	0.2981	0.0289	0.0969	1.4183	8.2445	27.66
20	0.2692	0.0289	0.1074	1.2738	6.8263	25.36
25	0.2403	0.0290	0.1205	1.1291	5.5525	23.11
30	0.2114	0.0290	0.1370	0.9844	4.4234	20.92
35	0.1824	0.0265	0.1456	0.8456	3.4390	18.85
40	0.1559	0.0266	0.1704	0.7129	2.5934	16.64
45	0.1293	0.0225	0.1740	0.5903	1.8805	14.54
50	0.1068	0.0225	0.2107	0.4778	1.2903	12.08
55	0.0843	0.0226	0.2681	0.3650	0.8125	9.63
60	0.0617	0.0226	0.3663	0.2520	0.4475	7.25
65	0.0391	0.0196	0.5000	0.1466	0.1955	5.00
70	0.0196	0.0196	1.0000	0.0489	0.0489	2.5
75	0.0000	0.0000		0.0000	0.0000	

Table 6.2. *Life tables for male plantation slaves, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Upper bound						
0	1.0000	0.2874	0.2874	0.7845	19.4508	19.45
1	0.7126	0.2064	0.2896	2.4376	18.6664	26.19
5	0.5062	0.0374	0.0739	2.4375	16.2288	32.06
10	0.4688	0.375	0.0800	2.2503	13.7913	29.41
15	0.4313	0.0385	0.0893	2.0603	11.5410	26.75
20	0.3928	0.0479	0.1221	1.8441	9.4808	24.13
25	0.3449	0.0479	0.1390	1.6044	7.6366	22.14
30	0.2969	0.0134	0.1462	1.3760	6.0323	20.31
35	0.2535	0.0134	0.1712	1.1590	4.6563	18.36
40	0.2101	0.0368	0.1754	0.9584	3.4973	16.64
45	0.1733	0.0369	0.2127	0.7741	2.5389	14.65
50	0.1364	0.0287	0.2100	0.6104	1.7648	12.93
55	0.1078	0.0287	0.2659	0.4671	1.1544	10.71
60	0.0791	0.0201	0.2541	0.3453	0.6873	8.68
65	0.0590	0.0201	0.3407	0.2448	0.3420	5.79
70	0.0389	0.0389	1.0000	0.0973	0.0973	2.50
75	0.0000	0.0000		0.0000	0.0000	

Table 6.2 *(cont.)*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Mean						
0	1.0000	0.3653	0.3653	0.7260	17.3168	17.31
1	0.6347	0.1842	0.2902	2.1703	16.5908	26.14
5	0.4505	0.0339	0.0754	2.1676	14.4205	32.01
10	0.4166	0.0288	0.0693	2.0106	12.2529	29.41
15	0.3877	0.0321	0.0827	1.8584	10.2423	26.41
20	0.3557	0.0406	0.1141	1.6768	8.3839	23.57
25	0.3151	0.0440	0.1396	1.4654	6.7071	21.28
30	0.2711	0.0417	0.1538	1.2513	5.2416	19.33
35	0.2294	0.0402	0.1753	1.0464	3.9904	17.39
40	0.1892	0.0369	0.1953	0.8535	2.9439	15.56
45	0.1522	0.0334	0.2192	0.6777	2.0904	13.73
50	0.1189	0.0293	0.2463	0.5211	1.4128	11.88
55	0.0896	0.0254	0.2833	0.3844	0.8917	9.95
60	0.0642	0.0211	0.3287	0.2683	0.5073	7.90
65	0.0431	0.0169	0.3910	0.1734	0.2390	5.54
70	0.0263	0.0263	1.0000	0.0656	0.0656	2.50
75	0.0000	0.0000		0.0000	0.0000	
Lower bound						
0	1.0000	0.4433	0.4433	0.6675	15.1828	15.18
1	0.5567	0.1619	0.2908	1.9030	14.5153	26.07
5	0.3948	0.0305	0.0773	1.8978	12.6123	31.94
10	0.3643	0.0202	0.0554	1.7710	10.7145	29.41
15	0.3441	0.0256	0.0744	1.6565	8.9435	25.99
20	0.3185	0.0332	0.1042	1.5095	7.2870	22.87
25	0.2853	0.0400	0.1402	1.3265	5.7775	20.25
30	0.2453	0.0400	0.1631	1.1265	4.4510	18.14
35	0.2053	0.0371	0.1805	0.9339	3.3245	16.19
40	0.1683	0.0371	0.2202	0.7486	2.3906	14.20
45	0.1312	0.0299	0.2279	0.5813	1.6420	12.51
50	0.1013	0.0299	0.2952	0.4318	1.0608	10.47
55	0.0714	0.0221	0.3095	0.3018	0.6290	8.80
60	0.0493	0.0221	0.4483	0.1913	0.3273	6.63
65	0.0272	0.0136	0.5000	0.1020	0.1360	5.00
70	0.0136	0.0136	1.0000	0.0340	0.0340	2.50
75	0.0000	0.0000		0.0000	0.0000	

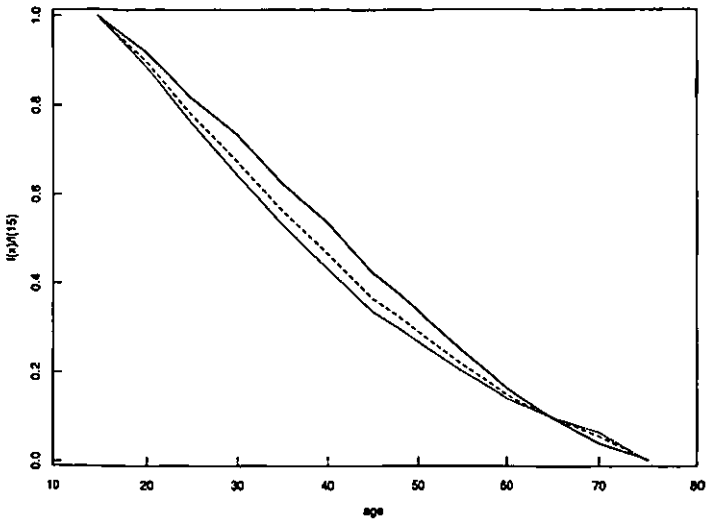


Figure 6.3. Mean estimated survival functions for male slaves, giving the probability of survival to age x for those slaves who survived to at least age 15. ··· African; — creole; - - - all plantation males.

domestic servants. It is likely, however, that fewer than half of the plantation slaves born on a Trinidad estate would reach age 5: the mean estimate of the proportion of newborns surviving to age 5 was 42 percent for girls and 45 percent for boys. As was noted by contemporary observers, the toll of infant and child mortality on the stock of slaves was high.[28]

The comparison of the mortality of Africans and creoles must be limited to mortality at age 15 and above: there are few data for Africans less than 15 years old because the transatlantic slave trade was closed six years prior to the 1813 registration. Hence no Africans could be less than 6 years old in 1813, and those less than 15 years old in 1813 must have been brought from Africa when they were less than 8 years old. Thus the comparisons between Africans and creoles are made using life tables that give the probability of surviving to ages greater than 15, given survival to age 15.

The mortality of African males appears to have been a bit higher than that of creole males: between ages 15 and 65, the mean survival function for African males lies below that of creole males (Figure 6.3; Appendix Tables

[28] J.-F. Dauxion-Lavaysse, *A Statistical, Commercial and Political Description of Venezuela, Trinidad, and Margarita*, p. 389.

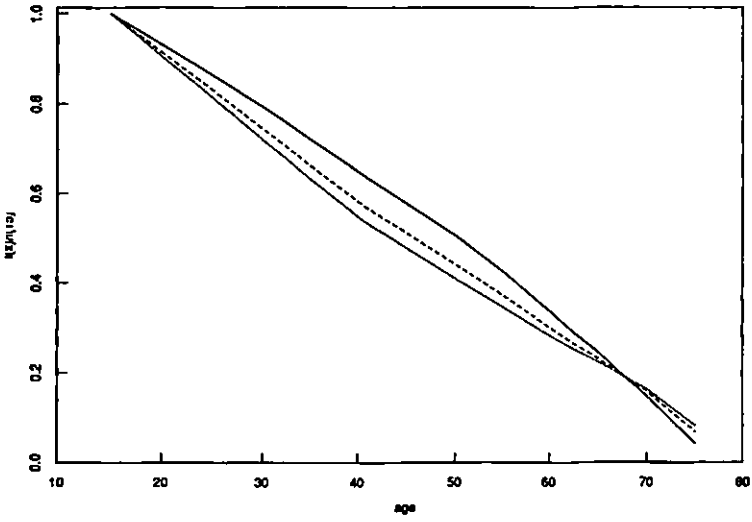


Figure 6.4. Mean estimated survival functions for female slaves, giving the probability of survival to age x for those slaves who survived to at least age 15. ··· African; — creole; - - - all plantation females.

A.1–A.3). Thus the probability of surviving to any age between 15 and 65, given survival to age 15, was lower for African males than for creole males on plantations. Inferences drawn about survival probabilities above age 65 are unlikely to be reliable because there were few creole males over age 65. Equivalently, the expectation of remaining life for creole males exceeded that of African males between ages 15 and 40, but above age 40, Africans showed a slight advantage. Again, however, estimates of the expectation of remaining life at high ages are particularly unreliable for the creoles because few creole males had reached the older ages by 1813.

Similar conclusions can be drawn about the comparative mortality of African and creole females: the creole women fared slightly better than did the African women (Figure 6.4; Appendix Tables A.4–A.6). Like the males, the expectation of remaining life for the creole females exceeded that of the African females at each age between 15 and 40, whereas after 40 the African females had slightly greater life expectancy. Again, however, as in the case of the males, inferences about the relative mortality of Africans and creoles at high ages are likely to be unreliable because of the scarcity of elderly creoles.

That the mortality of adult Africans and creoles did not differ greatly in Trinidad in the second decade of the nineteenth century is unsurprising.

Seasoning, or adjusting to the New World environment, was largely a phenomonon of the past: African slaves present in Trinidad in 1813 were the survivors of seasoning, since they had been in the New World for at least six years. In fact, few of the adult slaves in Trinidad were natives of the island. Ninety-two percent of the adult slaves had been imported into Trinidad and, hence, regardless of whether African or creole, were cast in the dangerous role of immigrant to a harsh and unreceptive frontier environment.

Finally, there lingers the question of the slaves allegedly smuggled into Trinidad after the announcement of the slave registration. Life tables can be estimated separately for slaves who lived on plantations that filed late returns – the plantations allegedly harboring smuggled slaves – and plantations that filed their returns on time. The life tables for the two sets of returns are virtually identical, suggesting that there is no demographic evidence from the mortality of plantation slaves that wholesale slave smuggling occurred in 1813.

Life tables with covariates

The contention that sugar cultivation was inimical to slave survival – especially that of males – appears to have been true in Trinidad. The odds of surviving are given by $e^{\hat{\beta}}$, where $\hat{\beta}$ is the appropriate parameter estimate. For an adult male slave on a sugar plantation, the odds of surviving were lower than for slaves on any other type of plantation (Appendix Tables A.7 and A.8).The odds that an adult male slave on a cotton plantation would survive were nearly twice the odds that an adult male slave on a sugar plantation would survive. The survival odds for an adult male slave on a cotton plantation were 1.67 times greater than those for an adult male slave on a cocoa plantation. There was no significant difference between the odds of survival for male slaves on cotton plantations and those on coffee plantations. The slaves who fared least well were the slaves on the provisions plantations: the odds that an adult male slave on a provisions plantation would survive were less than half as great as those for an adult male slave on a cotton plantation. Thus overall, when other characteristics of the plantation, the slave's occupation, and personal characteristics of the slave were accounted for, adult male slaves on cotton and coffee plantations fared better than did adult male slaves on cocoa plantations, who in turn fared better than did their counterparts on sugar plantations. The adult male slaves who worked on the smaller, marginal provisions plantations experienced the greatest mortality.

The fate of adult male creoles was less a function of the estate crop than was the fate of adult male Africans. The only crop that significantly affected the chances of survival for adult male creoles was sugar: the odds that an adult male creole on a sugar plantation would survive were 0.42 times as great as the odds that a comparable slave on a cotton plantation would sur-

vive. For adult African males, life on a cotton or coffee plantation was more benign than life on a sugar, cocoa, or provisions plantation.

The estate crop had little influence on the survival of adult female slaves, perhaps because they were less directly involved with the most onerous aspects of sugar cultivation (Appendix Table A.9). Adult female creoles on cocoa plantations were the only group whose mortality was significantly influenced by plantation crop: the odds that creole women on cocoa plantations would survive were nearly seven times greater than the odds that creole women on other plantations would survive. The mortality of African women did not vary significantly by crop type.

Relative to fieldworkers, domestic servants, and adult males who held a miscellany of other outdoor jobs, adult male Africans who were head slaves – slaves in positions of authority – or who held skilled occupations, such as masons or carpenters, were less likely to die. The odds that an adult male African in a skilled occupation would survive were 1.67 times greater than the odds of survival for domestic servants or unskilled workers, while the odds of survival for an adult male African who was a head slave were 2.74 times greater than the odds for slaves who held unskilled jobs but were otherwise comparable.

Among the adult female slaves, those who held miscellaneous outside jobs or no job were at a distinct disadvantage relative to women who worked in the fields or who were domestic servants. Differences in the odds of surviving by occupation were more pronounced for creole females than for Africans. Among the creoles, the odds of survival for fieldworkers and for domestic servants were 4.03 and 6.57 times greater, respectively, than for women in other jobs. Among the Africans, the odds of survival for fieldworkers and for domestic servants were 2.32 and 2.59 times greater, respectively, than for African women who were neither fieldworkers nor domestic servants.

Shortness – an index of chronic malnutrition during childhood and adolescence – corresponded to an increase in the odds of dying for African males and creole females. On the other hand, tall slaves were no more likely to survive than were slaves of average height.

Colored creole slaves – both male and female – were no less likely to die than were comparable black creole slaves. Whether there were significant differences in mortality by color for Africans is uncertain: colored African slaves were simply too scarce for meaningful inferences to be made.

The nationality of the plantation owner was a significant factor in the mortality of adult male Africans: slaves who lived on French or Spanish estates were more likely to survive than were slaves who lived on British estates. For adult male creoles, the size of the plantation was an important determinant of mortality. As plantations grew, the chances of survival for a creole male increased: the odds of survival for a creole male on a plantation with

200 slaves were 5.36 times greater than the odds of survival for a creole male on a plantation with 100 slaves. However, once the plantation reached roughly 220 slaves, the odds of a creole male surviving fell with each additional slave.

If Trinidad were to have any prospect of surviving as a slave colony in the absence of a slave trade, a pivotal factor would be the mortality of children, who formed the basis of the future labor force.

The mortality of children varied little with the crop grown on each estate (Appendix Tables A.10–A.12). Were there to have been such variation, it would have reflected environmental variations by crop (e.g., coffee was grown in hilly dry areas rather than in marshy areas) rather than a direct effect of the crop grown (through work régimes, as for adults) on the mortality of children. The exception to the lack of variation by crop type was the mortality of young (ages 0–4) girls, who were considerably less likely to survive if they lived on a provisions plantation – which tended to be small and poor – than if they lived on any other type of plantation.

A sizable proportion of the older (ages 5–14) children held jobs, principally as domestic servants or as field laborers in the "small grass gang." Whether a boy held a job had no impact on his chances of surviving. Among the older girls, the odds of survival for those who were fieldworkers were 2.15 times greater than for other girls. This may reflect a selection effect: it may be that those girls who were put to fieldwork at earlier ages were, in fact, the healthiest, strongest girls.

Children who were short compared to other children of the same age and sex – perhaps as the result of chronic malnutrition – were more likely to die than were children who were of average height. The odds of survival for young boys and for young girls who were short were 0.5 and 0.6 times as great, respectively, as for average children of the same sex. Among the older children, short girls were less likely to survive than were other girls.

By the same token, tall boys – boys who may have experienced relatively better nutrition (or less severe chronic malnutrition) than their peers – were more likely to survive than were shorter boys. Tall girls had no particular advantage relative to other girls.

For any given crop, the characteristics of the plantation – nationality of the owner, plantation size – accounted for some of the variation in the odds of survival for boys. Boys who lived on estates owned by Frenchmen or Spaniards were more likely to survive than were boys who lived on estates owned by Britons; this was especially true for older boys. Among the younger boys, the odds of surviving fell with increasing estate size.

Boys who were listed in the slave returns as living in the same households as women who appeared to be their mothers were more likely to survive than were boys who appeared not to be living with their mothers (Appendix Tables A.13–A.19). The odds of survival for a boy with mother present were

1.55 times greater than for a boy without a mother present. How the positive effect of maternal presence was manifested is unclear, since the effect of maternal presence appears not to have been explicitly linked either to the birthplace of the mother, to her physical characteristics (her height and her age at the birth of the child), or to her occupation. The presence or absence of a girl's mother had no effect on her chances of survival.

Summary

Life in Trinidad was indeed precarious. On the basis of period life tables for 1813–16, it appears that a newborn slave lived, on average, about seventeen years; those who survived their first year of life would live, on average, another quarter century. The infant mortality rate – the number of deaths in the first year of life per thousand live births – was somewhere between 255 and 485 for the females, and 287 and 443 for the males. Fewer than half of the slave children survived to their fifth birthdays.

Female slaves who reached age 15, taken here to correspond to reaching adulthood, lived on average another thirty years, with the creole females having slightly lower mortality than the African females. Male slaves who reached age 15 lived, roughly, another twenty-six years; again, the creoles had slightly lower mortality than did the Africans.

Adult male slaves were far more affected by their environments than were adult female slaves. The chances that an adult male would survive varied with the crop grown on his estate, with other characteristics of the estate, such as size or nationality of the owner, and with the slave's occupation. The major factor causing variations in adult female mortality was occupation: women who were domestic servants were more likely to survive than were field-workers, who in turn were more likely to survive than women who had other outside jobs or no job. Taken as a group, these factors – crop, occupation, plantation characteristics, and personal characteristics – account for a significant amount of the variation in individual probabilities of surviving among adult slaves.

Like adult male slaves, boys showed more systematic variation in mortality than did girls. The chances that a boy would survive varied with the nationality of the estate owner, estate size, his height, and the presence of his mother. The major factor correlated with variations in the mortality of girls was height: short girls – girls who were likely to have suffered from chronic malnutrition – were less likely to survive than were other, perhaps better nourished, girls of the same age.

These findings about the factors influencing slave mortality cannot be directly compared to earlier works on slave mortality: in these models of mortality, the influence of several factors is investigated simultaneously. Just as the coefficients estimated by a multivariate regression model are not nec-

essarily the same as those estimated by a set of simple regression models for the same variables, the estimated effects of factors in multivariate logistic models of mortality are not the same as those that would be obtained by estimating models for each variable separately. For example, the effect on mortality of living on a sugar plantation, estimated from a model that also includes variables representing characteristics of the slave (birthplace, height, occupation) and of the plantation (size, owner's nationality), will not be the same as the effect estimated by simply calculating a life table for slaves on sugar plantations.

Some of the questions raised about slave mortality by nineteenth-century observers can now be resolved. Was, as Governor Picton suggested, mortality on coffee plantations far greater than that on any other plantation?[29] Or was it sugar cultivation, with its régime of night work, that was most inimical to slave survival?[30] A male slave working on a sugar plantation was far more likely to die than was a *comparable* male slave living on a cotton plantation. Were slaves who worked on plantations owned by French or Spanish masters – who were less likely to be absentee landlords than were the British – less likely to die than were other slaves?[31] For the male slaves, working on a plantation owned by a Catholic master was advantageous; for the female slaves, it made no difference.

Some questions still cannot be answered. For example, were slaves who were born in Trinidad less likely to die than were creole slaves born elsewhere in the New World? Most of the slaves who were born in Trinidad were children; few of the children were born elsewhere. The relative dearth of adult slaves born in Trinidad means that this question cannot be answered in a statistically meaningful way.

Beyond any doubt, mortality among the plantation slaves in Trinidad was extremely high: fewer that half of newborns survived the first five years of life. If the plantation slave population of Trinidad were to have any hope of being self-sustaining, fertility among the plantation slaves would have to be high enough to compensate for the high slave mortality.

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29 Picton to the Secretary of State, April 12, 1802. Reproduced in TTHS No. 160.

30 C.O. 295/44, f. 19: Woodford to Goulburn, August 3, 1817.

31 Ibid.

7

Plantation slave fertility

A slave must be doubly jealous of any interference with those privileges which he considers as his exclusive right. In vain you may recommend to him for his own benefit to select and attach himself to a Wife belonging to the Estate on which he resides . . . [he] selects his wife in a distant Quarter, changes . . . as often as fancy or caprice may dictate, or possibly only to prove that unhappy slave though he may be, he still has some freedom of action remaining.[1]

That the slave population of Trinidad failed to increase naturally in the early part of the nineteenth century was never questioned by either the advocates or the opponents of slavery: the shrinking number of slaves and the desperate shortage of labor were obvious. Before the abolition of the transatlantic slave trade, the Trinidadian slave population had been maintained by a steady stream of imports, both from Africa and from other Caribbean islands. Following the abolition of the trade, it was agreed by all parties that the island's slave population was destined to shrink in the absence of imported slaves. What the two sides in the slavery debate disagreed about was the cause of the decrease of the slave population.

This chapter begins with a discussion of plantation slave fertility as perceived in the nineteenth century. Next there is a discussion of the slave registration data, followed by analysis first of slave fertility – the rate at which women bore live children – and then of slave reproductivity – the ability of the slave population to reproduce itself once infant and child mortality had taken its toll on slave births.

Childbearing among the plantation slaves

The West Indian lobby in Great Britain – composed largely of planters and other advocates of slavery – argued that the decline in the slave population

[1] W. H. Burnley, *Two Letters and an Address to His Excellency Sir R. Woodford . . .*, p. 25.

was the result of low slave fertility rather than of high slave mortality. Births, they claimed, were rare. Slaves were believed to be loath to enter into conventional marriages; venereal disease was thought to be epidemic; abortions were alleged to be common. In short, they argued, the failure of the slave population to increase was the result of licentious slave behavior beyond the control of the owners.

The opponents of slavery agreed that the number of slave births was small, but they argued that this was a result of the brutal slave system, particularly as it was practiced in the Caribbean, rather than of the deliberate behavior of slaves. "The Negro race, like all other inhabitants of tropical climates, [is] naturally prolific to a great degree . . . ."[2] The failure of the slaves to reproduce themselves was ascribed by the emancipationists, ". . . to inattention to the health of pregnant women, to insufficient food, and to extreme and murderous agricultural labour."[3]

It is difficult to interpret the discussions of slave reproduction by nineteenth-century writers. "Fertility" was generally used to describe the bearing of children who survived, thus confounding the concepts of fertility and child mortality. This compound notion – the production of a replacement labor force – was, of course, the aspect of slave reproduction that most concerned plantation owners in the face of shrinking slave populations. Rules designed to encourage the production of surviving slave children were embodied in the slave codes; these rules recognized both the importance of rewarding mothers for producing children who survived and of creating conditions that would promote child survival:

> It is a prevalent opinion that owners of plantations, by humane and moderate treatment, might preserve the offspring of their slaves and thereby considerably increase their population. To encourage so beneficial a measure, we have ordained that every mother of a family having more than three children on her master's plantation shall be allowed one day in the week extraordinary, from July 1st to 1st of January, if attached to a sugar or cotton estate, and from 1st January to 1st July, if to a coffee, cacao or manioc estate, at the end of every year she shall receive from her master a dollar a head for her future encouragement in the care of her children.
>
> A mother of a family having seven children living on her master's estate shall be exempted from all labour, and she shall be furnished her allowance and maintenance in common with other slaves, and receive the reward, already specified, of one dollar per annum for her children.
>
> The same motive obliges us to prohibit women being put to work before they are perfectly recovered from child-bed, nor shall the infant be carried to the field, but remain under the care of a prudent woman . . . .[4]

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[2] Ibid., p. 6.

[3] Ibid.

[4] Trinidad Slave Code of 1800, Article 14.

In light of the rapid decline in the Trinidadian slave population in the absence of imported slaves, the apparently low fertility of Trinidadian slaves was cited as evidence of the worst conditions of slavery. But was the fertility of the slaves in Trinidad exceptionally low? Or did the high level of infant mortality among the slaves cloud the picture drawn by abolitionists? How many children did the average plantation slave woman in Trinidad bear during her reproductive years? Finally, and most important from the owner's perspective, did the plantation slave population have the long-run potential for reproducing itself, thus ensuring a future labor force in Trinidad?

Slave registration data

The Order in Council for the Registration of the Trinidadian slaves was a complex document that described in minute detail the mechanics of the registration of slaves. One of the distinctive features of the Trinidadian registration order was the stipulation that on each plantation slaves were to be registered by household and the relationships among members of each household were to be recorded. Slaves who did not live in households were to be placed at the end of the plantation return in the general lists of male and female slaves.

The specification of family relationships was often not an easy task; in all, at least thirty-five different types of relationships among household members were recorded.[5] Some relationships were simple: son of head of household, daughter of wife of head of household. Others were more complex: son of male other than head of household, sister of nephew of head of household. Whether or not these relationships could be or were accurately reported by slave owners is unknown.

The registration of slaves by household, and the specification of putative relationships within the household, makes it possible to match apparent mothers and children because the identity of mothers can often be inferred from the slave registration data on family relationships. For example, a 5-year-old girl living in a household might have been registered as the daughter of the head of the household and his wife, implying that the wife of the head of household was the girl's mother. Among polygamists, distinctions were made among the wives of the head of the household: "daughter of head and first wife" and "daughter of head and second wife" were both reported family relationships. There were also children whose mothers could not be identified. In some instances, the child was not registered in a household but rather was placed in the general slave list. In other cases, the reported relationship, such as the niece of the head of the household, gave no clue to the mother's identity despite the fact that the child was living in a household. There were also instances in which the recorded relationship made no sense: for example,

[5] T. 71/501–2: Trinidad Slave Registers.

the identification of an 8-year-old girl as the daughter of the 17-year-old wife of a household head. In cases in which the reported relationship was inconsistent with the reported ages, the child's mother was considered unknown since there is no way of ascertaining whether the relationship was misreported, or ages were misreported, or both.

Examples of the way in which slave children were matched with women who were apparently their mothers can be drawn from Harmony Hall plantation in North Naparima. Seven slave households were listed in the plantation registration return. In the Purcell household, John was identified as the head of the household, and Peggy was identified as the wife of the head of the household. Two girls, Jenny and Venus, were registered in the household and were both identified as the daughters of John and Peggy Purcell. In other households, half-brothers and half-sisters were registered: Sabeth Euphimia was registered as the "daughter of Exeter and Mary Euphimia" while Douglas, six years her senior, was registered simply as the "son of Mary Euphimia." Two households consisted only of a woman and a child: Fanny Jack and her son Henry, and Betsey Richmond and her daughter, Helen.

By using the family relationships in the plantation slave returns, 3,171 children 10 years old and younger were matched with 2,061 women who appeared to be their mothers and whose ages ranged from 15 to 60; the identified mothers represented 42 percent of the plantation slave women age 15 to 60. This does *not* imply that only 42 percent of plantation slave women bore children: women who had borne children, none of whom survived, or none of whom still lived in the maternal household, would not be identified as "mothers" in the registration data simply because no living, coresident children were recorded as their sons or daughters.

The mothers of the remaining 434 children age 10 and under could not be identified, either because the children were not registered in households, or because, although they were registered in households, their mothers could not plausibly be identified from the recorded family relationships.

Of the 2,061 women identified as mothers, 572 (28 percent) were creole; 1,489 (72 percent) of the mothers were African. Of the 3,171 children whose mothers were identified, 26 percent were attributed to creole mothers, and 74 percent were attributed to African mothers.

It is, of course, important to note that there are potential errors associated with this approach to identifying the mothers of children. Because of carelessness or ignorance on the part of the slave owner, children may have been erroneously attributed to grandmothers, stepmothers, older sisters, or other female relations, particularly in households containing the children of more than one union. The prevalence of these problems in the data cannot be ascertained. Similarly, errors in the matching of children with their mothers might be generated by age misreporting, which could make incorrect

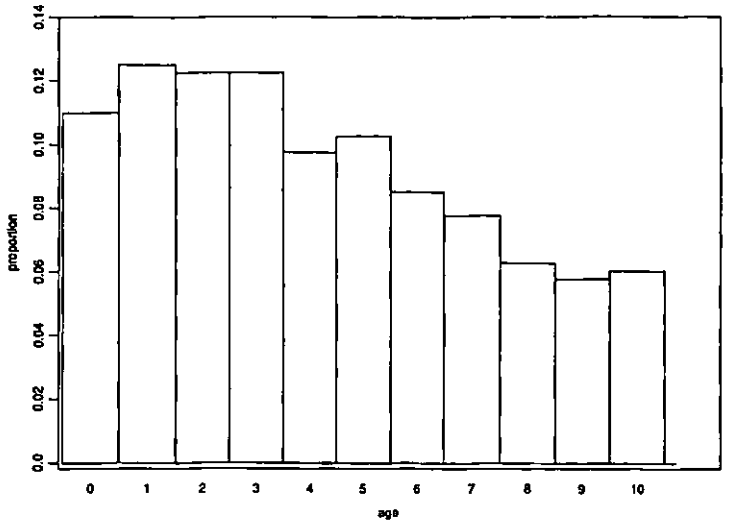


Figure 7.1. Age distribution of children age 10 and under matched with mothers: 1813

relationships appear plausible, or correct relationships appear implausible.

Many women may appear childless because children less than 3 years old were occasionally omitted from the slave registration data. A report by the Commissioner of Population stated that young children were, in some cases, deliberately omitted in order to reduce taxes levied on the basis of the number of slaves owned.[6] Other children – the sickly and weak – may have been deliberately omitted in order to mitigate charges of cruelty if they died. The registered ages of children also reflect some age misreporting: there is, for example, clear evidence of heaping at age 5 (Figure 7.1). Heaping at age 5 is more pronounced among the children who were not matched with mothers than among those whose mothers could be identified, understandably so if the mother of the child was not available to report his or her age (Figure 7.2). The proportion of children between ages 5 and 10 and not matched with mothers is greater than the proportion of matched children at these ages, presumably a function both of the mortality of women and of the movement of older children away from the maternal household as they entered the "small grass gang" or child labor force. The children of African mothers

[6] C.O. 295/33, f. 261–2.

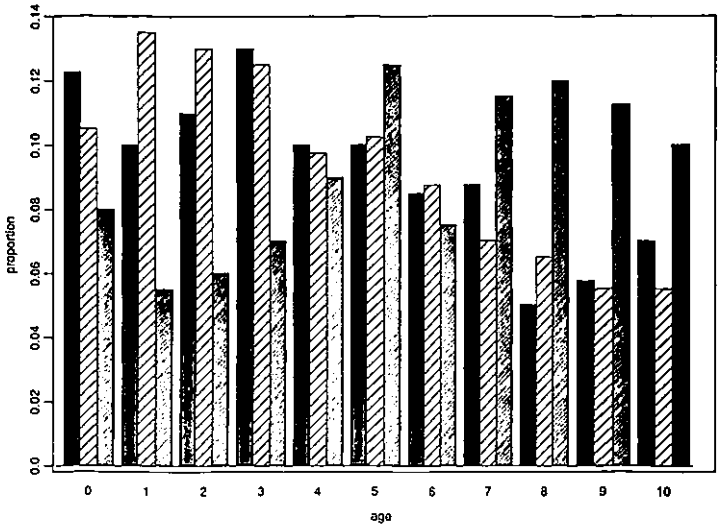


Figure 7.2. Age distribution of children age 10 and under by mother's birthplace: 1813. ■ creole mother; ▨ African mother; ▩ unmatched with mother.

tended to be older than the children of creole mothers, reflecting the fact that the African mothers themselves were older than the creole mothers.

Despite these problems in the data, a check on the internal consistency of the registration data and on the mother–child matching procedure is possible. If the plantation slave children are correctly matched with their mothers, then the age distribution of children attributed to mothers age 20–24 should be younger than that of children attributed to mothers age 30–34. By the same token, the age distribution of children matched with mothers 40–44 years old should be older than that of women 30–34, but this may not be the case if the oldest children of women 40–44 have left the maternal household: then the age distribution of children attributed to mothers age 40–44 years old will appear spuriously low. The Trinidadian plantation slave data are consistent with these hypothesized patterns: for example, nearly 70 percent of the children matched with mothers 20–24 years old were 3 years old or less, while only 35 percent of the children matched with mothers age 40–44 were age 3 or less (Figure 7.3). Thus, it appears that despite the potential problems in the data, the plantation slave children have, for the most part, been matched with plausible mothers.

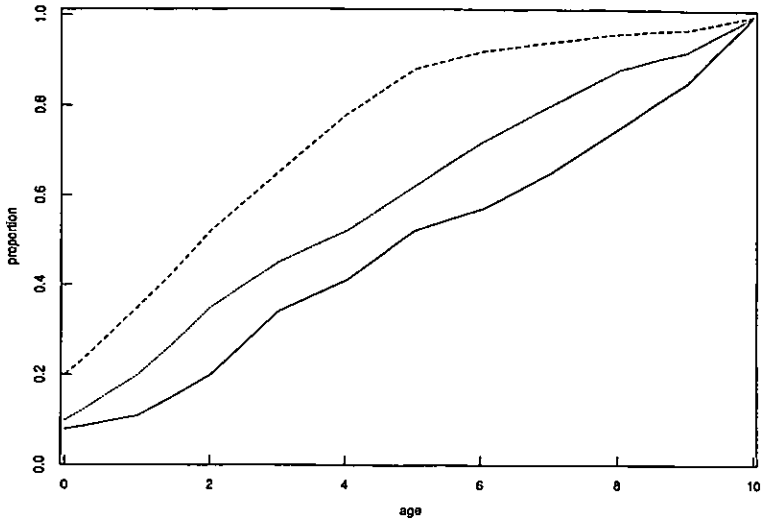


Figure 7.3. Proportion of children age x or younger by mother's age in 1813. - - - 20–24; ··· 30–34; — 40–44.

Fertility

In standard demographic usage, *fertility* describes the actual childbearing experience of women: a woman who has borne at least one live child is (or was) fertile. *Fecundity* expresses the physiological ability of a woman to produce children. A fertile woman must have been, at one time, fecund, while a fecund woman may or may not be fertile. A woman who is not fecund cannot bear children: she is sterile. Thus the fertility of women in a population describes the rate at which women actually bear live children, rather than their ability to bear children; the subsequent fate of the children – whether they live or die – has no direct bearing on the fertility of the women in the population. A woman who has borne five live children, all of whom have died, is as fertile as a woman who has borne five live children, all of whom have survived. In contrast, measures that embody both the birth of children and their subsequent survival are measures of *reproductivity*.

The description of the fertility of a population and the comparison of fertility among populations requires measures of fertility that are independent of the population's age structure. That is, the measures of fertility should reflect the actual childbearing experience of women in the population, and should not depend on the proportion of women at childbearing ages in the popula-

Table 7.1. *Women on plantations by woman's birthplace, children by mother's birthplace, and child–woman ratios: 1813*

	Women 15–49	Children[a] 0–10	Children 0–4	Children 0–4 per woman 15–49	Children 0–4 per child 0–10
All plantations					
All	4,636	3,687	2,011	0.4338	0.5453
Creole	1,198	953	500	0.4175	0.5247
African	3,438	2,734	1,511	0.4395	0.5524
Sugar plantations					
All	3,440	2,574	1,404	0.4082	0.5453
Creole	912	666	363	0.3978	0.5446
African	2,528	1,908	1,041	0.4119	0.5456
Plantations registered after April 22					
All	601	445	238	0.3956	0.5345
Creole	144	100	62	0.4305	0.6200
African	457	345	176	0.3851	0.5119

[a]Children unmatched with mothers were attributed to African and creole women in the same proportion as children who were matched with mothers.

tion. The crude birth rate in a population depends upon the population's age and sex composition and so may give a very misleading impression of the fertility of the women in population. To illustrate this important property of crude birth rates, consider an example in which all women at childbearing ages in each of two populations give birth every year. In the first population, women at childbearing ages comprise 10 percent of the total population; in the second, they comprise 40 percent of the total population. Then, despite the fact that the fertility of the women is the same in both populations – all women bear a child each year – the second population has a crude birth rate four times greater than the first. To conclude that fertility in the first population was lower than that in the second population on the basis of the crude birth rate would be incorrect. Thus the crude birth rate is an unsatisfactory measure of fertility among populations with different age structures, such as the African and creole slave populations in Trinidad, or the Trinidadian and Jamaican slave populations, which differed sharply in age and sex composition. Similarly, because child–woman ratios (Table 7.1) and the general fertility rate depend upon the age distribution of women in the childbearing ages, they are also unsatisfactory measures for comparing fertility among populations.

The most appropriate measures of fertility are the age-specific fertility rates for the population, and their sum, the total fertility rate of the population. Neither age-specific fertility rates nor the total fertility rate depend upon the population's age and sex composition. Age-specific fertility rates express the pace at which women in a given age group bear children: for example, the age-specific fertility rate of women ages 20–24 is defined as the number of children born to women at those ages during a given time period (usually a year) divided by the average number of women in the age group during the same time period. Thus the measure is expressed as births per woman per year, and can be interpreted as the number of children that a woman will, on average, bear each year between the ages of 20 and 24. Multiplying the sum of five-year age-specific fertility rates over all childbearing ages by 5 yields the total fertility rate: the average number of children borne by a woman who survives her childbearing years.

In the absence of direct information on births in a population in a given period, such as might be obtained from a vital registration system or plantation records, the number of births that occurred in years prior to a survey can be estimated by using information on the population's age-specific mortality patterns and on the number of children at various ages recorded in the survey. For example, in a population closed to migration, the 2-year-old children listed in a census or survey are the survivors of the children who were born two years earlier. Similarly, the women ages 17–51 in the survey are the survivors of the women ages 15–49 two years earlier. In particular, the 2-year-old children whose mothers are 17–21 at the survey are the survivors of births to women ages 15–19 two years earlier. Thus the age-specific fertility rate of women can be estimated from numbers of children and women recorded in a survey by "back-projecting" or reconstructing the population in the years prior to the survey.[7]

Finally, it is important to note that the age-specific fertility rates estimated by reconstructing the plantation slave population for the period preceding the registration are *period* fertility rates. These rates reflect the fertility of a hypothetical plantation slave woman, subject over the course of her lifetime to the fertility rates that prevailed at a particular time prior to the registration. Thus, because these are period fertility rates, they do not describe the fertility of a real cohort of plantation slave women.

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[7] W. H. Grabill and L.-J. Cho, "Methodology for the Measurement of Current Fertility from Population Data on Young Children," *Demography*, 2(1) (1965), pp. 50–73; L.-J. Cho, W. H. Grabill, and D. J. Bogue, *Differential Fertility in the United States*, Chicago: University of Chicago Community and Family Study Center; L.-J. Cho (1973), "The Own-Children Approach to Fertility Estimation: An Elaboration," *International Population Conference*, Liege: IUSSP, Vol. 2, pp. 263–78; United Nations, *Manual X: Indirect Techniques for Demographic Estimation*, New York: U.N. Publications, pp. 178–93.

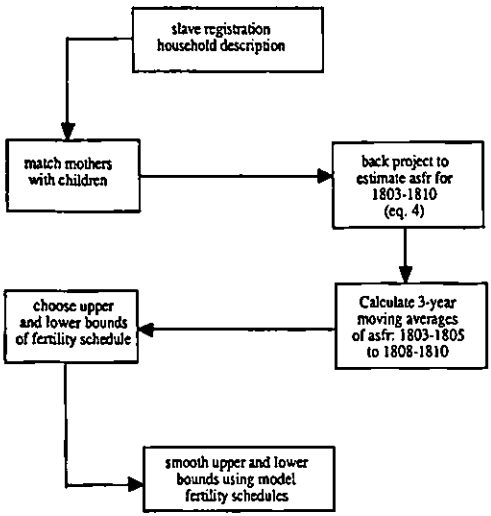


Figure 7.4. Schematic representation of the fertility estimation procedure.

Methods

The estimation of the age-specific fertility schedules for the Trinidadian slave women involves four steps (Figure 7.4). First, using back projection methods, the age-specific fertility schedules for each of the eight years, 1803–10, are constructed. Second, to attenuate the effects of the misreporting of children's ages, especially at age 5, three-year moving averages of the fertility schedules are calculated. Third, upper and lower limits for fertility are chosen from the moving-average fertility schedules. Finally, the limiting fertility schedules are smoothed using model fertility schedules. The result is an estimate of the upper and lower bounds of slave fertility for the period 1803–10.

Methods for estimating age-specific fertility rates and the total fertility rate from household data are based on the observation that children age y at the time of a survey (or registration) are the survivors of births y years before the survey; in particular, children age y at the time of the survey whose mothers are age x at the time of the survey are the survivors of children born to women age $(x-y)$, y years before the survey. Given a life table (the age-specific pattern of mortality) for the population, the age-specific fertility rates that prevailed y years before the survey can be estimated using data for the distribution of y-year-old children by mothers' age at the time of the survey.[8]

[8] The discussion assumes that the population is closed to migration, as was essentially the case for the slave population in the years immediately preceding 1813.

Approaches to estimating fertility that rely upon reconstructing the population at some time in the past are called "reverse-survival" or "back-projection" methods: using a life table, the population is reconstructed by projecting backward in time. Formally, let $c_{y,x,t}$ be the number of children age y whose mothers are age x at the time of the census t. These children are the survivors of

$$b_{x-y,t-y} = c_{y,x,t}\left[\frac{l_0}{{}_1L_y}\right] \qquad [7.1]$$

births y years ago to women age $(x-y)$. Let $w_{x,t}$ be the number of women (both mothers and nonmothers) in the population age x at time t. Then, y years before the survey there were

$$w_{x-y,t-y} = w_{xt}\left[\frac{{}_1L_{x-y}}{{}_1L_x}\right] \qquad [7.2]$$

women age $(x-y)$ in the population. The age-specific fertility rate for women age $(x-y)$, $(t-y)$ years prior to the survey is

$$f_{x-y,t-y} = \left[\frac{c_{yxt}}{w_{xt}}\right]\left[\frac{l_0}{{}_1L_y}\right]\left[\frac{{}_1L_x}{{}_1L_{x-y}}\right]. \qquad [7.3]$$

Age-specific fertility rates for five-year age groups of women may be written as

$${}_5f_{x-y,t-y} = \left[\frac{c_{yxt}}{{}_5w_{xt}}\right]\left[\frac{l_0}{{}_0L_y}\right]\left[\frac{{}_0L_x}{{}_5L_{x-y}}\right] \qquad [7.4]$$

where c_{yxt} is now the number of children age y whose mothers are age x to $x+5$ at time t, and ${}_5w_{xt}$ is the number of women age x to $x+y$ at time t.

In March 1813, for example, there were 109 6-year-old children in the plantation slave population whose apparent mothers were 26–30 years old. Most of these children were born in 1807. There were 1,284 women age 26–30 in the plantation slave population in 1813. Thus, the age-specific fertility rate of women 20–24 years old in 1807 was

$${}_5f_{20,1807} = \left[\frac{109}{1{,}284}\right]\left[\frac{1}{0.4128}\right]\left[\frac{1.3528}{1.5430}\right] \qquad [7.5]$$

$$= 0.1803 \text{ births per woman,}$$

where 0.4128, 1.3528, and 1.5430 are the life table values of ${}_1L_6$, ${}_5L_{26}$, and ${}_5L_{20}$, respectively.[9]

[9] Life table values are taken from the mean life table estimated for all plantation women (Table 6.1).

The accuracy of age-specific fertility rates estimated by reverse-survival methods depends upon several factors; these factors, such as age misreporting, can affect the estimated *pattern* of fertility (the age-specific fertility schedule), or the estimated *level* of fertility (the total fertility rate), or both. If one is only interested in ascertaining whether fertility was high or low – the level of fertility – then errors in the pattern of fertility that do not affect the level of fertility are of little importance. If, on the other hand, one wishes to draw inferences about the ages at which women bore children, in addition to inferences about the total number of children they bore, then errors in the pattern of fertility are important. For the plantation slave population of Trinidad, inferences will be drawn only about the level of fertility (the total fertility rate), which is more robust to errors in data, and not about the age pattern of fertility (the age-specific fertility rates).

Misreporting of children's ages in a survey will affect the estimated level of fertility: for example, heaping of children at age 5 in the survey leads to an overestimate of births that occurred five years before the survey, and hence to inflated estimates of fertility for that year. Conversely, underenumeration of infants results in erroneously low estimates of fertility for the year immediately preceding the survey. If the misreporting of childrens' ages does not depend on the mother's age – if, for example, the 4-year-old son of a 25-year-old woman is as likely to be called 5 years old as is the 4-year-old son of a 35-year-old woman – then the pattern of fertility is not affected: the effect of the age misreporting is equivalent to that created by randomly assigning new ages to a subset of the children, without regard to mother's age. In contrast to age misreporting, the mismatching of children to mothers will affect the pattern of fertility, but the estimated level of fertility will be affected only if the mismatching is widespread.

The misstatement of the woman's age will affect the estimated pattern of fertility and, in some cases, will result in an underestimate of the level of fertility. The ages of women who do not know their ages are often imputed by census-takers on the basis of the external characteristics of the woman: for example, women who have borne children are often believed to be older than women who have not borne children. If slave women with children were systematically reported by their owners to be older than women who had no children, then fertility at the youngest ages would be underestimated – too many childless women would be deemed "young" – and fertility at the middle ages would be overestimated. The result would be an age-specific fertility schedule that peaked at an older than usual age.[10]

In summary, the misstatement of children's ages affects the estimated level of fertility – the total fertility rate – but has little effect on the age pattern of

[10] A. J. Coale, "A Reassessment of Fertility Trends in Egypt, Taking Account of the Egyptian Fertility Survey," mimeographed (1983).

fertility if children are correctly assigned to mothers. Conversely, the misstatement of women's ages and the mismatching of children with mothers affects the estimated age pattern of fertility, but has little effect on the estimated total fertility.

What is the effect on the fertility estimates of the children whose mothers are unknown? The children who cannot be matched with their mothers present a slight problem because the ages of the mothers at the time the chidren were born cannot be ascertained. It is conventionally assumed that unmatched children age y are distributed by mother's age in the same way as are matched children age y. For example, if 10 percent of matched 6-year-old children are matched with mothers age 25–29, then it is assumed that 10 percent of the unmatched 6 year olds – the apparently motherless children – were born to mothers who would now be 25–29 years old. If this assumption is correct, then the failure to match some children with their mothers will not affect the estimates of the fertility schedules. Thus, the dissolution of slave households by sale or transfer, or a tendency for young children to move away from their maternal households, will not have a large impact on the fertility estimates: both the mothers and the children are still present in the plantation slave population and hence are counted.

Other assumptions underlying back-projection methods of fertility estimation are that the fertility of women who died before the survey was the same as that of women who survived; that the mortality of children whose mothers died is the same as that of children whose mothers survived; and that the mortality of children does not vary with the age of their mothers at the time of birth. In theory, the validity of this last set of assumptions is questionable – for example, infant mortality rates do vary slightly with mother's age – but in practice the effect of the assumptions on the fertility estimates is negligible.

By far the most influential factor underlying reverse-survival estimates of fertility is the choice of the life table used in the reconstruction of the population y years before the survey: the greater the mortality implied by the life table, the larger will be the number of births imputed to the women y years ago, and the larger will be the number of women apparently alive y years ago. Small variations in the life table, particularly at the youngest ages, can produce large differences in fertility estimates.

Back-projection techniques produce fertility estimates for the years preceding the survey. Hence, life tables describing mortality in the years immediately prior to the survey are required for population reconstruction. However, there are no mortality data for the Trinidadian plantation slaves for 1803–13, the years for which reverse-survival fertility estimates can be created: the estimated slave life tables presented earlier are based on plantation slave mortality between 1813 and 1816. Thus, in order to estimate fertility for the period prior to the 1813 slave registration, it must be assumed that

Table 7.2. *Age-specific fertility schedules for all plantation slave women, 1807: low estimate, mean, and high estimate*

Ages	Low	Mean	High
15–19	0.0649	0.0742	0.0866
20–24	0.1581	0.1803	0.2099
25–29	0.1696	0.1935	0.2246
30–34	0.1418	0.1617	0.1878
35–39	0.1034	0.1174	0.1352
40–44	0.1228	0.1388	0.1588
45–49	0.0503	0.0567	0.0646
TFR	4.0548	4.6127	5.3370

plantation slave mortality in the years immediately before 1813 was not markedly different than the mortality of plantation slaves immediately following the 1813 registration. In other words, it is assumed that there were no major changes in either the age pattern or the level of plantation slave mortality during the fourteen-year period 1803–16. To the extent that this period includes five years (1803–7) during which the transatlantic slave trade existed, this assumption is not completely warranted; however, the major impact of the transatlantic slave trade would be reflected in adult, especially adult male, mortality rather than child mortality.

Even with the assumption of unchanging mortality over the period 1803–16, there is a difficulty in reconstructing the slave population: a single slave life table cannot be estimated for the period.[11] Rather, because of deficiencies in the slave data, upper and lower bounds must be estimated for the survival function. Back-projection of the registered population using these life tables gives upper and lower bounds on the population present at some point in the past. Corresponding to these reconstructed populations are two sets of estimated age-specific fertility rates that constitute upper and lower bounds for the population's fertility schedule.

An example of the first step in the estimation of the slave fertility schedules – the fertility schedules based on back projection – is given in Table 7.2. These fertility estimates, for 1807, are based on the number of 6-year-old children in the plantation slave population in 1813. Back projection using the upper bound of the life table yields the lowest fertility estimates: this life table has the lowest infant and child mortality and thus imputes a comparatively small number of additional births relative to the number of surviving chil-

[11] See Chapter 5, section entitled "Upper and lower bounds on mortality."

dren. Conversely, back projection using the lower bound of the life table yields the highest fertility estimates.

The upper and lower bounds of the life tables generate rather different levels of fertility although, of course, they generate the same age pattern of fertility because in both estimates children are distributed among mothers in exactly the same way.[12] Based on the reverse survival of 6-year-old children, it appears that plantation slave women bore between 4.05 and 5.34 children during their childbearing years.

Why is the range of the estimated total fertility rates for 1807 so great? Differences in the estimated number of children born to plantation slave women reflect the divergence between the upper and lower bounds of the life table between birth and age 3, for which no direct mortality information is available.[13] As noted, the estimated age-specific fertility rate for women age $(x+y)$ to $(x+n+y)$ at the time of the survey, based on back projection for y years, is

$$ {}_5f_{x-y,t-y} = \left[\frac{c_{yxt}}{{}_5W_{xt}}\right]\left[\frac{l_0}{{}_1L_y}\right]\left[\frac{{}_5L_x}{{}_5L_{x-y}}\right]. \qquad [7.6] $$

Suppose that the population life table is suspect at the youngest ages, say, birth to age z. Then the estimated age-specific fertility rates can be rewritten as

$$ {}_5f_{x-y,t-y} = \left[\frac{c_{yxt}}{{}_5W_{xt}}\right]\left[\frac{l_0}{{}_1L_z}\right]\left[\frac{{}_1L_z}{{}_1L_y}\right]\left[\frac{{}_5L_x}{{}_5L_{x-y}}\right], \qquad [7.7] $$

where $[l_0/{}_1L_z]$ represents the dubious portion of the life table; denote this term by δ. The total fertility rate may be written as

$$ TFR = 5\delta \sum_{x=15}^{45} \left[\frac{c_{yxt}}{{}_5W_{xt}}\right]\left[\frac{{}_1L_z}{{}_1L_y}\right]\left[\frac{{}_5L_x}{{}_5L_{x-y}}\right]. \qquad [7.8] $$

If two life tables differ only in the mortality below age z, then the estimated value of TFR^*,

$$ TFR^* = \frac{TFR}{\delta} = 5 \sum_{x=15}^{45} \left[\frac{c_{yxt}}{{}_5W_{xt}}\right]\left[\frac{{}_1L_z}{{}_1L_y}\right]\left[\frac{{}_5L_x}{{}_5L_{x-y}}\right], \qquad [7.9] $$

---

12 To confirm this, note that each age-specific fertility schedule is a linear transformation of each of the other fertility schedules.

13 See Chapter 5, section entitled "Upper and lower bounds on mortality."

Table 7.3. *TFR*, all plantation slave women, 1807: low estimate, mean, and high estimate*

Ages	Low	Mean	High
15–19	0.0361	0.0372	0.0379
20–24	0.0876	0.0902	0.0922
25–29	0.0937	0.0968	0.0990
30–34	0.0784	0.0809	0.0828
35–39	0.0564	0.0587	0.0604
40–44	0.0663	0.0695	0.0717
45–49	0.0269	0.0284	0.0293
TFR*	2.2271	2.3085	2.3665
δ^a	1.8198	1.9881	2.2552
$\delta \cdot$ TFR*	4.0528	4.6127	5.3370

[a] $\delta = l_0/{}_1L_3$.

should be the same for the two life tables because *TFR** depends upon only the observed population and mortality above age *z*.

Estimates of *TFR** for 1807, with $z = 3$, are given in Table 7.3. The three estimates, based on three different life tables, are quite close – 2.22, 2.30, and 2.36 – supporting the contention that differences in the estimated total fertility rate based upon the upper bound, lower bound, and mean life tables are principally due to differences in mortality in the estimated life tables from birth to age 3. Nothing can be done about these discrepancies – as a result of the underenumeration of children less than 3 years old, and of the birth and death of children between the registrations, the level of mortality between birth and age 3 is truly unknown – but a principal source of uncertainty in the estimated fertility rates has been identified.

Following the back-projection procedure for population reconstruction, a series of eight age-specific fertility schedules can be estimated: a schedule for 1810 based on back projection of 3-year-old children, a schedule for 1809 based on 4-year-old children, and so on, back to a schedule for 1803 based on 10-year-old children (Table 7.4). Estimates of fertility rates for 1811 and 1812 would be misleadingly low because children less than 3 years old were underreported in the slave registration data.

If the ages of the children were all correctly reported, then variations in the estimated total fertility rate over time would reflect actual changes in fertility. If, however, the ages of children were misreported – for example, heaped on age 5 – then variations over time in the estimated fertility rates would be the result both of actual changes in fertility and of age misreporting. The latter is the case in the Trinidadian plantation slave data, in which the effect on the

Table 7.4. *Age-specific fertility schedules, by single calendar year, all plantation slave women: mean estimates*

Ages	1810	1809	1808	1807	1806	1805	1804	1803
15–19	0.0927	0.1302	0.1247	0.0742	0.1042	0.0757	0.0505	0.0633
20–24	0.2665	0.2128	0.1652	0.1803	0.1593	0.1455	0.1297	0.1516
25–29	0.1983	0.2332	0.1964	0.1934	0.2263	0.1617	0.1983	0.1790
30–34	0.1767	0.1316	0.2824	0.1617	0.1253	0.2459	0.1910	0.2393
35–39	0.2038	0.0823	0.2481	0.1174	0.1932	0.0925	0.2046	0.0972
40–44	0.0530	0.0178	0.1545	0.1388	0.0851	0.0650	0.0800	0.1264
45–49	0.0502	0.0706	0.1271	0.0567	0.1713	0.0668	0.0000	0.0014
TFR	5.2061	4.3928	6.4917	4.6127	5.3240	4.2650	4.2710	4.2910

Table 7.5. *Age-specific fertility schedules, three-year moving averages, all plantation slave women: mean estimates*

Ages	1808–10	1807–9	1806–8	1805–7	1804–6	1803–5
15–19	0.1159	0.1097	0.1010	0.0847	0.0768	0.0632
20–24	0.2148	0.1861	0.1638	0.1617	0.1448	0.1422
25–29	0.2093	0.2076	0.2054	0.1938	0.1954	0.1797
30–34	0.1969	0.1919	0.1898	0.1776	0.1874	0.2254
35–39	0.1781	0.1493	0.1862	0.1343	0.1634	0.1314
40–44	0.0751	0.1037	0.1262	0.0963	0.0767	0.0905
45–49	0.0826	0.0848	0.1184	0.0983	0.0794	0.0227
TFR	5.3635	5.1657	5.4761	4.7339	4.6200	4.2757

fertility estimates of age misreporting among children is evident: the estimated fertility rates for 1808, based upon the reported number of 5-year-old children in the population, are much higher than those of other years. The effect of the heaping of children's ages can be attenuated by calculating three-year moving averages of the fertility schedules: for example, averaging the schedules for 1808, 1809, and 1810 produces a fertility schedule based on the reported number of 3, 4, and 5 year olds in the population (Table 7.5).[14] The averaging spreads the erroneously large number of 5 year olds among the adjacent ages. Thus, back-projecting the population over eight years with a given life table generates six fertility schedules based on the moving averages of the fertility schedules for three consecutive years.

[14] United Nations, op. cit., p. 183.

Table 7.6. *Age-specific fertility schedules, all plantation slave women: low estimate, mean, and high estimate*

Ages	Low	Mean	High
All women			
15–19	0.0554	0.0866	0.1179
20–24	0.1252	0.1605	0.1958
25–29	0.1581	0.1983	0.2385
30–34	0.1988	0.2097	0.2206
35–39	0.1168	0.1657	0.2146
40–44	0.0808	0.1126	0.1444
45–49	0.0205	0.0775	0.1346
TFR	3.7779	5.0548	6.3317
Creole women			
15–19	0.1187	0.1225	0.1263
20–24	0.1682	0.2091	0.2499
25–29	0.1981	0.2878	0.3775
30–34	0.1723	0.1782	0.1848
35–39	0.1548	0.2793	0.4039
40–44	0.0681	0.0755	0.0829
45–49	0.1122	0.1030	0.0939
TFR	4.9618	6.2769	7.5921
African women			
15–19	0.0487	0.0774	0.1061
20–24	0.1136	0.1479	0.1822
25–29	0.1506	0.1857	0.2207
30–34	0.1887	0.2036	0.2184
35–39	0.1113	0.1441	0.1768
40–44	0.0741	0.1091	0.1441
45–49	0.0007	0.0828	0.1648
TFR	3.4386	4.7520	6.0655

In total, there are three fertility schedules for each three-year period, each based on a different life table (the upper bound life table, the lower bound life table, and the mean life table). Together, they yield eighteen estimated age-specific fertility schedules and eighteen estimates of the total fertility rate. From these eighteen schedules, an upper bound and a lower bound for the fertility schedules are chosen. The criterion for the selection of upper and lower bounds for plantation slave fertility is the estimated total fertility rate, which is more robust to deficient data than are the age-specific fertility rates.

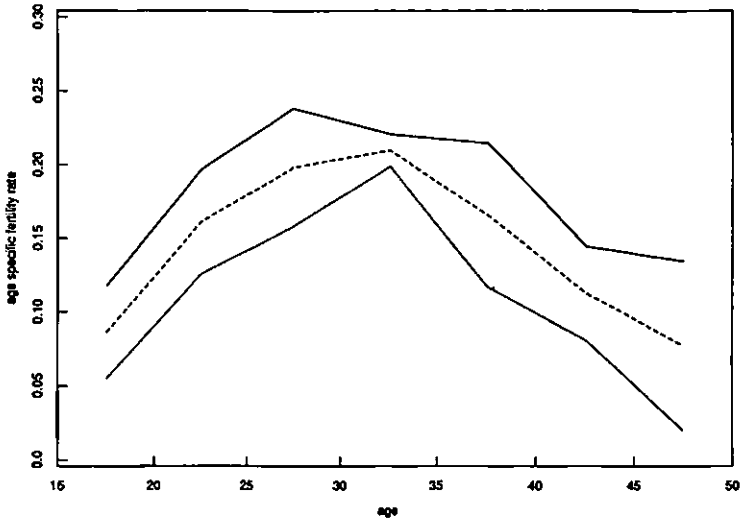


Figure 7.5. Age-specific fertility schedules (unsmoothed) for all plantation slave women. — upper; - - - mean; ··· lower.

The fertility schedule corresponding to the highest total fertility rate is designated the upper bound for plantation slave fertility; that with the lowest total fertility rate is the lower bound for the fertility of slaves on plantations. The average of these two limiting fertility schedules is the mean fertility schedule (Table 7.6). The differences between the upper and lower bounds of the fertility schedule stem from variation in the life tables used to reconstruct the population, from age misreporting, and from true, but unknown, intertemporal variation in fertility.

The upper and lower bounds of the fertility schedule for plantation slave women – estimated by back-projecting the 1813 population to generate a series of fertility schedules corresponding to the years preceding the registration, and then taking moving three-year averages of these schedules – are somewhat irregular, although of a plausible shape (Figure 7.5). The irregularities, or distortions in the age pattern of fertility, are the result of the misassignment of children to mothers and the misstatement of mothers' ages, both of which create a distorted distribution of children by mothers' ages. The estimated total fertility rate is relatively robust to the misassignment of children to mothers and the misstatement of mothers' ages; it is the age-specific fertility schedule that most clearly shows the effects of these errors in the data.

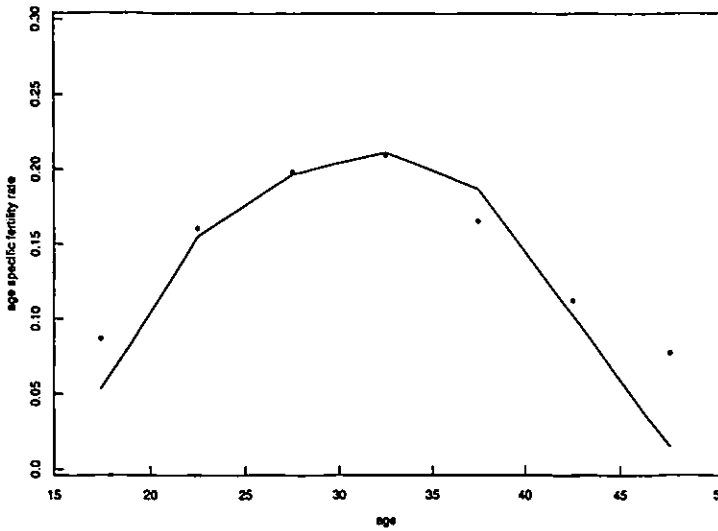


Figure 7.6. Smoothed (fitted) and unsmoothed fertility schedules for all plantation slave women: mean schedules. — smoothed; * unsmoothed.

The last step in the estimation of the level and pattern of plantation slave fertility is the smoothing of the irregular estimated fertility schedules by fitting model fertility schedules to the estimated schedules using a maximum likelihood estimation routine (Figure 7.6)[15]. This is analogous to using model life tables to smooth estimated life tables. The smoothing process affects the estimated age-specific fertility rates, but the estimated total fertility – the sum of the age-specific fertility rates – is much less sensitive to the smoothing process (Table 7.7; Figure 7.7). Finally, the average of the smoothed upper bound on fertility and the smoothed lower bound on fertility yields the smoothed mean fertility schedule.

In summary, the procedure for estimating upper and lower bounds for plantation slave fertility and for generating a mean fertility schedule involves four steps. First, using reported information on family relationships from the 1813 registration, children were matched with their (apparent) mothers and tabulated according to their own ages and their mothers' ages in 1813. Second, using standard reverse-survival techniques, age-specific fertility schedules were estimated for each year, 1803–10 (see Table 7.4); three fer-

[15] Ansley Coale and James Trussell, "Model Fertility Schedules: Variations in the Age Structure of Childbearing in Human Populations," *Population Index*, 40(2), pp. 185–258.

Table 7.7. *Smoothed age-specific fertility schedules, all plantation slave women: low estimate, mean, and high estimate*

Ages	Low	Mean	High
All women			
15–19	0.0441	0.0529	0.0618
20–24	0.1290	0.1550	0.1810
25–29	0.1603	0.1970	0.2338
30–34	0.1668	0.2116	0.2564
35–39	0.1412	0.1847	0.2282
40–44	0.0762	0.1025	0.1289
45–49	0.0113	0.0153	0.0194
TFR	3.6446	4.5950	5.5483
Creole women			
15–19	0.0673	0.0878	0.1083
20–24	0.1612	0.2103	0.2594
25–29	0.2083	0.2702	0.3322
30–34	0.1811	0.2329	0.2847
35–39	0.1406	0.1769	0.2187
40–44	0.0706	0.0894	0.1082
45–49	0.0094	0.0120	0.0147
TFR	4.1931	5.4122	6.6314
African women			
15–19	0.0241	0.0288	0.0336
20–24	0.1209	0.1447	0.1685
25–29	0.1475	0.1807	0.2140
30–34	0.1582	0.2001	0.2420
35–39	0.1331	0.1735	0.2139
40–44	0.0708	0.0954	0.1200
45–49	0.0100	0.0140	0.0181
TFR	3.3231	4.1868	5.0505

tility schedules were generated for each year, corresponding to the three life tables (upper bound, lower bound, and mean life table) used in the back projection of the population. Three-year moving averages of the fertility schedules were then calculated (see Table 7.5). Third, the upper and lower limits of fertility were selected by choosing those age-specific fertility schedules corresponding to the highest and lowest estimated total fertility rates, respectively (see Table 7.6). Finally, the upper and lower bounds of the fertility schedule were smoothed using model fertility schedules, and a mean fertility

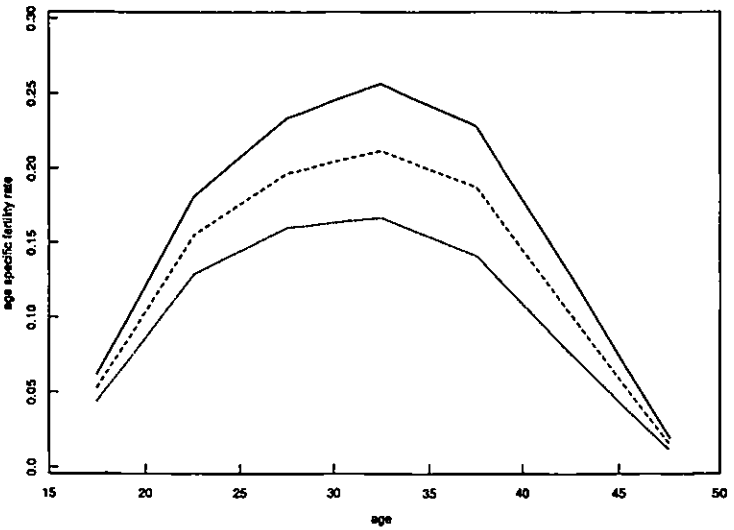


Figure 7.7. Smoothed fertility schedules for all plantation slave women. — upper; - - - mean; ··· lower.

schedule was calculated (see Table 7.7). The fertility of the plantation slave women can thus be described by three fertility schedules: an upper limit to fertility, a lower limit to fertility, and a mean fertility schedule.

Findings

The period fertility of the Trinidadian plantation slave women appears to have been moderate: on average, a hypothetical plantation slave woman, subject to the age-specific fertility rates that prevailed in the first decade of the nineteenth century and surviving to age 49, bore 4.6 (±0.9) children over the course of her lifetime. It is important to note, however, that because these are period fertility rates, they do not describe the fertility of a real cohort of plantation slave women.

Variations in the fertility of subgroups of the plantation slave population can be examined by estimating fertility schedules, using the procedure described in the preceding section, for different groups of women: African and creole women, women who lived on sugar plantations, women who lived on plantations that filed late slave registration returns.

At first glance, the estimated age-specific fertility schedules are slightly disconcerting: the schedules peak at age group 25–29 years or 30–34 years

rather than at the more plausible 20–24 years. But, as noted in the preceding section, the differential overstatement of the ages of women with children – the tendency to impute higher ages to women with more children – results in estimated fertility rates that are too high at middle ages and too low at younger ages. However, it is easy to demonstrate that if, in the case of the plantation slaves, the ages of just 10 percent of the women with children were overstated by five years, then the estimated fertility schedule assumes a more plausible shape with an earlier peak at ages 20–24 years. Thus the shape of the estimated age-specific fertility schedule can in large part be explained by the misreporting of women's ages, which alters the estimated age pattern of fertility.

In contrast, the estimated total fertility rate is fairly robust to the moderate overstatement of maternal ages. Hence comparisons of groups of women – Africans, creoles, women on sugar plantations – on the basis of total fertility rates rather than age-specific fertility rates are warranted. On the other hand, inferences drawn from the estimated age patterns – such as whether women in their early thirties were most fertile – are *not* warranted.

From the estimated fertility schedules it appears that, as argued by many West Indian planters, creole women were more fertile that were African women: a creole woman on a Trinidadian plantation bore, on average, 5.4 (±1.2) children during her lifetime whereas an African woman bore 4.2 (±0.9) children (Table 7.7; Figure 7.8). However, caution must be used in comparing the estimated fertility schedules of African and creole women. Not only are the creole estimates based on much smaller samples of women and children than are the African estimates – which renders the creole estimates somewhat less reliable than those for the Africans – but the creole women were concentrated in the earlier childbearing ages, thus making the estimates of the fertility of older creole women, of whom there were few, especially volatile.

The fertility of women on sugar plantations appeared to be slightly lower than that of women on other plantations: a woman on a sugar estate bore, on average, 4.4 (±0.9) children if she survived to 49, whereas women on estates that grew crops other than sugar bore 5.2 (±0.8) children during their lifetimes. The sample of women on the sugar plantations is much larger than that of women on plantations that grew other crops. Creole women on sugar estates bore 4.9 (±1.8) children whereas African women on sugar estates bore 4.1 (±1.0) children (Table 7.8; Figure 7.9).

Why wasn't the fertility of slave women in Trinidad higher? Why was it lower than the fertility of twentieth-century African women: 6–7 children per woman? The answer rests upon several factors.

The level of fertility in a population is the product of two components: the proportion of women in the population who are exposed to the possibility of childbearing, and the rate of childbearing among those women. The propor-

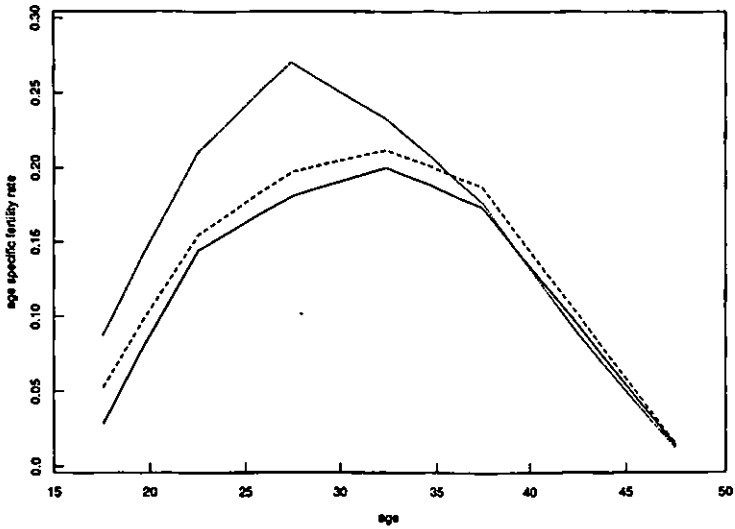


Figure 7.8. Smoothed fertility schedules for all plantation slave women by woman's birthplace: mean estimated schedules. ··· creole; - - - all plantation women; — African.

tion of women in the population who are exposed to the risk of childbearing is synonymous with the women who are in established reproductive unions or more casual visiting unions. If the proportion of women in the population who are in sexual unions – permanent or casual – is small, then the average fertility of the women in the population – the average rate at which all women, whether in unions or not, bear children – will be low, even if the women in unions are quite fertile. For example, suppose that only 10 percent of women age 25–29 are in reproductive unions, but that every year each of those women bears a child. Then the fertility of the women who are in reproductive unions is very high: one child per woman. However, the fertility of all the women age 25–29 in the population, most of whom are not in reproductive unions, is very low: 0.1 child per woman.

In 1813, 38 percent of adult female plantation slaves were registered in lists of single slaves rather than in the household lists; 34 percent of the adult females were living in households without adult males. It is not possible to ascertain from the registration data how many of the slave women had ever lived in reproductive unions or had ever borne a child: the registers recorded only the status of slaves in 1813, and so the only women who could be identified in 1813 as having been in unions were those currently in unions or

Table 7.8. *Smoothed age-specific fertility schedules, women on sugar plantations: low estimate, mean, and high estimate*

Ages	Low	Mean	High
All women			
15–19	0.0396	0.0494	0.0592
20–24	0.1160	0.1447	0.1734
25–29	0.1495	0.1874	0.2254
30–34	0.1571	0.2039	0.2507
35–39	0.1366	0.1808	0.2251
40–44	0.0752	0.1020	0.1289
45–49	0.0113	0.0153	0.0194
TFR	3.4262	4.4188	5.4114
Creole women			
15–19	0.0564	0.0744	0.0924
20–24	0.1353	0.1733	0.2114
25–29	0.1643	0.2363	0.3084
30–34	0.1302	0.2141	0.2981
35–39	0.0931	0.1741	0.2552
40–44	0.0429	0.0923	0.1417
45–49	0.0045	0.0125	0.0205
TFR	3.1335	4.8860	6.6382
African women			
15–19	0.0223	0.0273	0.0323
20–24	0.1122	0.1372	0.1622
25–29	0.1408	0.1753	0.2099
30–34	0.1566	0.2003	0.2440
35–39	0.1089	0.1649	0.2210
40–44	0.0705	0.0987	0.1270
45–49	0.0110	0.0150	0.0190
TFR	3.1115	4.0942	5.0770

those with at least one surviving child living in the same household. Women who had borne children but whose children had moved away or who had no surviving children appeared childless in the registration data.

The Trinidadian slave registration returns can be used to generate a schedule, by age, of the proportion of women with at least one surviving child living in the maternal household. The interpretation of this schedule is difficult. It clearly overstates the proportion, at each age, of plantation slave women who had never been in reproductive unions. It also exaggerates the

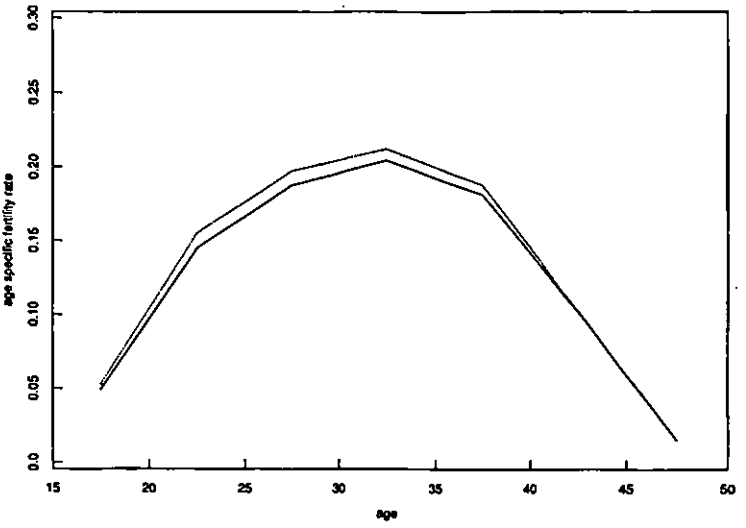


Figure 7.9. Mean estimated fertility schedule for women on all plantations and on sugar plantations. - - - all plantations; — sugar plantations.

Table 7.9. *Proportion of all plantation slave women matched with at least one surviving child: 1813*

Ages	All	Creole	African
15–19	0.2483	0.3373	0.1386
20–24	0.3635	0.4014	0.3475
25–29	0.4686	0.5787	0.4430
30–34	0.5117	0.5511	0.5021
35–39	0.4929	0.4797	0.4966
40–44	0.4689	0.5882	0.4352
45–49	0.3295	0.3429	0.3245
50–54	0.2500	0.2759	0.2388
Total	0.4108	0.4406	0.4003

proportion of women truly childless, whether in unions or not, particularly at the youngest and oldest ages: younger women would have borne few children and, given high infant and child mortality rates, were more likely to have no surviving children than were older women. Surviving children of

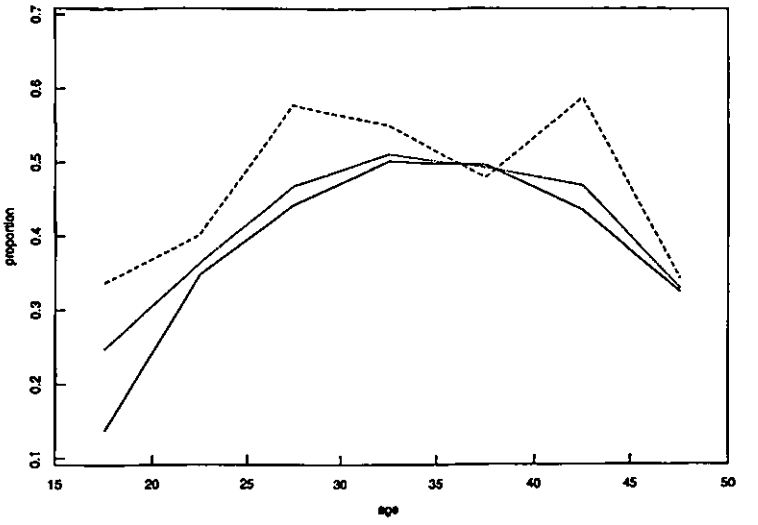


Figure 7.10. Proportion of women matched with at least one child: 1813. - - - creole; ··· all; — African.

older women may no longer have been living in the maternal household, thus making their mothers appear childless. At the middle ages, such as 30–34 years, both effects would be attenuated: very young children would still be living at home, and the woman may have borne enough children so that at least one would survive, even in the presence of high mortality. Thus the proportion of women age 30–34 with at least one surviving child may give a fair idea of the proportion of women who had actually borne at least one child.

The proportion of Trinidadian plantation slave women with at least one surviving child rose rapidly to a peak at ages 30–34 and thereafter declined (Table 7.9; Figure 7.10). At the peak only 51 percent of the Trinidadian women appeared to have borne at least one child.

In a population in which there were twice as many men as women, it is hardly plausible that half the women were not in reproductive unions. There are other possible explanations for the low proportion of women who appeared to be childless. First, the mortality and morbidity of siblings are not independent;[16] the limited contemporary reports of West Indian planters cited

16 J. M. Tanner, H. Lejarraga, and G. Turner, "Within Family Standards for Birthweight," *Lancet*, 2 (1972), pp. 193–4.

repeated cases of women who bore as many as six children, none of whom survived.[17] If the death of *all* of a woman's children was indeed prevalent, then the proportion of women matched with surviving children would certainly understate the proportion of women who had been in reproductive unions or borne children.

Another, although more remote, possibility is that nearly half the plantation slave women were indeed childless: although most women entered reproductive unions, many of the unions may have proved barren. Chronic malnutrition may have rendered plantation slave women subfecund. Alternatively, owners complained that the veneral disease prevalent among the slaves resulted in sterility, supporting their claim that low slave fertility was the result of slave behavior beyond the control of owners.[18]

Thus the proportion of women who appear childless in the Trinidadian slave registration data is high. These women could be childless because they never entered reproductive unions, or because they entered unions but were sterile. Alternatively, women could appear childless at the registration because all their children had died. In any case, the estimates of fertility rates based on back projection of the population will be unbiased.[19]

The level of fertility among women in reproductive unions – the number of children each woman bears – depends upon several factors: the length of the woman's effective childbearing span (the greater the number of years she is exposed to the risk of childbearing, the greater the number of children she can bear); the level of sterility in the population (the greater the proportion of the population who are sterile, the lower the average fertility of the population); and the pace at which children are born, or the length of the birth interval (the more closely spaced the children, the greater the number of births that can occur during the woman's childbearing years). The length of the birth interval depends, in turn, upon the prevalence of impaired fecundability (from venereal disease), contraception, abortion, and stillbirth in the population; upon the level of infant mortality; and upon the prevalence of practices

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17 H. O. Patterson, *The Sociology of Slavery*, p. 101.

18 On the other hand, it has been argued that reports in the plantation records of venereal disease were too rare to account for significant sterility. See H. S. Klein and S. L. Engerman, "Fertility Differentials between Slaves in the United States and the British West Indies: A Note on Lactation Practices and Their Possible Implications," *William and Mary Quarterly*, 35 (1976), p. 366.

19 If the women are truly childless, then the estimates of fertility are clearly unbiased. If the women appear childless because their children have died, then the reverse-survival procedures yield unbiased fertility estimates because the dead children are "recreated." Bias in the fertility estimates stems from the omission of children or women who have not died, the misreporting of ages, and the mismatching of children with mothers.

such as breastfeeding, which extend the period of postpartum subfecundability.

What can be said about the level of fertility of women who were in reproductive unions? Pitman reported that slave women in the British West Indies ". . . began to breed at the age of sixteen to eighteen."[20] Working from a subsample of the Trinidadian slave registration height data, Higman estimated the mean age at menarche among personal and plantation slave women to be 17 years, nearly a year and a half later than an estimate made in the nineteenth century.[21] A better indicator than menarche, however, of the beginning of the childbearing span is the mean age at which slave women entered reproductive unions, or actually began childbearing, rather than the age at which they were capable of bearing children. One such measure is the mean age at which women gave birth to their first child.[22] Such a mean cannot be calculated directly from the Trinidadian slave data; the closest calculable mean is the mean age at which women gave birth to their first child who survived and was recorded in the 1813 registration. In the presence of high levels of infant and child mortality, the mean age at which women bore their first surviving registered child will significantly overstate the age at which women bore their first child. If older women appear childless because all their children have left home, the estimate of the mean age of women at the birth of their first surviving child will be biased downward. Therefore, the mean age of the first birth schedule for the Trinidadian plantation slave women cannot be reliably estimated.

Similarly, there are no good ways in which to estimate the age at which childbearing ceased. Among the Trinidadian plantation slaves, women in their late forties and early fifties were reported bearing children, which is clearly implausible. Furthermore, in a population with high mortality, the incidence of widowhood among women in their childbearing years would be high; in a population in which males greatly outnumbered females, the rate at which subsequent unions were formed might also have been high. In the 1813 slave registration returns only 5 percent of plantation slave women were reported living in households with a partner and with children from more than one union. Thus, it is not clear whether the actual childbearing span of the Trinidadian women was shortened by widowhood.

On average, a Trinidadian plantation slave woman, subject to the age-specific fertility rates that prevailed in the first decade of the nineteenth

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20 W. F. Pitman, "Slavery on the British West India Plantations in the Eighteenth Century," *Journal of Negro History*, 11 (1926), pp. 584–668.

21 B. W. Higman, "Growth in Afro-Caribbean Slave Populations," *American Journal of Physical Anthropology*, 50 (1979), p. 382.

22 J. Trussell and R. Steckel, "The Age of Slaves at Menarche and Their First Birth," *Journal of Interdisciplinary History*, 8 (1978), p. 483.

century and surviving to age 49, bore 4.6 (±0.9) children – thus undermining the contention of the advocates of slavery that slave fertility was low and that, as a result, the plantation slave population was destined to shrink. Although the fertility of plantation slave women in Trinidad was, in fact, not low, the salient question remains: was plantation slave fertility high enough that, in the presence of devastating infant and child mortality, the plantation slave population of Trinidad could be sustained?

Reproductivity

The question of whether the slave colonies could become self-sustaining was key in the debate over the abolition of the slave trade in 1807. Until that time, the labor force in the Caribbean had been maintained by a steady stream of imported slaves from Africa. In the absence of such imports, it was feared that the slave population of the Caribbean was destined to shrink.

The appropriate measures for ascertaining whether a population is inherently self-sustaining are *reproduction* rates, rather than fertility rates. Reproduction rates express the average number of daughters that a woman will bear who, in turn, will survive to adulthood. Hence, reproduction rates address the question, "Will a woman, on average, replace herself with at least one childbearing daughter?" If women are assumed to survive all of their reproductive years – the assumption made in the calculation of the total fertility rate – then the measure of reproductivity is the *gross* reproduction rate. If the calculation incorporates the mortality experience of the women, so that not all newborn girls survive to age 49, then the measure of reproductivity is the *net* reproduction rate. The net reproduction rate is lower than the gross reproduction rate; the higher the mortality among females, the greater will be the difference between the net and gross reproduction rates.

If the net reproduction rate of a female population is greater than 1, then the population has the capacity for long-run growth: on average, each woman is replacing herself with at least one daughter who, in turn, survives to adulthood and bears a daughter. If the net reproduction rate of the population is less than 1, then the population cannot grow: the women are not replacing themselves. Thus, if the plantation slave population of Trinidad were to have the potential of being a self-sustaining population, the net reproduction rate would need to be greater than unity.

Methods

Suppose d_{xt} is the number of daughters born to women age x at time t. Let w_{xt} be the number of women in the population age x at time t. Then the net

reproduction rate at time t is defined as

$$NRR_t = \sum_{x=15}^{45} \left[\frac{d_{xt}}{w_{xt}}\right]\left[\frac{{}_1L_x}{l_0}\right]. \qquad [7.10]$$

In the case of the Trinidadian slaves, however, there do not exist data on the number of daughters born to women age x at time t. However, the number of daughters born to women age $(x-y)$ at time $(t-y)$ can be reconstructed from the number of daughters age y of mothers age x at time t in a manner completely analogous to that used in the fertility estimates.

By back projection over y years, the number of daughters born to women age $(x-y)$ at time $(t-y)$ can be estimated as

$$d_{0,x-y,t-y} = d_{yxt}\left[\frac{l_0}{{}_1L_y}\right]. \qquad [7.11]$$

The number of women age $(x-y)$ at time $(t-y)$ was

$$w_{x-y,t-y} = w_{xt}\left[\frac{{}_1L_{x-y}}{{}_1L_x}\right], \qquad [7.12]$$

and so the net reproduction rate of women at time $(t-y)$ was

$$NRR_{t-y} = \sum_{x=15}^{45} \left[\frac{d_{xt}}{w_{xt}}\right]\left[\frac{{}_1L_x}{{}_1L_y}\right]. \qquad [7.13]$$

The most important aspect of this formulation of the net reproduction rate is that it is independent of the life table at ages 0 to y : the only life table functions in the expression, ${}_1L_x$ and ${}_1L_y$, refer to mortality at ages y and above. Thus, even if the life table is suspect at the youngest ages – such as ages 0–3, as is the case with the slaves – accurate estimates of the net reproduction rate can be obtained for the period more than three years prior to the registration. The estimate of the net reproduction rate for the period preceding the registration therefore does not depend on the questionable part of the life table. Thus the estimates of the net reproduction rates are more robust to errors in data than are the estimates of the total fertility rate, which do depend upon the early, and dubious, part of the life table.

Annual net reproduction rates estimated for women on all plantations for the years 1803–10 are given in Table 7.10. The three net reproduction rates estimated for each year – low, mean, and high – correspond to the three life tables – upper bound, mean, and lower bound – used in the reconstruction of the female population; these rates are thus the estimated upper bound, the estimated lower bound, and the estimated mean level of the net reproduction

Table 7.10. *Net reproduction rate, all plantation slave women: 1803–10*

Year	Lower	Mean	Upper
All women			
1803	0.5195	0.5609	0.5911
1804	0.4920	0.5293	0.5561
1805	0.4958	0.5305	0.5560
1806	0.5940	0.6372	0.6689
1807	0.5338	0.5687	0.5945
1808	0.7262	0.7748	0.8106
1809	0.5571	0.5816	0.5996
1810	0.6434	0.6653	0.6809
Mean	0.5702	0.6060	0.6322
Creole women			
1803	0.7408	0.7973	0.8387
1804	0.5969	0.6373	0.6669
1805	0.6124	0.6646	0.7029
1806	0.7466	0.7914	0.8245
1807	0.6782	0.7193	0.7497
1808	0.8168	0.8721	0.9128
1809	0.6832	0.7179	0.7432
1810	0.7844	0.8114	0.8380
Mean	0.7846	0.7514	0.7074
African women			
1803	0.4514	0.4876	0.5141
1804	0.4697	0.5055	0.5318
1805	0.4618	0.5028	0.5257
1806	0.5456	0.5878	0.6190
1807	0.5005	0.5341	0.5590
1808	0.7047	0.7515	0.7862
1809	0.5162	0.5375	0.5530
1810	0.6317	0.6531	0.6684
Mean	0.5947	0.5700	0.5365

rate over time. The annual net reproduction rates for African and creole women are also estimated and given in Table 7.10.

Just as in the estimates of the age-specific fertility rates, the effect of heaping at age 5 is readily apparent in the estimates of the annual net reproduction rates: the net reproduction rate estimated for 1808, based on the number of 5 year olds present in the population, is considerably higher than the net reproduction rate estimated for other years (Figure 7.11); this is because too many

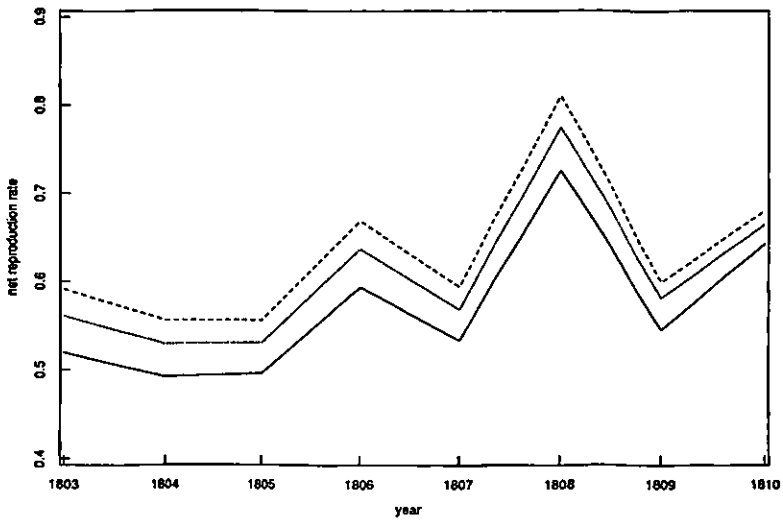


Figure 7.11. Net reproduction rates, all plantation slave women: 1803–10. - - - upper; ··· mean; — lower.

children were listed as 5 year olds in the registration, resulting in an overestimate of the number of births that occurred five years before the registration. Again, as for the age-specific fertility rate estimates, the effect of age misreporting among children can be attenuated by taking three-year moving averages of the net reproduction rate, thus redistributing some of the putative 5 year olds to ages 4 and 6 (Table 7.11; Figure 7.12).

Findings

Reproduction rates address the question, "Will a woman, on average, replace herself with at least one daughter who, in turn, bears a daughter?" Even if the period crude growth rate – the difference between the crude birth rate and the crude death rate – of a population is negative, it is nonetheless true that, should the net reproduction rate of a female population be greater than 1, then the population has the intrinsic capacity for long-run growth: on average, each woman will replace herself with at least one daughter who, in turn, survives to adulthood and produces the next generation. If the net reproduction rate of the population is less than 1, then, even if the period crude growth rate is greater than 0, the population does not have the intrinsic capacity to grow: the women are not replacing themselves with reproducing daughters. Thus, if

Table 7.11. *Net reproduction rate, three-year moving averages, all plantation slave women: 1803–10*

Year	Lower	Mean	Upper
All women			
1803–5	0.5024	0.5402	0.5677
1804–6	0.5272	0.5657	0.5936
1805–7	0.5412	0.5788	0.6064
1806–8	0.6180	0.6602	0.6913
1807–9	0.6057	0.6417	0.6682
1808–10	0.6422	0.6739	0.6970
Mean	0.5728	0.6101	0.6374
Creole women			
1803–5	0.6500	0.6997	0.7361
1804–6	0.6519	0.6977	0.7314
1805–7	0.6790	0.7251	0.7590
1806–8	0.7472	0.7943	0.8290
1807–9	0.7261	0.7697	0.8019
1808–10	0.7614	0.8004	0.8313
Mean	0.7026	0.7478	0.7814
African women			
1803–5	0.4069	0.4986	0.5238
1804–6	0.4923	0.5320	0.5588
1805–7	0.5026	0.5416	0.5679
1806–8	0.5836	0.6244	0.6547
1807–9	0.5738	0.6077	0.6327
1808–10	0.6175	0.6473	0.6692
Mean	0.5294	0.5723	0.6012

a population has the long-run capacity to be a self-sustaining population, the net reproduction rate of the population must be greater than unity.

The Trinidadian plantation slave population appeared destined to shrink in the absence of imported slaves: in the years 1803–10, the net reproduction rate of the plantation slaves remained well below 1. The mean net reproduction rate for the period 1803–10, based on three-year moving averages of annual net reproduction rate estimates (Table 7.11), was 0.6 (±0.03) daughters per woman: not enough to sustain the population. It appears as though the net reproduction rate was increasing over the period 1803–10, but whether this is real or an artifact of age misreporting cannot be ascertained. Even if the increase were true, and the net reproduction rate continued to increase at the

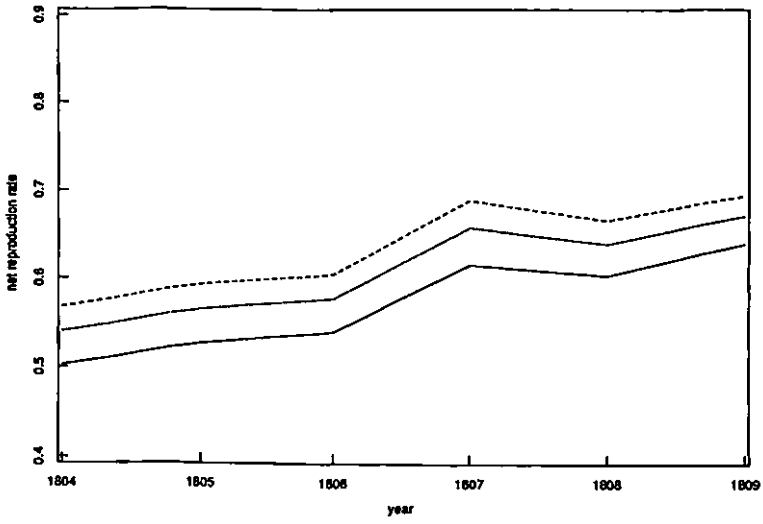


Figure 7.12. Net reproduction rates, three-year moving averages, all plantation slave women: 1803–10. - - - upper; ··· mean; — lower.

same pace, it would be decades before the net reproduction rate reached unity and the population had the capacity for reproducing itself. Thus, even though women were bearing, on average, 2.2 liveborn daughters, infant and child mortality rates were so high that only 0.6 (±0.03) of these daughters were themselves surviving to the reproductive ages.

Members of the West Indian party in Parliament argued that the critical issue for the future of the slave labor force was not whether the plantation slave population, as a whole, was growing, but rather whether the creole slave population was reproducing itself. The creoles, after all, were to be the foundation of the future slave population of the Caribbean: there was no longer a transatlantic slave trade. Thus it was possible that the slave population would shrink in the immediate future, while most of the childbearing women were African, but that, as creole women moved into childbearing ages and comprised an increasing share of reproducing women, the population would eventually begin to grow.

The crucial element in the difference between the creole net reproduction rate and that of the Africans is the difference in creole and African fertility. The mortality element of the net reproduction rate calculation is the same for the two populations because the offspring of both African and creole women were creole children, subject during their lifetimes to creole mortality. Thus the

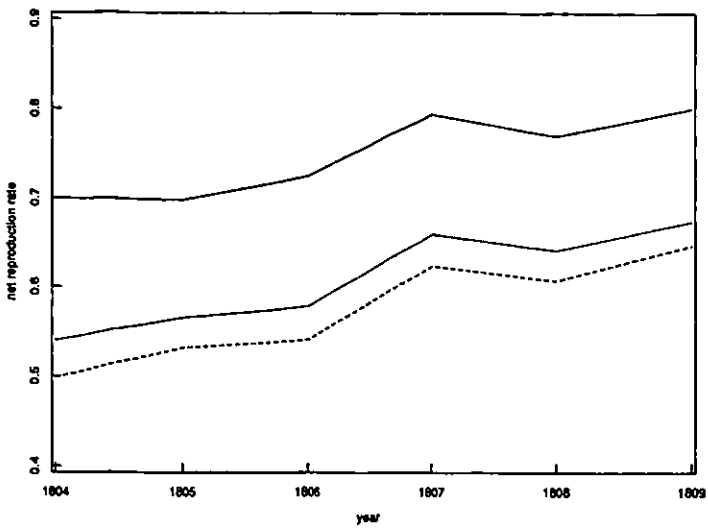


Figure 7.13. Net reproduction rates by woman's birthplace, three-year moving averages: 1803–10. — creole; ··· all women; - - - African.

question was whether creole fertility was sufficiently high to yield a net reproduction rate greater than unity despite high infant and child mortality. This proved not to be the case: although the net reproduction rate of the creole slaves was greater than that of the Africans – 0.75 (±0.04) daughters versus 0.57 (±0.03) daughters – it was still less than 1, meaning that the creole population could not sustain itself (see Table 7.11; Figure 7.13).

The problem in slave reproductivity stemmed from the high mortality of the plantation slave population rather than from low slave fertility: one-third of slave children died in infancy, and half failed to survive to their fifth birthdays. The probability that a woman would survive to age 25 was 0.29. Whether this high mortality was a reflection of a brutal slave system, or simply reflected the appalling conditions prevalent in rural tropical areas and that are, even now, inimical to infant and child survival, is unknown. Nonetheless, plantation slave fertility would have to be quite high – higher than 4.6 children per woman – to compensate for such disastrous mortality if the slave population were to have any hope of reproducing itself.

Conclusions

Proponents of slavery maintained that the decline in the plantation slave population in Trinidad was the result of low slave fertility, stemming from

deliberate behavior by slaves, rather than of high slave mortality. The opponents of slavery agreed that the annual number of births among slaves was small, but they attributed the failure of the slave population to reproduce itself to mortality – the brutality inherent in slavery – rather than to the behavior of slaves that might limit their fertility.

Why did the slave population not reproduce itself? Was the fertility of the plantation slaves in Trinidad exceptionally low, as claimed by advocates of slavery? Or did the high level of infant and child mortality among the slaves produce a shrinking slave population despite high fertility?

Fertility among the plantation slaves of Trinidad was apparently moderate: the average plantation slave woman bore roughly five children during her lifetime. Creole women may have borne, on average, one more child than did African women, which is consistent with the casual observation of some nineteenth-century writers that creole women were "more fertile" than African women.

It appears that the cultivation of sugar may have been inimical to fertility: women on sugar plantations bore fewer children that did women on other types of estates. It is possible that the arduous labor on sugar estates caused higher miscarriage rates, thus lengthening the interval between live births. If this is true, then the impact of brutal slave labor upon slave reproductivity would be reflected directly in fertility in addition to indirectly in mortality.

Despite the fact that the estimated fertility of the Trinidad plantation slave women would be considered moderate by modern, noncontracepting African standards, it is possible that the plantation slave women of Trinidad were, nonetheless, more fertile than were their counterparts in more developed colonies (Table 7.12; Figure 7.14).[23] The comparison of slave fertility among colonies is difficult: the age-specific fertility rates estimated by Higman for Berbice, Tobago, and St. Lucia imply very low period fertility for the slave women, and it is puzzling that the shape of the estimated age-specific fertility schedules is not the "mountain" shape characteristic of human populations, whether or not they limit their fertility. Nonetheless, if real, such differences in slave fertility among colonies could stem from a number of factors. For example, in a natural fertility (noncontracepting) population in which breast-feeding is prevalent, the death of an infant abruptly curtails lactational amenorrhea, thus permitting the mother to conceive and bear another child more rapidly than she would had the first child survived. Hence variations in the fertility of natural fertility populations can often be ascribed to variations in the infant mortality rate: women in populations with high infant mortality, and especially with high neonatal mortality, are often more fertile than are women in otherwise comparable populations with lower mortality.

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23 B. W. Higman, *Slave Populations of The British Caribbean*, p. 358.

Table 7.12. *Estimated age-specific fertility rates for St. Lucia, Tobago, Berbice, and Trinidad*

Ages	St. Lucia	Tobago	Berbice	Trinidad[a]
15–19	0.084	0.102	0.155	0.0529
20–4	0.108	0.147	0.158	0.1550
25–9	0.109	0.106	0.136	0.1970
30–4	0.087	0.093	0.105	0.2116
35–9	0.070	0.071	0.082	0.1847
40–4	0.031	0.036	0.035	0.1025
45–9	0.028	0.013	0.019	0.0153
TFR	2.71	2.93	3.54	4.5950

[a]Mean estimated schedule for all plantation slave women.
Sources: Higman, *Slave Populations of the British Caribbean*, p. 358 (St. Lucia, Tobago, Berbice); the present work, Table 7.6 (Trinidad).

The combination of pernicious infant and child mortality and moderate fertility meant that the slave population was destined to shrink: the mean net reproduction rate for the period 1803–10 was 0.6 (±0.03) daughters per woman. Although the creole population had a higher net reproduction rate than did the Africans, it was still less than 1, implying that there was little hope that the slave population would replace itself as the Africans disappeared from the slave population.

Some intriguing questions posed in the nineteenth century must linger unanswered. Was the fertility of slave women born in Trinidad different than that of other creole slave women in Trinidad? Was the fertility of colored women different than that of Negro women? These questions cannot be answered for Trinidad in 1813 simply because these women – Trinidadian-born women and colored women – comprised a tiny fraction of the slave women between the ages 15 and 49: the samples of these women are not large enough to produce meaningful estimates of fertility rates.

On the other hand, another intriguing question can be answered: was the fertility of plantation women who were registered after the deadline (and therefore ostensibly women who were smuggled into Trinidad) different than the fertility of women who lived on plantations that met the registration deadline? No. The total fertility rate of the two groups of women appears to be the same, 4.6 children per woman, indicating that there is no evidence on the basis of fertility that slaves were hastily smuggled into Trinidad in 1812.

The fundamental question that surfaced in the slavery debates – the issue of whether the plantation slave population in Trinidad was failing to reproduce itself because of high mortality, low fertility, or both – can now be re-

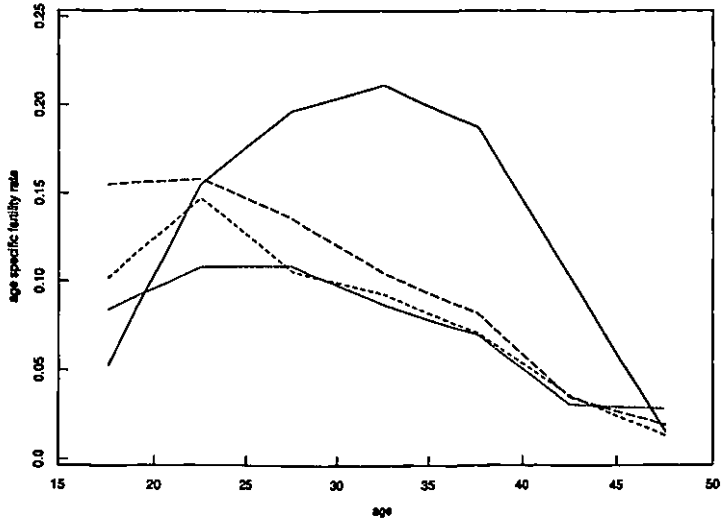


Figure 7.14. Age-specific fertility rates for slave women in Trinidad, St. Lucia, Tobago, and Berbice. — Trinidad; – – St. Lucia; - - - Tobago; ··· Berbice.
Source: Table 7.12.

solved. The problem lay in the high mortality of the population, especially among infants and children, rather than in low slave fertility: although the average slave women bore 2.2 daughters during her lifetime, one-third of these would die in infancy, and half would die before reaching age 5. A newborn girl had one chance in three of surviving to the beginning of her reproductive years. Plantation slave fertility among the surviving women would have to be much greater than the estimated 4.6 children per woman if the Trinidadian plantation slave population were to grow.

8

The plantation slaves of Trinidad

. . . I shall not hesitate to say that the slaves of this Island generally taken are in point of comfort and care at least equal to a great majority of the European peasantry. They are better clothed, better fed, and do less labour. A few masters blind to their own interests probably do treat their slaves with less humanity. The laws in such cases take cognizance of such conduct and punish it.[1]

The size and composition of the plantation slave population of Trinidad in 1813 was very clearly the product of the transatlantic and intercolonial slave trade and of the Spanish immigration policy for Trinidad enacted in 1783. A large proportion of the plantation slaves present in Trinidad in 1813 were reported to be between 20 and 40 years old, ages that had featured prominently in the slave trade. In addition, there were nearly twice as many adult male slaves as females on the plantations. As the importation of slaves into Trinidad became less common, so that the fertility and mortality of the plantation slaves became the principal forces shaping the population, the vestiges of the slave trade that lingered in the structure of the plantation slave population began to disappear.

In the parliamentary debates about the abolition of the slave trade, basic questions about the demography of slave populations in the British Caribbean were frequently raised. These questions were again voiced in subsequent parliamentary debates about the composition of Trinidadian labor force under British rule, and in the debates about the Slave Registration Bill. A great deal of attention was lavished on questions of Caribbean slave demography, although few facts were available on which to base the discussion: instead, fervent passion and moral outrage fueled the debates.

The antislavery forces in Great Britain – those who advocated first the abolition of the slave trade and later the emancipation of slaves – claimed that mortality among the slaves in the British Caribbean colonies was extraor-

[1] Picton to the Secretary of State, April 12, 1802. Reproduced in TTHS No. 160.

dinarily high, thus supporting their contention that slavery was cruel and inhumane, and could not be sanctioned by thinking, moral people. They also claimed that slave fertility was low, and cited this as further evidence that slaves – who, they said, ought to be highly prolific – were living a miserable, subhuman existence.

Supporters of slavery in the British Caribbean did not contest the conventional wisdom that slave mortality was high and slave fertility was low. But, they argued, one could not therefore infer that the system of slave labor was necessarily at fault. Instead, they argued that high slave mortality reflected the harsh conditions of a frontier tropical environment – an environment that placed a heavy toll upon Europeans as well upon slaves. Slaves succumbed to fevers and dysentery, about which the slave owners could do little. Thus high slave mortality was beyond the control of slave owners, they argued, and was not caused by the system of slavery. Nor, in the eyes of the advocates of slavery, was slavery per se responsible for low slave fertility. Slaves were portrayed as reluctant to marry, indulging instead in abortions and in promiscuous behavior that led to widespread venereal disease and subsequent sterility. Low slave fertility was thus alleged to be a matter beyond the slave owners' control.

But was the conventional wisdom true? Was slave mortality in the British Caribbean especially high, and was slave fertility especially low? Could hard evidence, in the form of accurate statistics on the Caribbean slaves, be collected so that the demographic impact of slavery could be ascertained? The African Institution believed so, and thus, in 1811, called for a registration of slaves in the Caribbean, ostensibly to collect data on illegal slave movements, but with the secondary motive of collecting statistics that they could use to bolster their antislavery position.

Through compromise, Trinidad became the site of the first slave registration. Establishing such a registration in Trinidad was a relatively easy matter, because Trinidad did not have a legislative assembly, as did other British Caribbean colonies. Rather, it was ruled by fiat from London, and so the implementation of such a registration scheme required only a royal order.

Thus, in 1813, 1815, and 1816, sufficient data were collected in Trinidad to resolve many of the issues that had been raised in the emotional debates over slavery. The only ingredients that were missing were the techniques with which to analyze the data.

Mortality among the plantation slaves

Since it was widely accepted that mortality was high among the slaves in Trinidad and other British Caribbean colonies, most questions about slave mortality centered on the causes of the high death rates. Was, as the slave owners alleged, the high mortality of slaves in Trinidad merely an un-

fortunate consequence of the harsh frontier environment in which the slaves lived and worked – an environment that proved equally inimical to European survival? Or, as the opponents of slavery contended, was high mortality among the slaves the result of the brutal overwork inherent in slavery?

The debate about the causes of high slave mortality led, in turn, to a series of more specific questions about slave mortality. How many years did the average slave live? What proportion of newborn slaves survived to adulthood? Was the mortality of creole slaves – slaves born in the New World – different than that of slaves born in Africa? And if so, did that mean that the slave population would eventually be self-sustaining, even if it was destined to shrink in the immediate future?

The Trinidadian plantation slave registration records support the nineteenth-century perception of slave mortality: it appears that mortality was high among the plantation slaves of Trinidad. A newborn plantation slave, subject during his or her lifetime to the age-specific mortality rates for plantation slaves that prevailed in Trinidad between 1813 and 1816, could expect to live about seventeen years. A particularly heavy toll on the plantation slave population was extracted by infant mortality. The infant mortality rate – the number of deaths in the first year of life per 1,000 live births – was about 365 for boys and 370 for girls: more than a third of the plantation slave children died before their first birthdays. Fewer than half of the slave children survived to age 5, and barely a third reached adulthood.

The nineteenth-century speculation that some slaves were at greater risk of dying than others is also reflected in the Trinidadian slave registration data. There was considerable variation among the plantation slaves in their risks of dying: some slaves were, by dint of their personal characteristics or the characteristics of the environments in which they lived, more likely to survive than were other plantation slaves. The odds of slave survival varied with slave birthplace and with specific living environment. For example, a 15-year-old male plantation slave, born in Africa but subject during his adult life to the mortality rates for plantation slaves that prevailed in Trinidad from 1813 to 1816, would survive, on average, to age 39; a 15-year-old creole male on a plantation could expect to live about three years longer than would an otherwise comparable slave born in Africa. Female plantation slaves fared a bit better than did their male counterparts: a 15-year-old female plantation slave who had been born in Africa lived, on average, to age 45, while a comparable creole woman lived roughly three years longer.

Slave survival also varied with the plantation environment. For example, a male slave working on a sugar plantation was far more likely to die than was an otherwise comparable male slave living on a cotton plantation. In fact, an adult male slave who lived on a sugar plantation was less likely to survive than was a comparable slave on *any* other type of plantation.

It was also maintained by some that slaves who worked on plantations

owned by French or Spanish masters – who were less likely to be absentee landlords than were the British – were less likely to die than were other slaves. This contention is, to a limited extent, supported by the Trinidadian slave registration data: for male slaves, working on a plantation owned by a Catholic master improved their chances of survival, but for female slaves, the religion or nationality of the plantation owner made no difference.

Beyond any doubt, mortality among the plantation slaves in Trinidad was extremely high: fewer that half of newborns survived the first five years of life, and a newborn slave would live, on average, seventeen years. Furthermore, sugar cultivation, which was the mainstay of the Trinidadian economy, was especially inimical to the survival of adult slaves. Thus, if the plantation slave population of Trinidad were to have any hope of being self-sustaining, fertility among the plantation slaves would have to be high enough to compensate for the extremely high plantation slave mortality.

Fertility among the plantation slaves

It was clear to the proponents of slavery that, in order for the plantation slave population of Trinidad to grow, slave fertility needed to be high. But, to their distress, they believed that slave fertility was low: few additions were made to the ranks of the adult laborers by slaves who had been born and raised in Trinidad. Thus many slave owners and managers implemented systems to reward plantation slave women for the bearing of live children.

Slave owners and plantation managers confused two factors in their perception of the fertility behavior of slave women: to most, "fertility" meant the bearing of children who survived to become economically useful. This notion, which confounded the concepts of fertility and child mortality, reflected the concern of the plantation owners with the production of a replacement labor force. Thus, what slave owners noted was that slave *reproductivity* was low; no clear inferences about slave fertility were drawn.

In light of the rapid decline in the Trinidadian slave population in the absence of imported slaves, the low reproductivity (erroneously labeled as the low fertility) of Trinidadian slaves was cited as evidence of the worst conditions of slavery. Although reproductivity was low, did this mean that the fertility of the slaves in Trinidad was exceptionally low? Or did the high level of infant mortality among the slaves account for low reproductivity in a very fertile population? How many children did the average plantation slave woman in Trinidad bear during her reproductive years? And was reproductivity really low? Or did the plantation slave population have the long-run potential for reproducing itself, thus ensuring a future labor force in Trinidad?

It appears from the data on women and children compiled in the Trinidad plantation slave registers that a plantation slave woman who survived to age 49, and who was subject to the fertility rates that prevailed in Trinidad during

the early nineteenth century, bore, on average, about five children during her lifetime. The fertility of a creole plantation slave woman may have been slightly higher than that of an African plantation slave woman: creole women appear to have borne about one more child during their reproductive lifetimes than did African plantation slave women. Trinidadian plantation slave women thus bore one or two children fewer than do noncontracepting women in twentieth-century Africa.

Slave women on sugar plantations appear to have been slightly less fertile than were women on other plantations. Differences in plantation slave fertility by crop may be attributed to differences in the woman's exposure to the risk of childbearing (i.e., the formation of sexual unions), to her ability to conceive (in part a function of the prevalence of venereal disease), or to her ability to sustain a viable pregnancy. All of these factors reflected the woman's health and nutritional status, her environment, and the work she was expected to perform.

In some sense, however, the fertility of plantation slave women was not an issue. Rather, it was their reproductivity that was important: did these women bear daughters who would, in turn, bear daughters? That is, was each generation of childbearing women duplicating itself in the next generation? If, on average, each woman in the population did not bear at least one childbearing daughter, the population could not replace itself.

It appears that the Trianidadian plantation slave population could not be sustained. Although each woman bore, on average, more than two daughters, infant and child mortality extracted a horrendous toll from the plantation slaves. Only a third of newborn infant girls would survive to their reproductive years. Thus the plantation slave women produced fewer than one daughter each to form the subsequent generation: the plantation slave population appeared destined to shrink.

The fundamental question that surfaced in the slavery debates – whether the plantation slave population in Trinidad was failing to reproduce itself because of high mortality, low fertility, or both – can thus be resolved. The failure of the population to reproduce itself stemmed from the high mortality of the population, especially among infants and children, rather than from low slave fertility. In fact, slave fertility was not low. In sharp contrast, however, slave reproductivity was very low. Plantation slave fertility among the surviving women needed to be much greater than the estimated five children per woman – on the order of at least eight children per woman – if the plantation slave population were to sustain itself.

Slave smuggling in Trinidad

The collection of the slave registration data was meant to provide the means by which to resolve many of the controversies surrounding slavery in the

British Caribbean colonies. Yet the very act of collecting the data in Trinidad set the stage for another, completely unanticipated skirmish between pro- and antislavery forces in Britain. The new fight centered around allegations of illegal intercolonial movements of slaves, or slave smuggling.

Following the completion of the 1813 Trinidadian slave registration, James Stephen claimed that some 4,500 slaves were smuggled into Trinidad in the year preceding the slave registration, and that these slaves appeared in the lists of the plantations that filed returns after the deadline passed. He based his contention on the difference in the number of slaves listed in Trinidadian tax rolls for 1811 and in the 1813 slave registers. Officials in Trinidad disagreed with Stephen, arguing that the difference in the reported number of slaves reflected not the widespread slave smuggling in 1812 and 1813, but rather the underreporting of slaves by their owners in 1811 in order to avoid taxes.

The Trinidadian slave registration data for 1813 and 1816 provide a means for resolving this question by the judicious use of demographic evidence. One would expect to see systematic differences in population structure, mortality, and fertility between the slaves on plantations that filed returns on time and those that were late if the slaves who were registered after the deadline were recent imports to the colony. Demographic evidence in support of the contention that large numbers of slaves were smuggled into Trinidad before the slave registration, and that these appeared as the slaves who were registered after the registration deadline, would consist of demonstrable systematic differences between plantation slaves who were registered before the deadline and those who were registered after. If there were no systematic differences between the two groups of slaves – if the populations did not differ in their age and sex structure, household structures, fertility or mortality – then there is a strong demographic case that the late slave returns did not contain smuggled slaves, but rather constituted a random sample of the plantation slave population of the island.

It appears from the slave registration data that the plantation slaves who were registered after April 22, 1813 – the slaves whom James Stephen alleged were smuggled into the island – did not differ in any noticeable or systematic way from those who were registered before April 22. The age and sex composition of the subpopulation of the plantation slave population registered after the deadline was similar to that of the plantation slaves who were registered on time. The proportion colored, the proportion born in Trinidad, and the proportion born in Africa were also comparable for the two groups of slaves, again suggesting that late registration had nothing to do with the source of the slaves. The mean plantation size for slaves who were registered late was slightly smaller than that of those who were registered on time, but this gave credence to the claim of the registrar that

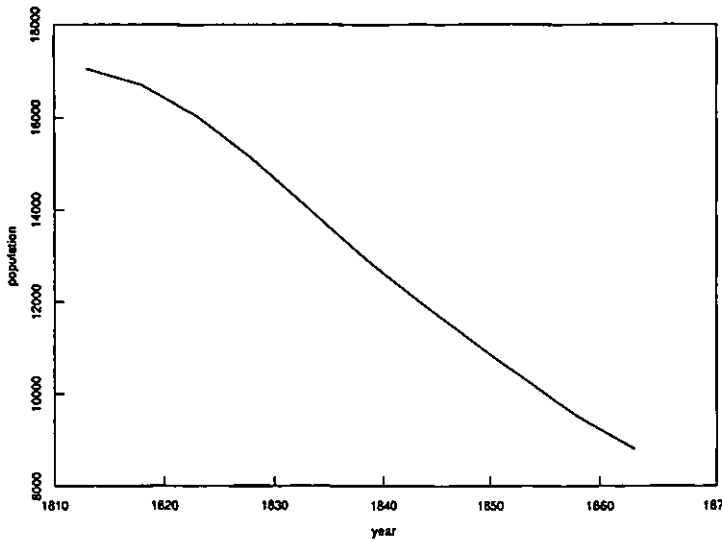


Figure 8.1. Projected plantation slave population for Trinidad, 1813–63. Projections are based on the 1813 plantation slave population, the mean estimated life tables for males and females, and the mean estimated fertility schedule.

the owners of smaller estates on remote parts of the island – those who would have the hardest time reaching Port of Spain – were the owners most likely to be remiss in timely compliance with the slave registration order.

Nor did the fertility or mortality of slaves registered after April 22 differ from that of comparable slaves registered before April 22. Slaves who were registered after the deadline were neither more nor less likely to survive the interregistration period than were slaves who were registered on time. The average number of children born to women on the two sets of plantations was also comparable: about five children per woman.

Thus there is no convincing demographic evidence to support the contention that slaves were smuggled into Trinidad in 1813 and registered as *plantation* slaves. It appears far more likely that plantation slaves were badly undercounted in 1811, and that the monthlong period proposed by Stephen for the registration of slaves in Trinidad was unrealistic.

The future of the plantation slave population

That the plantation slave population of Trinidad appeared destined to shrink in the absence of a slave trade was obvious to all parties. What was unknown was just how rapidly mortality would take its toll on the slave labor force and, in particular, how quickly the ranks of the adult laborers would be depleted.

Using the slave life tables estimated from the Trinidad plantation slave registration data collected in 1813 and 1816, the fertility rates estimated from the slave registration data collected in 1813, and the age and sex structure of the plantation slave population in 1813 reported in the slave registers, in conjunction with the assumptions that fertility and mortality patterns would remain unchanged in the immediate future and that the population would be closed to migration – the standard tenets of stable population theory – one can project the plantation slave population population for the fifty-year period from 1813 to 1863.[2]

If the plantation slave population of Trinidad remained closed to migration and manumission, and if the fertility and mortality schedules estimated from the plantation slave registration data prevailed after 1813, then the worst fears of the slave owners would be borne out: the plantation slave population was destined to shrink, and to shrink rapidly (Figure 8.1).

In 1813, there were 17,087 plantation slaves in Trinidad, largely concentrated in two age groups: children less than 10 years old, and adults between the ages of 25 and 40 (see Figure 4.4). Twenty-five years later, in 1838, there would be slightly more than 13,000 slaves, and fifty years later, in 1863, there would be only 9,000 slaves. Annual births would fall from about 140 in 1813 to 80 in 1838, and to 60 in 1863. In short, the plantation slave population would shrink at a rate of about 1.25 percent a year.

Not only would the plantation slave population shrink: the age structure of the population was destined to change as well. By 1838, as the 1813 deficit of slaves between the ages of 10 and 25 worked its way through the population age structure, slave owners would be faced with two problems. They would have few slaves, and would be especially short of slaves between the ages of 25 and 45: they would be short of adult laborers and women at reproductive ages (Figure 8.2). By 1863, the slave owners would no longer have the pronounced deficit of adult slaves; rather, they would simply have very few slaves at any age (Figure 8.3). Thus, in the absence of a slave trade, the Trinidadian plantation slave population was destined to shrink rapidly.

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[2] Projections were done using standard Leslie matrix techniques for quinquennial age groups.

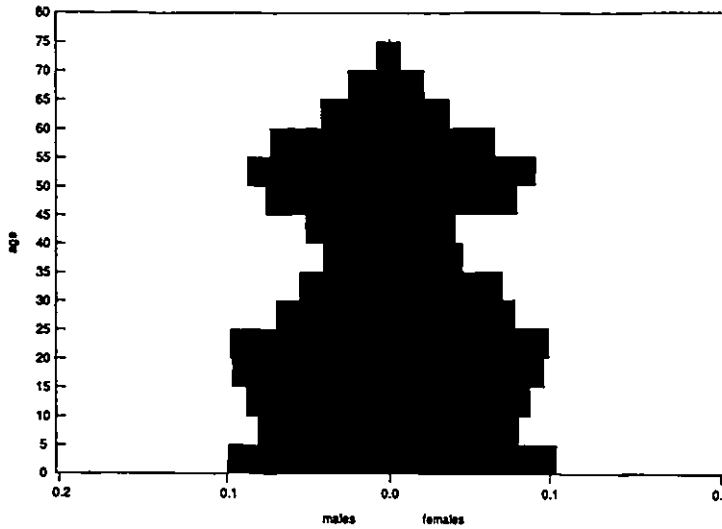


Figure 8.2. Projected age and sex distribution of the plantation slave population of Trinidad, 1838. Projections are based on the 1813 plantation slave population, the mean estimated life tables for males and females, and the mean estimated fertility schedule.

Conclusion

The Trinidadian slave registration data produce a useful portrait of plantation slavery in Trinidad in the second decade of the nineteenth century. Although the slave registration data are obviously flawed, modern techniques of mathematical demography can be employed to yield a plausible picture of plantation slave demography.

Plantation slave mortality was extremely high. Plantation slave fertility was moderate. If the demographic régime that prevailed at the initial slave registration were to continue during the nineteenth century, the plantation slave population was destined to shrink: it did not have the intrinsic ability, embodied in the fertility and mortality schedules, to reproduce itself. A shift from away from sugar cultivation toward other crops during the second decade of the nineteenth century may have foreshadowed a reduction in plantation slave mortality and an increase in plantation slave fertility, but the changes were unlikely to be great enough to reverse the shrinking of the plantation slave population. Thus, if Trinidad were to be maintained as a viable agricultural colony, then additional labor, either slave or free, had to be found elsewhere.

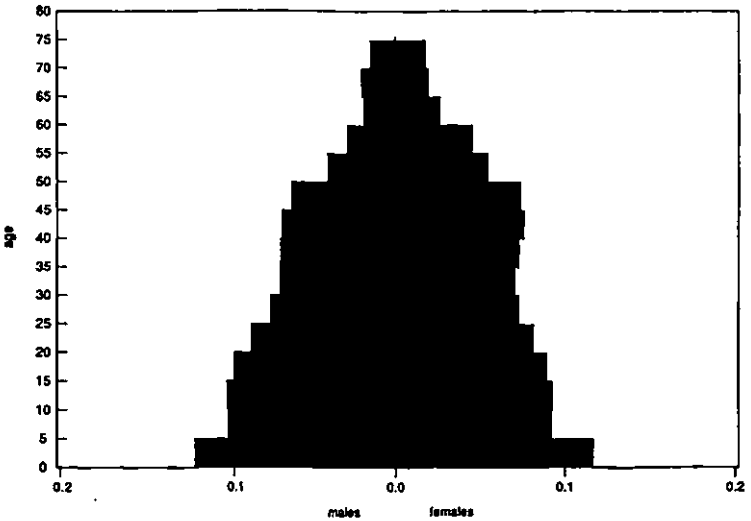


Figure 8.3. Projected age and sex distribution of the plantation slave population of Trinidad, 1863. Projections are based on the 1813 plantation slave population, the mean estimated life tables for males and females, and the mean estimated fertility schedule.

Appendices

Drawings of Trinidadian slave life

The drawings on the following pages are from Richard Bridgens, *West India Scenery with Illustrations of Negro Character, the Process of Making Sugar, &c, from Sketches Taken During a Voyage to and a Residence of Seven Years in the Island of Trinidad.* London: Robert Hennings and Co. (1836). Figures A.5 and A.8 are reproduced by courtesy of the Department of Special Collections, Stanford University Libraries; all others are reproduced by courtesy of the Nettie Lee Benson Latin American Collection, University of Texas Libraries, University of Texas at Austin.

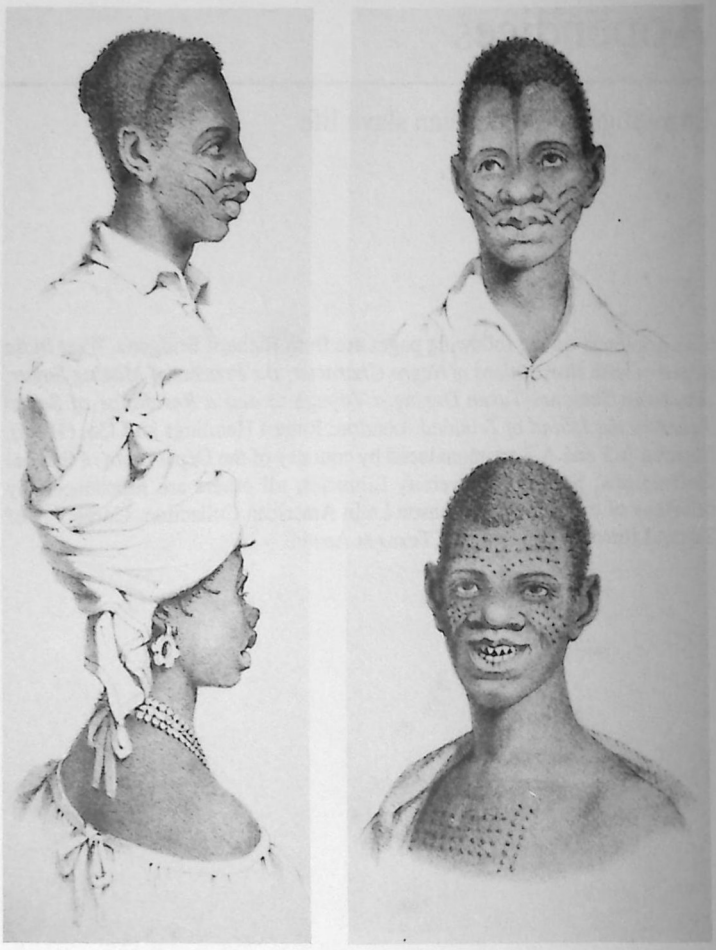


Figure A.1. *Negro Heads.*



Figure A.2. *Field Negro.*



Figure A.3.
Hoeing Cane.



Figure A.4. *Cutting Cane.*



Figure A.5.
Carting Cane to the Mill.

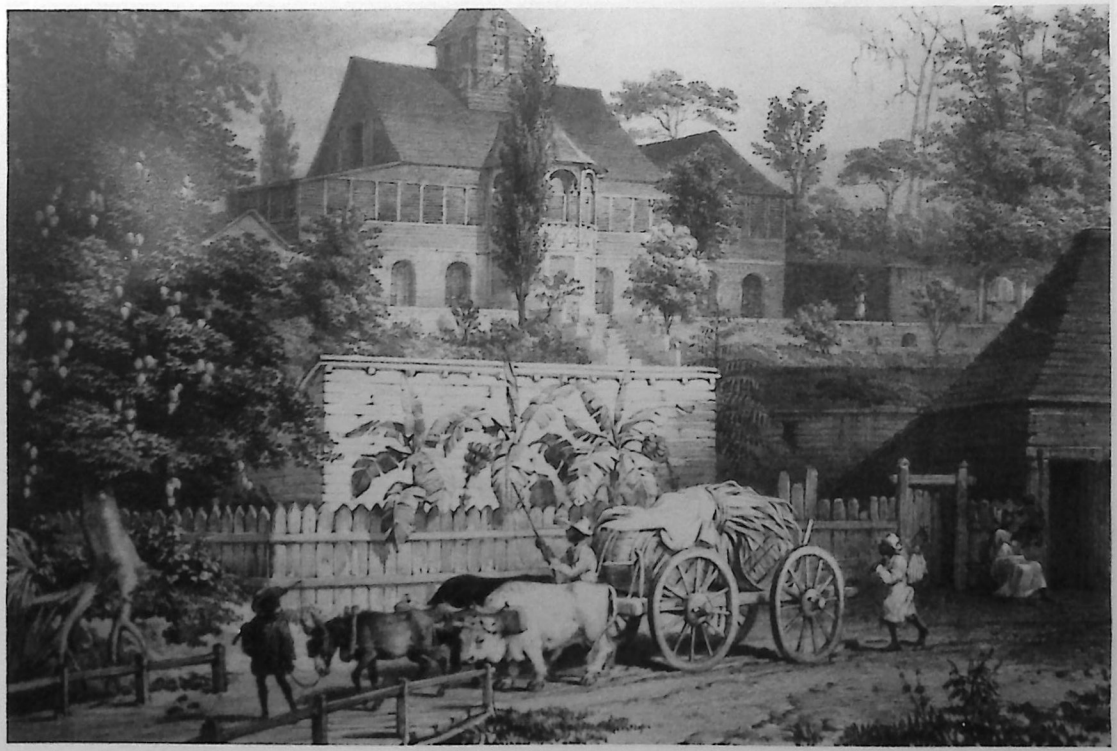


Figure A.6. *Carting Cane.*

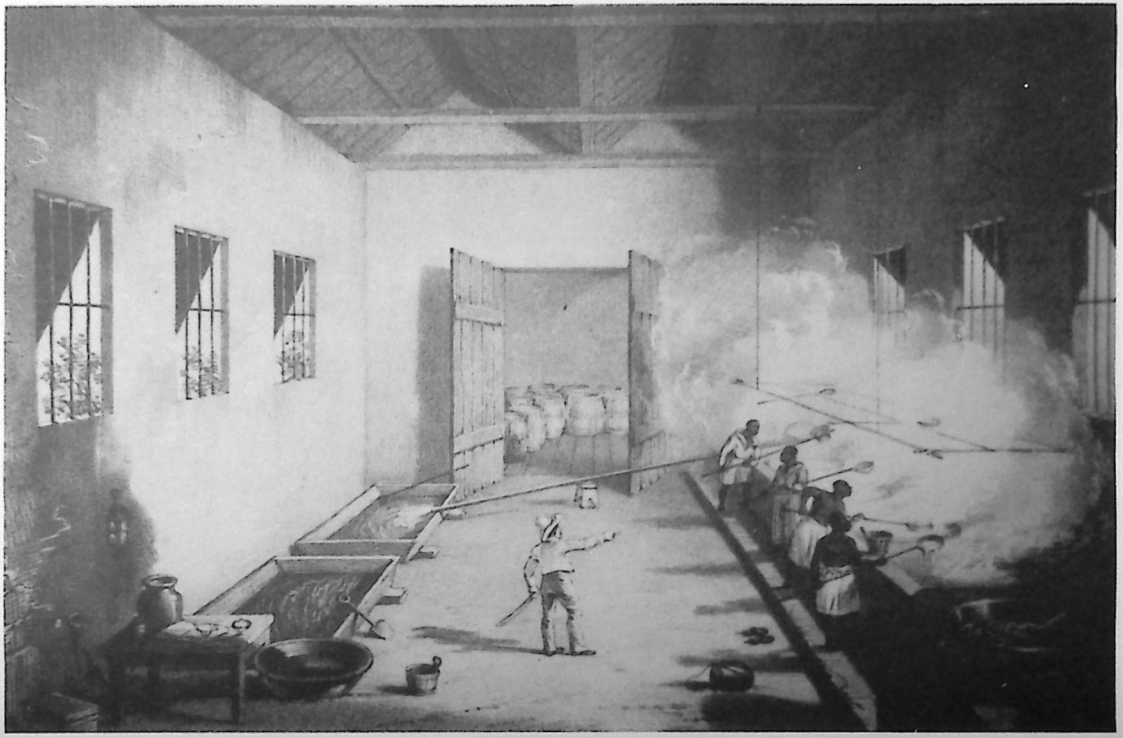


Figure A.7. *In the Boiling House.*



Figure A.8.
Negro Mode of Nursing.



Figure A.9.
Negro Witchcraft.

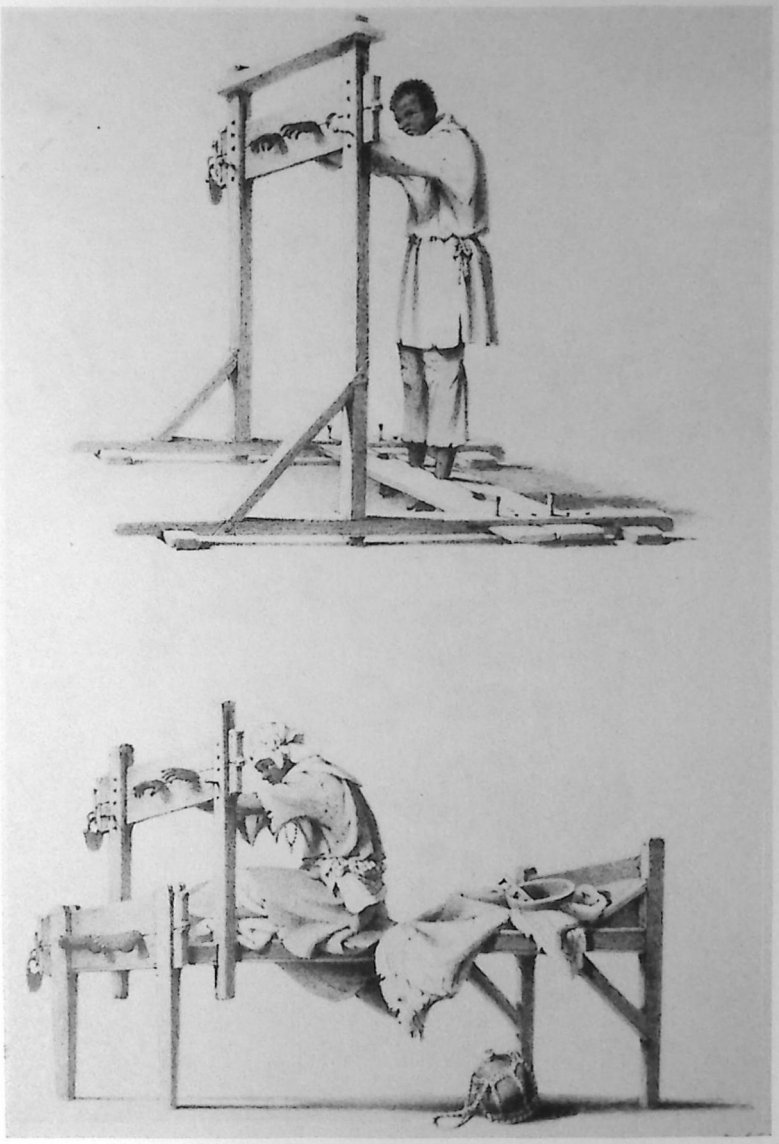


Figure A.10. *Negro Stocks.*



Figure A.11.
Negro Dancing.

Appendix tables

Table A.1. *Life tables for male slaves, conditioned on survival to age 15, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Upper bound						
0						
1						
5						
10						
15	1.0000	0.0893	0.0893	4.7768	26.7586	26.75
20	0.9107	0.1112	0.1221	4.2757	21.9818	24.13
25	0.7996	0.1112	0.1390	3.7199	17.7061	22.14
30	0.6884	0.1006	0.1462	3.1904	13.9862	20.31
35	0.5878	0.1006	0.1712	2.6872	10.7958	18.36
40	0.4871	0.0854	0.1754	2.2221	8.1086	16.64
45	0.4017	0.0854	0.2127	1.7949	5.8866	14.65
50	0.3163	0.0664	0.2100	1.4152	4.0917	12.93
55	0.2498	0.0664	0.2659	1.0831	2.6765	10.71
60	0.1834	0.0466	0.2541	0.8005	1.5934	8.68
65	0.1368	0.0466	0.3407	0.5675	0.7930	5.79
70	0.0902	0.0902	1.0000	0.2255	0.2255	2.50
75	0.0000	0.0000		0.0000	0.0000	
Mean						
0						
1						
5						
10						
15	1.0000	0.0827	0.0827	4.7933	26.4180	26.41
20	0.9173	0.1047	0.1141	4.3250	21.6246	23.57
25	0.8127	0.1134	0.1396	3.7798	17.2996	21.28
30	0.6993	0.1076	0.1538	3.2274	13.5198	19.33
35	0.5917	0.1038	0.1753	2.6991	10.2924	17.39
40	0.4879	0.0953	0.1953	2.2014	7.5933	15.56
45	0.3926	0.0861	0.2192	1.7480	5.3919	13.73
50	0.3066	0.0755	0.2463	1.3440	3.6439	11.88
55	0.2310	0.0655	0.2833	0.9916	2.2999	9.95
60	0.1656	0.0544	0.3287	0.6919	1.3084	7.90
65	0.1112	0.0435	0.3910	0.4472	0.6165	5.54
70	0.0677	0.0677	1.0000	0.1693	0.1693	2.50
75	0.0000	0.0000		0.0000	0.0000	
Lower bound						
0						
1						
5						
10						
15	1.0000	0.0744	0.0744	4.8140	25.9910	25.99
20	0.9256	0.0965	0.1042	4.3868	21.1770	22.87
25	0.8291	0.1162	0.1402	3.8550	16.7902	20.25
30	0.7129	0.1162	0.1631	3.2738	12.9352	18.14
35	0.5966	0.1077	0.1805	2.7140	9.6614	16.19
40	0.4890	0.1077	0.2202	2.1756	6.9475	14.20
45	0.3813	0.0869	0.2279	1.6892	4.7719	12.51
50	0.2944	0.0869	0.2952	1.2547	3.0827	10.47
55	0.2075	0.0642	0.3095	0.8769	1.8280	8.80
60	0.1433	0.0642	0.4483	0.5558	0.9510	6.63
65	0.0790	0.0395	0.5000	0.2964	0.3952	5.00
70	0.0395	0.0395	1.0000	0.0988	0.0988	2.50
75	0.0000	0.0000		0.0000	0.0000	

Table A.2. *Life tables for creole male slaves, conditioned on survival to age 15, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	$_nd_x$	$_nq_x$	$_nL_x$	T_x	e_x
Upper bound						
0						
1						
5						
10						
15	1.0000	0.0709	0.0709	4.8229	29.2239	29.22
20	0.9291	0.0928	0.0999	4.4138	24.4010	26.26
25	0.8364	0.0589	0.0704	4.0346	19.9872	23.89
30	0.7775	0.1062	0.1366	3.6217	15.9527	20.51
35	0.6712	0.0756	0.1126	3.1671	12.3310	18.37
40	0.5956	0.1213	0.2037	2.6748	8.1639	15.38
45	0.4743	0.0812	0.1711	2.1686	6.4890	13.68
50	0.3931	0.0975	0.2481	1.7218	4.3204	10.98
55	0.2956	0.0975	0.3299	1.2342	2.5986	8.79
60	0.1981	0.0741	0.3741	0.8051	1.3644	6.88
65	0.1240	0.0741	0.5978	0.4346	0.5593	4.51
70	0.0499	0.0499	1.0000	0.1247	0.1247	2.50
75	0.0000	0.0000		0.0000	0.0000	
Mean						
0						
1						
5						
10						
15	1.0000	0.0792	0.0792	4.8019	27.2574	27.25
20	0.9208	0.1031	0.1119	4.3461	22.4555	24.38
25	0.8177	0.0816	0.0997	3.8846	18.1094	22.14
30	0.7361	0.1095	0.1488	3.4068	14.2248	19.32
35	0.6266	0.0893	0.1425	2.9097	10.8180	17.26
40	0.5373	0.1146	0.2133	2.4000	7.9083	14.71
45	0.4227	0.0845	0.1999	1.9022	5.5083	13.03
50	0.3382	0.0906	0.2680	1.4644	3.6061	10.66
55	0.2476	0.0839	0.3388	1.0281	2.1418	8.65
60	0.1637	0.0650	0.3973	0.6558	1.1137	6.80
65	0.0986	0.0580	0.5880	0.3482	0.4579	4.64
70	0.0406	0.0374	0.9204	0.1097	0.1097	2.69
75	0.0032	0.0032		0.0000	0.0000	
Lower bound						
0						
1						
5						
10						
15	1.0000	0.0921	0.0921	4.7696	24.2295	24.22
20	0.9079	0.1189	0.1310	4.2420	19.4598	21.43
25	0.7889	0.1164	0.1476	3.6536	15.2179	19.28
30	0.6725	0.1146	0.1705	3.0759	11.5643	17.19
35	0.5579	0.1104	0.1978	2.534	8.4884	15.21
40	0.4475	0.1043	0.2330	1.9768	5.9750	13.35
45	0.3432	0.0896	0.2612	1.4920	3.9982	11.64
50	0.2536	0.0800	0.3155	1.0679	2.5063	9.88
55	0.1736	0.0629	0.3621	0.7107	1.4384	8.28
60	0.1107	0.0511	0.4613	0.4259	0.7277	6.57
65	0.0596	0.0332	0.5569	0.2152	0.3018	5.05
70	0.0264	0.0182	0.6892	0.0866	0.0866	3.27
75	0.0082	0.0082		0.0000	0.0000	

Table A.3. *Life tables for African male slaves, conditioned on survival to age 15, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Upper bound						
0						
1						
5						
10						
15	1.0000	0.0935	0.0935	4.7663	25.7391	25.73
20	0.9065	0.1223	0.1349	4.2270	20.9727	23.13
25	0.7843	0.1158	0.1476	3.6319	16.7457	21.35
30	0.6685	0.1075	0.1608	3.0738	13.1138	19.61
35	0.5610	0.1080	0.1854	2.5451	10.0400	17.89
40	0.4570	0.1012	0.2214	2.0321	7.4949	16.39
45	0.3558	0.0614	0.1726	1.6256	5.4628	15.35
50	0.2944	0.0616	0.2094	1.3179	3.8372	13.03
55	0.2328	0.0679	0.2918	0.9940	2.5193	10.82
60	0.1648	0.0357	0.2165	0.7350	1.5252	9.25
65	0.1292	0.0357	0.2763	0.5566	0.7902	6.11
70	0.0935	0.0935	1.0000	0.2337	0.2337	2.50
75	0.0000	0.0000		0.0000	0.0000	
Mean						
0						
1						
5						
10						
15	1.0000	0.1112	0.1112	4.7220	24.3710	24.37
20	0.8888	0.1267	0.1426	4.1272	19.6490	22.10
25	0.7621	0.1166	0.1529	3.5190	15.5219	20.36
30	0.6455	0.1121	0.1736	2.9474	12.0029	18.59
35	0.5334	0.1002	0.1879	2.4167	9.0555	16.97
40	0.4332	0.0987	0.2278	1.9194	6.6388	15.32
45	0.3345	0.0662	0.1980	1.5071	4.7194	14.10
50	0.2683	0.0663	0.2473	1.1757	3.2123	11.97
55	0.2020	0.0601	0.2973	0.8597	2.0366	10.08
60	0.1419	0.0427	0.3007	0.6029	1.1769	8.29
65	0.0992	0.0340	0.3432	0.4111	0.5740	5.78
70	0.0652	0.0652	1.0000	0.1630	0.1630	2.50
75	0.0000	0.0000		0.0000	0.0000	
Lower bound						
0						
1						
5						
10						
15	1.0000	0.1319	0.1319	4.6702	22.7715	22.77
20	0.8681	0.1319	0.1520	4.0105	18.1013	20.85
25	0.7361	0.1175	0.1596	3.3870	14.0908	19.14
30	0.6187	0.1175	0.1899	2.7996	10.7038	17.30
35	0.5012	0.0958	0.1911	2.2665	7.9042	15.77
40	0.4054	0.0958	0.2363	1.7876	5.6377	13.90
45	0.3096	0.0718	0.2320	1.3685	3.8502	12.43
50	0.2378	0.0718	0.3021	1.0094	2.4816	10.43
55	0.1660	0.0509	0.3064	0.7026	1.4723	8.87
60	0.1151	0.0509	0.4418	0.4484	0.7696	6.68
65	0.0642	0.0321	0.5000	0.2409	0.3212	5.00
70	0.0321	0.0321	1.0000	0.0803	0.0803	2.50
75	0.0000	0.0000		0.0000	0.0000	

Table A.4. *Life tables for female slaves, conditioned on survival to age 15, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Upper bound						
0						
1						
5						
10						
15	1.0000	0.0836	0.0836	4.7909	30.9071	30.90
20	0.9164	0.0837	0.0914	4.3725	26.1162	28.49
25	0.8326	0.0837	0.1006	3.9538	21.7437	26.11
30	0.7489	0.0866	0.1157	3.5278	17.7899	23.75
35	0.6622	0.0866	0.1308	3.0946	14.2621	21.53
40	0.5756	0.0734	0.1275	2.6946	11.1675	19.40
45	0.5022	0.0734	0.1461	2.3277	8.4729	16.87
50	0.4289	0.0695	0.1621	1.9706	6.1452	14.32
55	0.3594	0.0695	0.1934	1.6230	4.1746	11.61
60	0.2899	0.0714	0.2465	1.2707	2.5516	8.80
65	0.2184	0.0714	0.3271	0.9135	1.2809	5.86
70	0.1470	0.1470	1.0000	0.3674	0.3674	2.50
75	0.0000	0.0000		0.0000	0.0000	
Mean						
0						
1						
5						
10						
15	1.0000	0.0892	0.0892	4.7777	29.5472	29.54
20	0.9108	0.0893	0.0980	4.3308	24.7702	27.16
25	0.8215	0.0893	0.1087	3.8843	20.4393	24.87
30	0.7322	0.0910	1.1243	3.4334	16.5550	22.61
35	0.6412	0.0877	0.1367	2.9867	13.1216	20.46
40	0.5535	0.0799	0.1444	2.5677	10.1349	18.31
45	0.4736	0.0743	0.1568	2.1823	7.5672	15.97
50	0.3993	0.0720	0.1803	1.8166	5.3849	13.48
55	0.3273	0.0721	0.2204	1.4562	3.5683	10.90
60	0.2552	0.0733	0.2871	1.0927	2.1121	8.27
65	0.1819	0.0690	0.3792	0.7371	1.0194	5.60
70	0.1129	0.1129	1.0000	0.2823	0.2823	2.50
75	0.0000	0.0000		0.0000	0.0000	
Lower bound						
0						
1						
5						
10						
15	1.0000	0.0969	0.0969	4.7576	27.6568	27.65
20	0.9031	0.0969	0.1074	4.2729	22.8992	25.35
25	0.8061	0.0971	0.1205	3.7877	18.6263	23.10
30	0.7090	0.0971	0.1370	3.3022	14.8386	20.92
35	0.6119	0.0891	0.1456	2.8367	11.5364	18.85
40	0.5228	0.0891	0.1704	2.3914	8.6997	16.64
45	0.4337	0.0755	0.1740	1.9800	6.3083	14.54
50	0.3583	0.0755	0.2107	1.6027	4.3282	12.08
55	0.2828	0.0758	0.2681	1.2244	2.7256	9.63
60	0.2070	0.0758	0.3663	0.8454	1.5012	7.25
65	0.1312	0.0656	0.5000	0.4919	0.6558	5.00
70	0.0656	0.0656	1.0000	0.1640	0.1640	2.50
75	0.0000	0.0000		0.0000	0.0000	

Table A.5. *Life tables for creole female slaves, conditioned on survival to age 15, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	$_nd_x$	$_nq_x$	$_nL_x$	T_x	e_x
Upper bound						
0						
1						
5						
10						
15	1.0000	0.0715	0.0715	4.8211	35.2545	35.25
20	0.9285	0.0606	0.0653	4.4907	30.4333	32.77
25	0.8678	0.0606	0.0698	4.1876	25.9426	29.89
30	0.8072	0.0660	0.0817	3.8712	21.7550	26.95
35	0.7413	0.0660	0.0890	3.5414	17.8838	24.12
40	0.6753	0.0649	0.0962	3.2142	14.3424	21.23
45	0.6104	0.0649	0.1064	2.8895	11.1282	18.23
50	0.5454	0.0810	0.1484	2.5248	8.2387	15.10
55	0.4645	0.0810	0.1743	2.1200	5.7139	12.30
60	0.3835	0.0935	0.2439	1.6838	3.5938	9.37
65	0.2900	0.0935	0.3225	1.2162	1.9100	6.58
70	0.1965	0.1154	0.5873	0.6939	0.6939	3.53
75	0.0811	0.0811		0.0000	0.0000	
Mean						
0						
1						
5						
10						
15	1.0000	0.0719	0.0719	4.8202	33.3280	33.32
20	0.9281	0.0704	0.0759	4.4642	28.5078	30.71
25	0.8576	0.0700	0.0817	4.1130	24.0436	28.03
30	0.7876	0.0726	0.0922	3.7563	19.9306	25.30
35	0.7150	0.0709	0.0991	3.3977	16.1743	22.62
40	0.6441	0.0730	0.1134	3.0380	12.7766	19.83
45	0.5711	0.0706	0.1236	2.6790	9.7386	17.05
50	0.5005	0.0791	0.1581	2.3048	7.0596	14.10
55	0.4214	0.0880	0.2089	1.8869	4.7549	11.28
60	0.3334	0.0947	0.2842	1.4299	2.8680	8.60
65	0.2386	0.0919	0.3851	0.9633	1.4380	6.02
70	0.1467	0.1035	0.7057	0.4747	0.4747	3.23
75	0.0432	0.0432		0.0000	0.0000	
Lower bound						
0						
1						
5						
10						
15	1.0000	0.0724	0.0724	4.8191	31.1335	31.13
20	0.9276	0.0816	0.0880	4.4340	26.3144	28.36
25	0.8460	0.0808	0.0955	4.0279	21.8804	25.86
30	0.7652	0.0802	0.1048	3.6255	17.8525	23.33
35	0.6850	0.0764	0.1116	3.2339	14.2270	20.76
40	0.6086	0.0822	0.1351	2.8373	10.9931	18.06
45	0.5263	0.0770	0.1463	2.4392	8.1558	15.49
50	0.4493	0.0770	0.1714	2.0541	5.7166	12.72
55	0.3723	0.0961	0.2582	1.6213	3.6624	9.83
60	0.2762	0.0961	0.3480	1.1407	2.0411	7.38
65	0.1801	0.0900	0.5000	0.6753	0.9004	5.00
70	0.0900	0.0900	1.0000	0.2251	0.2251	2.50
75	0.0000	0.0000		0.0000	0.0000	

Table A.6. *Life tables for African female slaves, conditioned on survival to age 15, 1813–16: upper bound, mean life table, and lower bound*

x	l_x	${}_nd_x$	${}_nq_x$	${}_nL_x$	T_x	e_x
Upper bound						
0						
1						
5						
10						
15	1.0000	0.1080	0.1080	4.7301	29.7744	29.77
20	0.8920	0.0960	0.1076	4.2201	25.0443	28.07
25	0.7960	0.0960	0.1206	3.7400	20.8242	26.16
30	0.7000	0.0855	0.1221	3.2863	17.0843	24.40
35	0.6145	0.0855	0.1391	2.8590	13.7980	22.45
40	0.5291	0.0675	0.1277	2.4765	10.9389	20.67
45	0.4615	0.0675	0.1463	2.1388	8.4624	18.33
50	0.3940	0.0572	0.1452	1.8269	6.3236	16.04
55	0.3368	0.0572	0.1699	1.5408	4.4966	13.35
60	0.2795	0.0507	0.1815	1.2709	2.9558	10.57
65	0.2288	0.0507	0.2218	1.0172	1.6849	7.36
70	0.1781	0.0890	0.5000	0.6677	0.6677	3.75
75	0.0890	0.0890		0.0000	0.0000	
Mean						
0						
1						
5						
10						
15	1.0000	0.0993	0.0993	4.7517	30.0669	30.06
20	0.9007	0.0946	0.1050	4.2670	25.3152	28.10
25	0.8061	0.0937	0.1162	3.7964	21.0481	26.11
30	0.7124	0.0859	0.1206	3.3474	17.2517	24.21
35	0.6265	0.0841	0.1343	2.9223	13.9044	22.19
40	0.5424	0.0696	0.1283	2.5380	10.9821	20.24
45	0.4728	0.0675	0.1427	2.1952	8.4441	17.86
50	0.4053	0.0624	0.1539	1.8706	6.2489	15.41
55	0.3429	0.0625	0.1822	1.5586	4.3782	12.76
60	0.2805	0.0604	0.2155	1.2513	2.8197	10.05
65	0.2200	0.0577	0.2625	0.9558	1.5684	7.12
70	0.1623	0.0795	0.4900	0.6126	0.6126	3.77
75	0.0828	0.0828		0.0000	0.0000	
Lower bound						
0						
1						
5						
10						
15	1.0000	0.0825	0.0825	4.7937	30.6330	30.63
20	0.9175	0.0918	0.1000	4.3579	25.8394	28.16
25	0.8257	0.0891	0.1080	3.9056	21.4815	26.01
30	0.7365	0.0868	0.1179	3.4657	17.5759	23.86
35	0.6497	0.0815	0.1255	3.0447	14.1103	21.71
40	0.5682	0.0736	0.1296	2.6568	11.0655	19.47
45	0.4946	0.0673	0.1362	2.3044	8.4087	17.00
50	0.4272	0.0723	0.1692	1.9553	6.1043	14.28
55	0.3549	0.0726	0.2047	1.5929	4.1491	11.69
60	0.2823	0.0792	0.2807	1.2133	2.5561	9.05
65	0.2030	0.0713	0.3512	0.8369	1.3429	6.61
70	0.1317	0.0611	0.4637	0.5059	0.5059	3.84
75	0.0707	0.0707		0.0000	0.0000	

Table A.7. *Descriptive statistics for adult (age 15 or older) plantation slaves: 1813*

	All	African	Creole	Definition
Males				
Number	6,849	5,378	1,471	
Survivors	0.90	0.89	0.92	Proportion surviving from 1813 registration to 1816 registration
Age	31.65	32.09	30.03	Mean reported age in years
Height	64.03	64.01	64.09	Mean reported height in inches
Short				Shortest 20%
Tall				Tallest 20%
Creole	0.21			Proportion creole
Colored	0.03	0.00	0.11	Proportion colored
Field	0.69	0.75	0.52	Proportion field laborers
Domestic	0.03	0.01	0.07	Proportion domestic servants
Head	0.04	0.03	0.08	Proportion head slaves
Skilled	0.17	0.15	0.27	Proportion in skilled trades
Other/no job	0.07	0.06	0.06	
Fr./Span.	0.51	0.51	0.53	Proportion with French or Spanish owner
Size	74.31	74.84	72.37	Mean number of slaves on estate
Sugar	0.77	0.78	0.77	Proportion on estate growing sugar
Coffee	0.10	0.10	0.09	Proportion on estate growing coffee
Cotton	0.03	0.03	0.03	Proportion on estate growing cotton
Cocoa	0.11	0.12	0.09	Proportion on estate growing cocoa
Provisions	0.05	0.05	0.06	Proportion on estate growing provisions as cash crop

Table A.7 *(cont.)*

	All	African	Creole	Definition
Females				
Number	4,508	3,306	1,202	
Survivors	0.92	0.91	0.95	Proportion surviving from 1813 registration to 1816 registration
Age	31.03	31.74	29.10	Mean reported age in years
Height	60.58	60.41	61.06	Mean reported height in inches
Short				Shortest 20%
Tall				Tallest 20%
Creole	0.27			Proportion creole
Colored	0.03	0.00	0.09	Proportion colored
Field	0.82	0.87	0.69	Proportion field laborers
Domestic	0.15	0.10	0.28	Proportion domestic servants
Other/no job	0.03	0.03	0.03	
Fr./Span.	0.50	0.48	0.57	Proportion with French or Spanish owner
Size	75.96	77.49	71.76	Mean number of slaves on estate
Sugar	0.76	0.77	0.73	Proportion on estate growing sugar
Coffee	0.12	0.11	0.13	Proportion on estate growing coffee
Cotton	0.03	0.03	0.04	Proportion on estate growing cotton
Cocoa	0.11	0.11	0.10	Proportion on estate growing cocoa
Provisions	0.06	0.05	0.08	Proportion on estate growing provisions as cash crop

Source: T. 71/501–2: Trinidad Slave Registers, 1813.

Table A.8. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: adult male plantation slaves, 1813–16*

	All		African		Creole	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.4257	0.13	0.6005	0.07	0.0861	0.89
Std. *P* (Surv.)	–0.8560	0.09	–0.7346	0.00	–1.1556	0.00
Fr./Span.	0.2042	0.02	0.2733	0.00	–0.1726	0.43
Brit.						
Size	0.0038	0.17	0.0011	0.71	0.0168	0.01
Size^2	-1.1×10^{-5}	0.28	2.6×10^{-6}	0.83	-7.7×10^{-5}	0.00
Tall	0.1424	0.17	0.1824	0.13	0.0014	0.99
Average						
Short	–0.1594	0.12	–0.2064	0.06	0.1283	0.65
Field	0.0827	0.59	0.1555	0.35	–0.1318	0.73
Domestic	0.1661	0.58	0.4241	0.35	–0.4053	0.42
Head	0.8918	0.00	1.0101	0.01	0.5637	0.29
Skilled	0.4993	0.01	0.4769	0.02	0.4457	0.29
Other						
Sugar	–0.6275	0.00	–0.5676	0.00	–0.8562	0.07
Coffee	–0.2128	0.19	–0.2071	0.24	–0.2312	0.61
Cotton						
Cocoa	–0.4927	0.00	–0.4819	0.00	–0.4767	0.26
Provisions	–0.7447	0.00	–0.8145	0.00	–0.5079	0.36
N (Obs.)	*6,849*		*5,378*		*1,471*	
d.f.	*14*		*14*		*14*	
Model χ^2	*116.13*		*79.83*		*50.54*	
$-2 \ln \Lambda$	*4,319.69*		*3,547.62*		*746.51*	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.4143	0.05	0.5778	0.03	0.1865	0.62
Std. *P* (Surv.)	–0.7877	0.00	–0.6870	0.00	–1.0101	0.00
N (Obs.)	*6,849*		*5,378*		*1,471*	
d.f.	*1*		*1*		*1*	
Model χ^2	*64.13*		*33.21*		*31.55*	
$-2 \ln \Lambda$	*4,371.69*		*3,594.24*		*765.52*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.9. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: adult female plantation slaves, 1813–16*

	All		African		Creole	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.3613	0.43	0.7236	0.19	–0.1513	0.87
Std. *P* (Surv.)	–0.4304	0.00	–0.3773	0.05	–0.4507	–.12
Fr./Span.	0.0019	0.98	–0.0552	0.69	0.0312	0.91
Brit.						
Size	0.0071	0.06	0.0043	0.31	0.0147	0.11
Size^2	-2.1×10^{-5}	0.16	-1.2×10^{-5}	0.46	-4.0×10^{-5}	0.29
Tall	–0.1455	0.28	–0.1075	0.49	–0.4233	0.15
Average						
Short	–0.2082	0.14	–0.0865	0.58	–0.7096	0.05
Field	0.9580	0.00	0.8420	0.01	1.3954	0.00
Domestic	1.3217	0.00	0.9551	0.01	1.8825	0.00
Other						
Sugar	–0.2302	0.37	–0.3032	0.29	–0.0887	0.88
Coffee	0.0291	0.91	0.0454	0.87	–0.0194	0.97
Cotton						
Cocoa	0.1636	0.49	–0.0226	0.92	1.9680	0.07
Provisions	0.0473	0.88	0.0923	0.81	–0.0039	0.99
N (Obs.)	*4,508*		*3,306*		*1,202*	
d.f.	*12*		*12*		*12*	
Model χ^2	*42.85*		*20.44*		*35.69*	
$-2 \ln \Lambda$	*2,363.39*		*1,868.92*		*469.98*	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	1.0276	0.01	1.0325	0.02	1.2246	0.05
Std. *P* (Surv.)	–0.5816	0.00	–0.5401	0.00	–0.6365	0.01
N (Obs.)	*4,508*		*3,306*		*1,202*	
d.f.	*1*		*1*		*1*	
Model χ^2	*15.38*		*8.87*		*5.41*	
$-2 \ln \Lambda$	*2,390.86*		*1,880.49*		*500.26*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.10. *Descriptive statistics for all plantation slave children (ages 0–14): 1813*

	0–14	0–4	5–14	Definition
Boys				
Number	1,889	828	1,061	
Survivors	0.90	0.84	0.95	Proportion surviving from 1813 registration to 1816 registration
Age	5.99	2.08	9.03	Mean reported age in years
Height	39.07	30.53	46.86	Mean reported height in inches
Short				Shortest 20% by age
Tall				Tallest 20% by age
Colored	0.07	0.08	0.07	Proportion colored
No mom	0.18	0.08	0.26	Proportion not matched with mother
Field	0.17	0.02	0.28	Proportion field laborers
Domestic	0.10	0.01	0.17	Proportion domestic servants
Outside	0.09	0.00	0.15	Proportion with other outside job
Other/no job	0.36	0.97	0.40	
Fr./Span.	0.51	0.49	0.52	Proportion with French or Spanish owner
Size	76.59	76.57	76.61	Mean number of slaves on estate
Sugar	0.73	0.73	0.73	Proportion on estate growing sugar
Coffee	0.11	0.10	0.11	Proportion on estate growing coffee
Cotton	0.05	0.04	0.06	Proportion on estate growing cotton
Cocoa	0.12	0.14	0.11	Proportion on estate growing cocoa
Provisions	0.05	0.06	0.05	Proportion on estate growing provisions as cash crop

Table A.10 *(cont.)*

	0–14	0–4	5–14	Definition
Girls				
Number	1,894	837	1,057	
Survivors	0.88	0.81	0.94	Proportion surviving from 1813 registration to 1816 registration
Age	5.83	2.04	8.83	Mean reported age in years
Height	39.43	30.08	46.84	Mean reported height in inches
Short				Shortest 20% by age
Tall				Tallest 20% by age
Colored	0.07	0.06	0.08	Proportion colored
No mom	0.17	0.08	0.24	Proportion not matched with mother
Field	0.15	0.01	0.26	Proportion field laborers
Domestic	0.16	0.00	0.29	Proportion domestic servants
Other/no job	0.69	0.99	0.45	
Fr./Span.	0.53	0.52	0.54	Proportion with French or Spanish owner
Size	77.17	77.32	77.05	Mean number of slaves on estate
Sugar	0.71	0.71	0.71	Proportion on estate growing sugar
Coffee	0.12	0.13	0.12	Proportion on estate growing coffee
Cotton	0.06	0.04	0.07	Proportion on estate growing cotton
Cocoa	0.13	0.13	0.13	Proportion on estate growing cocoa
Provisions	0.06	0.06	0.07	Proportion on estate growing provisions as cash crop

Source: T. 71/501–2: Trinidad Slave Registers, 1813.

Table A.11. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: plantation slave boys, 1813–16*

	0–14		0–4		5–14	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.9413	0.03	1.0684	0.09	56.8143	0.01
Std. *P* (Surv.)	–0.8036	0.00	–0.9074	0.00	16.9454	0.02
Fr./Span.	0.2875	0.09	0.1842	0.39	0.5247	0.09
Brit.						
Size	–0.0122	0.03	–0.0227	0.00	0.0075	0.43
Size^2	4.8×10^{-5}	0.03	8.9×10^{-5}	0.00	-2.8×10^{-5}	0.44
No mom	–0.4382	0.05	–0.5865	0.08	–0.5193	0.09
Tall	0.5071	0.04	0.3373	0.26	0.8948	0.06
Average						
Short	–0.4469	0.01	–0.6793	0.00	0.0064	0.98
Colored	0.1108	0.72	0.2276	0.55	–0.0795	0.88
Field	0.2634	0.38			0.1206	0.74
Domestic	–0.0124	0.97			0.1255	0.77
Outside	0.3031	0.46			0.0628	0.89
Other						
Sugar	–0.2038	0.56	0.1596	0.71	–0.9914	0.11
Coffee	0.2991	0.40	0.7360	0.13	–0.5253	0.37
Cotton						
Cocoa	–0.2959	0.35	–0.3374	0.40	–0.2700	0.63
Provisions	–0.6006	0.16	–0.7381	0.15	–0.3176	0.70
N (Obs.)	*1,889*		*828*		*1,061*	
d.f.	*15*		*12*		*15*	
Model χ^2	*92.86*		*41.82*		*21.13*	
$-2 \ln \Lambda$	*1,118.07*		*671.24*		*423.08*	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.3801	0.10	0.4864	0.29	53.4303	0.01
Std. *P* (Surv.)	–0.7815	0.00	–0.7127	0.01	15.9723	0.01
N (Obs.)	*1,889*		*828*		*1,061*	
d.f.	*1*		*12*		*1*	
Model χ^2	*59.49*		*6.59*		*6.56*	
$-2 \ln \Lambda$	*1,151.45*		*706.47*		*437.65*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.12. *Estimated coefficients β̂ and associated probabilities for logistic models of mortality: plantation slave girls, 1813–16*

	0–14		0–4		5–14	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	1.1880	0.00	1.2224	0.05	–5.2355	0.78
Std. *P* (Surv.)	–0.6639	0.00	–0.6169	0.02	–2.7699	0.66
Fr./Span. Brit.	0.2256	0.18	0.1627	0.42	0.3118	0.30
Size	–0.0016	0.74	–0.0057	0.35	0.0062	0.50
Size^2	-7.5×10^{-6}	0.70	5.9×10^{-6}	0.80	-3.4×10^{-5}	0.33
No mom	–0.0313	0.89	–0.0206	0.95	–0.0085	0.97
Tall	–0.0288	0.88	–0.1360	0.55	0.3839	0.37
Average						
Short	–0.6301	0.00	–0.4876	0.02	–0.8794	0.00
Colored	0.4219	0.23	0.5117	0.26	0.3831	0.48
Field	0.8789	0.01			0.7673	0.05
Domestic	0.4549	0.15			0.4371	0.24
Other						
Sugar	–0.4856	0.16	–0.2116	0.63	–0.8629	0.13
Coffee	–0.4601	0.13	–0.3971	0.32	–0.4611	0.34
Cotton						
Cocoa	–0.1704	0.57	0.1747	0.65	–0.6041	0.22
Provisions	–0.8352	0.03	–0.8434	0.09	–0.4846	0.51
N (Obs.)	*1,894*		*837*		*1,057*	
d.f.	*14*		*12*		*14*	
Model χ^2	*119.44*		*25.97*		*21.96*	
$-2 \ln \Lambda$	*1,224.88*		*776.16*		*444.43*	
	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.1810	0.39	0.5324	0.21	14.1950	0.37
Std. *P* (Surv.)	–0.8491	0.00	–0.6080	0.02	3.7638	0.47
N (Obs.)	*1,894*		*837*		*1,057*	
d.f.	*1*		*1*		*1*	
Model χ^2	*79.40*		*4.80*		*0.51*	
$-2 \ln \Lambda$	*1,264.92*		*797.32*		*465.88*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.13. *Descriptive statistics for plantation slave children (ages 0–14), matched with mothers: 1813*

	0–14	0–4	5–14	Definition
Boys				
Number	1,515	762	753	
Survivors	0.90	0.85	0.95	Proportion surviving from 1813 registration to 1816 registration
Age	5.12	2.04	8.24	Mean reported age in years
Height	37.81	30.28	45.44	Mean reported height in inches
Short				Shortest 20% by age
Tall				Tallest 20% by age
Colored	0.07	0.07	0.07	Proportion colored
Mom tall	0.25	0.24	0.27	Proportion with mother in tallest 20% of women
Mom short	0.21	0.21	0.21	Proportion with mother in shortest 20% of women
Mom's age	26.50	26.98	26.01	Mean age of mother at birth of child
Mom domestic	0.13	0.13	0.14	Proportion with domestic servant mother
Mom creole	0.23	0.22	0.24	Proportion with creole mother
Field	0.13	0.02	0.25	Proportion field laborers
Domestic	0.08	0.01	0.15	Proportion domestic servants
Outside	0.06	0.00	0.13	Proportion with other outside job
Other/no job	0.73	0.97	0.47	
Fr./Span.	0.50	0.49	0.50	Proportion with French or Spanish owner
Size	78.04	75.64	80.46	Mean number of slaves on estate
Sugar	0.74	0.10	0.11	Proportion on estate growing coffee
Cotton	0.05	0.05	0.06	Proportion on estate growing cotton
Cocoa	0.13	0.14	0.12	Proportion on estate growing cocoa
Provisions	0.05	0.05	0.04	Proportion on estate growing provisions as cash crop

Table A.13 *(cont.)*

	0–14	0–4	5–14	Definition
Girls				
Number	1,544	775	769	
Survivors	0.88	0.82	0.95	Proportion surviving from 1813 registration to 1816 registration
Age	5.09	2.02	8.18	Mean reported age in years
Height	37.81	30.10	45.58	Mean reported height in inches
Short				Shortest 20% by age
Tall				Tallest 20% by age
Colored	0.06	0.05	0.07	Proportion colored
Mom tall	0.25	0.24	0.27	Proportion with mother in tallest 20% of women
Mom short	0.21	0.21	0.21	Proportion with mother in shortest 20% of women
Mom's age	27.03	27.28	26.79	Mean age of mother at birth of child
Mom domestic	0.14	0.13	0.16	Proportion with domestic servant mother
Mom creole	0.25	0.23	0.26	Proportion with creole mother
Field	0.12	0.02	0.23	Proportion field laborers
Domestic	0.13	0.00	0.26	Proportion domestic servants
Other/no job	0.75	0.98	0.51	
Fr./Span.	0.51	0.51	0.51	Proportion with French or Spanish owner
Size	79.63	78.55	80.71	Mean number of slaves on estate
Sugar	0.72	0.72	0.73	Proportion on estate growing sugar
Coffee	0.12	0.12	0.11	Proportion on estate growing coffee
Cotton	0.06	0.05	0.07	Proportion on estate growing cotton
Cocoa	0.12	0.13	0.11	Proportion on estate growing cocoa
Provisions	0.06	0.06	0.06	Proportion on estate growing provisions as cash crop

Source: T. 71/501–2: Trinidad Slave Registers, 1813.

Table A.14. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: plantation slave girls, ages 0–14, matched with mothers, 1813–16*

	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	1.0762	0.05	1.2516	0.00	0.2015	0.37
Std. *P* (Surv.)	–0.7054	0.00	–0.6948	0.00	–0.8465	0.00
Fr./Span.	0.2153	0.24	0.2201	0.22		
Brit.						
Size	–0.0037	0.49	–0.0031	0.57		
Size^2	-2.2×10^{-5}	0.91	-4.6×10^{-6}	0.82		
Tall	–0.0412	0.84	–0.0285	0.89		
Average						
Short	–0.6312	0.00	–0.9278	0.00		
Colored	0.2592	0.55	0.3958	0.34		
Field	0.7197	0.06	0.7162	0.06		
Domestic	0.5551	0.17	0.5801	0.15		
Mom tall	–0.0522	0.79				
Mom avg.						
Mom short	–0.0607	0.77				
Mom's age	0.0062	0.59				
Mom domes.	–0.1055	0.68				
Mom creole	0.3862	0.07				
Sugar	–0.4592	0.24	–0.4409	0.26		
Coffee	–0.5987	0.08	–0.5784	0.09		
Cotton						
Cocoa	–0.0851	0.80	–0.1330	0.69		
Provisions	–1.1551	0.01	–1.0641	0.01		
N (Obs.)	*1,544*		*1,544*		*1,544*	
d.f.	*18*		*13*		*1*	
Model χ^2	*104.64*		*100.96*		*64.86*	
$-2 \ln \Lambda$	*1,027.31*		*1,030.98*		*1,067.09*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.15. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: plantation slave girls, ages 0–4, matched with mothers, 1813–16*

	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.5172	0.50	1.1453	0.07	0.5839	0.18
Std. *P* (Surv.)	–0.6813	0.02	–0.5993	0.04	–0.5837	–.03
Fr./Span.	0.2273	0.29	0.2259	0.28		
Brit.						
Size	–0.0048	0.46	–0.0035	0.58		
Size^2	-8.0×10^{-6}	0.97	-4.4×10^{-6}	0.86		
Tall	–0.1725	0.46	–0.1722	0.46		
Average						
Short	–0.5974	0.01	–0.5868	0.01		
Colored	0.6509	0.25	0.6471	0.23		
Mom tall	–0.1001	0.67				
Mom avg.						
Mom short	–0.1090	0.66				
Mom's age	0.0239	0.11				
Mom domes.	–0.4249	0.15				
Mom creole	0.3321	0.18				
Sugar	–0.1962	0.67	–0.1494	0.75		
Coffee	–0.3061	0.46	–0.3011	0.46		
Cotton						
Cocoa	0.1435	0.72	0.1157	0.77		
Provisions	–1.0164	0.06	–0.8397	0.11		
N (Obs.)	*775*		*775*		*775*	
d.f.	*16*		*11*		*1*	
Model χ^2	*32.81*		*26.89*		*4.08*	
$-2 \ln \Lambda$	*705.38*		*711.30*		*734.11*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.16. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: plantation slave girls, ages 5–14, matched with mothers, 1813–16*

	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	11.5142	0.63	17.2640	0.47	30.0257	0.16
Std. *P* (Surv.)	2.3599	0.76	4.4291	0.57	8.9623	0.21
Fr./Span.	0.0628	0.86	0.1588	0.66		
Brit.						
Size	–0.0014	0.90	–0.0038	0.73		
Size^2	-4.3×10^{-6}	0.92	5.6×10^{-7}	0.99		
Tall	0.6882	0.22	0.6795	0.22		
Average						
Short	–0.7026	0.05	–0.6976	0.05		
Colored	–0.4753	0.49	0.1411	0.82		
Field	0.4272	0.33	0.3494	0.43		
Domestic	0.4156	0.37	0.3866	0.41		
Mom tall	–0.1126	0.76				
Mom avg.						
Mom short	–0.0037	0.99				
Mom's age	–0.0252	0.17				
Mom domes.	0.8625	0.17				
Mom creole	0.6426	0.17				
Sugar	–0.9267	0.19	–0.7771	0.26		
Coffee	–0.9996	0.12	–0.9583	0.11		
Cotton						
Cocoa	–0.2913	0.64	–0.3777	0.54		
Provisions	–1.3687	0.11	–1.1698	0.16		
N (Obs.)	*769*		*769*		*769*	
d.f.	*18*		*13*		*1*	
Model χ^2	*22.03*		*15.36*		*1.69*	
$-2 \ln \Lambda$	*309.53*		*316.20*		*329.88*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.17. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: plantation slave boys, ages 0–14, matched with mothers, 1813–16*

	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	0.1766	0.77	0.8416	0.07	0.3688	0.15
Std. *P* (Surv.)	–0.8239	0.00	–0.8232	0.00	–0.8172	0.00
Fr./Span.	0.4106	0.04	0.4207	0.03		
Brit.						
Size	–0.0164	0.01	–0.0165	0.01		
Size^2	6.6×10^{-5}	0.02	6.6×10^{-5}	0.02		
Tall	0.8125	0.01	0.8071	0.01		
Average						
Short	–0.3944	0.05	–0.4127	0.04		
Colored	–0.0253	0.94	0.1823	0.62		
Field	0.2029	0.58	0.1733	0.64		
Domestic	–0.2291	0.60	–0.2086	0.63		
Outside	0.3121	0.57	0.3578	0.51		
Mom tall	0.1687	0.44				
Mom avg.						
Mom short	0.3502	0.15				
Mom's age	0.0162	0.24				
Mom domes.	0.5729	0.08				
Mom creole	0.1418	0.55				
Sugar	0.0919	0.81	0.0485	0.89		
Coffee	0.2094	0.58	0.1753	0.64		
Cotton						
Cocoa	–0.4492	0.19	–0.4431	0.19		
Provisions	–0.5335	0.26	–0.5951	0.21		
N (Obs.)	*1,515*		*1,515*		*1,515*	
d.f.	*19*		*14*		*1*	
Model χ^2	*90.97*		*83.75*		*51.13*	
$-2 \ln \Lambda$	*887.42*		*894.64*		*927.26*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.18. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: plantation slave boys, ages 0–4, matched with mothers, 1813–16*

	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	–0.2032	0.81	0.8930	0.18	0.3620	0.44
Std. P (Surv.)	–0.9559	0.00	–0.9737	0.00	–0.8198	0.00
Fr./Span.	0.2611	0.26	0.2581	0.25		
Brit.						
Size	–0.0239	0.00	–0.0240	0.00		
Size^2	9.5×10^{-5}	0.00	9.5×10^{-5}	0.00		
Tall	0.7102	0.05	0.7028	0.05		
Average						
Short	–0.5833	0.01	–0.6012	0.01		
Colored	0.0351	0.94	0.1747	0.68		
Mom tall	0.3957	0.15				
Mom avg.						
Mom short	0.4631	0.11				
Mom's age	0.0301	0.10				
Mom domes.	0.5933	0.13				
Mom creole	0.0931	0.74				
Sugar	0.3059	0.50	0.2352	0.60		
Coffee	0.7375	0.13	0.7209	0.14		
Cotton						
Cocoa	–0.4426	0.29	–0.4577	0.26		
Provisions	–0.6522	0.24	–0.7909	0.15		
N (Obs.)	*762*		*762*		*762*	
d.f.	*16*		*11*		*1*	
Model χ^2	*52.26*		*43.09*		*8.15*	
$-2 \ln \Lambda$	*587.42*		*596.60*		*631.53*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Table A.19. *Estimated coefficients $\hat{\beta}$ and associated probabilities for logistic models of mortality: plantation slave boys, ages 5–14, matched with mothers, 1813–16*

	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]	$\hat{\beta}$	Prob.[a]
Intercept	87.3113	0.01	89.16	0.01	89.37	0.00
Std. P (Surv.)	26.54	0.02	27.24	0.02	27.24	0.00
Fr./Span.	0.9421	0.02	0.9398	0.02		
Brit.						
Size	0.0097	0.44	0.0087	0.48		
Size^2	-2.7×10^{-5}	0.58	-2.5×10^{-5}	0.60		
Tall	1.0376	0.09	1.0443	0.09		
Average						
Short	0.0816	0.84	0.0884	0.82		
Colored	0.0432	0.95	0.3322	0.66		
Field	–0.1357	0.76	–0.1794	0.69		
Domestic	0.2675	0.65	0.2758	0.64		
Outside	–0.0779	0.89	–0.04	0.94		
Mom tall	–0.2830	0.48				
Mom avg.						
Mom short	–0.1601	0.72				
Mom's age	–0.0134	0.57				
Mom domes.	0.3781	0.55				
Mom creole	0.4697	0.34				
Sugar	–0.8154	0.30	–0.7388	0.33		
Coffee	–1.1876	0.08	–1.1315	0.09		
Cotton						
Cocoa	–0.7357	0.27	–0.7194	0.27		
Provisions	0.0542	0.96	0.1377	0.91		
N (Obs.)	*753*		*753*		*753*	
d.f.	*19*		*14*		*1*	
Model χ^2	*24.62*		*22.33*		*8.81*	
$-2 \ln \Lambda$	*270.51*		*272.79*		*286.32*	

[a]Probability of observing the parameter estimate if the true parameter value is zero, or in the case of Std. *P* (Surv.), –1.0.

Code Noir of 1789[1]

Chapter I – Education

Every one who has slaves, of whatever class and condition he may be, is obliged to instruct them in the principles of the Roman Catholic Religion and in the necessary truths in order that they may be baptized within the year of their residence in my Dominions, taking care to explain to them the Christian Doctrine every Holiday on which they shall not be obliged nor permitted to work, excepting at the time of the crop, when it is customary to grant them liberty to work on holidays. On those and other days when they are obliged to hear Mass, the Owners of the Estate shall be at the expense of maintaining a priest to say mass for them and to explain to them the Christian doctrine as likewise to administer the Holy Sacraments, not only on such days when he is obliged to do it, but likewise whenever he is wanted; taking care that every day as soon as their work is finished they say the rosary in the presence of the Master and the Steward, with the greatest composure and devotion.

Chapter II – Food and Clothes

It being manifest that the Masters of slaves are under the obligation of feeding and clothing them as likewise their wives and children, whether these be of the same condition or free, until they can earn their own bread, which it is presumed they are able to do when the females arrive at the age of twelve and the males at that of fourteen; and not being able to give any fixed rule with respect to the quantity and quality of the food and clothes which are to be given them on account of the difference of climate, constitution and other particular causes, it is ordered that with respect to those matters, the justices of the districts in which the Estates are situated, with the approbation of the Magistrates, and syndic or Recorder as Protector of Slaves, shall fix upon and determine the quantity and quality of the food and clothes which are daily to be given them, according to their ages and sexes and conformable to the custom of the country, and like those which are commonly given to day labourers,

[1] P. G. L. Borde, *Histoire de L'Ile de La Trinidad sous le Gouvernement Espagnol*, pp. 390–7.

and linen the same as the work people who are free have; which determination, after having been approved of by the Audience of the District, shall be fixed upon the door of the Town House and of the Churches of every place, and of the oratories or hermitages of Estates, that every one may know it, and that no one may plead ignorance.

Chapter III – Occupation of Slaves

The first and principle occupation of slaves must be agriculture and not those labours that require a sedentary life; and thus in order that their Masters and the State may be benefitted by their work and that they may perform it as they ought to do, the justices of the Towns and Villages, in the same form as has been mentioned in the beforegoing Chapter, shall regulate the work to be done in the course of the day, and they shall have two hours to themselves to be employed in manufactures or other occupations for their own advantage; neither the Masters nor their stewards can oblige those slaves to work who are sixty years old, or younger than seventeen; nor employ the women slaves in any work which is not conformable to their sex, or in which they must be with the males; and the said masters shall contribute two dollars every year for their domestic service, as is ordered in the 8th Chapter of the Royal Order published on the 28th of last February.

Chapter IV – Diversions

On holidays, when Masters cannot oblige nor permit their slaves to work, after they have heard mass and the Christian doctrine explained to them, the said Masters or their Stewards shall allow the slaves to divert themselves innocently in their presence, but they shall not allow them to be amongst those of the other Estates, nor even with the females, hindering them from excess in drinking and taking care that their diversions are ended before prayer time.

Chapter V – Habitations and Infirmary

All Masters of slaves must give them habitations distant those of the men from those of the women if they are not married; and they must be commodious and sufficient to defend them from the inclemencies of the weather, with beds, blankets and every thing necessary. Each man shall have his own bed and there shall be no more than two in a room: another habitation separated from the rest, which must be warm and commodious shall be destined for the sick, who must be assisted with every thing necessary by their Masters; and in case that the latter on account of not having room enough or being near some town, do wish to send them to the hospital, they shall contribute a daily sum which shall be determined by the justices for their assistance, in the manner and form mentioned in the 2nd Chapter; and if any of them should die it is the Master's obligation to pay the charges of the funeral.

Chapter VI – Old Men and Those Who Are Constantly Ill

Slaves who on account of old age or illness are not able to work, as likewise children of either of the two sexes, must be maintained by their Masters; and these latter

cannot give them their liberty in order to get rid of them, except by giving them a sufficient stock which must be approved of by the justices and syndic, to maintain them without any other assistance.

Chapter VII – Marriage of Slaves

The masters of slaves must not allow the unlawful intercourse of the two sexes but must encourage matrimony. Neither must he hinder them from marrying with the slaves of other masters; in which case if the estates were distant from one another so that the new married couple cannot fulfil the object of marriage, the wife shall follow her husband whose master shall buy her at a fair valuation set upon her by skilful men who shall be nominated by the two parties; and in case of disagreement a third shall be nominated to fix the price. If the master of the husband does not agree to the purchase, the master of the wife shall have the same faculty.

Chapter VIII – Obligations and Punishments of Slaves

As Masters of Slaves are obliged to maintain them, to educate and to employ them in useful work proportioned to their strength, age and sex, without forsaking their children and those who are old and sickly, so, on the other hand, there is an obligation on slaves to obey and respect their Masters and the Stewards, to perform the work which is given them to do conformable to their strength, and to venerate them as heads of the family. Thus he who will not fulfil any of those obligations must be punished, either by the master of the Estate or by his Steward, according to the nature of the offence, with prison, chains or lashes, which must not exceed the number of twenty five, and those must be given in such a manner as not to cause any contusion or effusion of blood; which punishments cannot be imposed on slaves but by their Masters or the Stewards.

Chapter IX – Of the Imposition of Greater Punishments

When slaves commit crimes against their Masters, Mistresses, the children, stewards, or any other person which require greater punishment than those mentioned in the beforegoing Chapter, the Master, his Steward or any one else who was present when the offence was committed shall secure the delinquent and inform the justice of it, that in the audience of the Slave's Master and of the Attorney who defends the cause of the former, a law suit may be commenced against him, and a punishment imposed upon him according to the importance and circumstances of the offence, observing in every thing what is ordered by the Laws with respect to the causes of other delinquents in general; and if the slave be sentenced to pay one third of the charges of the Law suit, his master shall be responsible, for it, besides the corporal punishment which, according to the importance of the crime, the delinquent shall suffer, after having been approved of by the Audience of the District, whether it be death or mutilation of members.

Chapter X – Defects or Excess of Their Masters and Their Stewards

The Master, or his Steward who does not fulfil what is ordered in the foregoing Chapters with respect to the education, aliments, clothes, diversions, habitations, etc., of slaves, or who should forsake their children and those that are old and sickly, shall be fined fifty dollars for the first time, one hundred dollars for the second and two hundred dollars for the third; and those fines shall be paid by the master even in the case that the fault had been committed by his steward only, if the latter were not able to pay it, one third of which belongs to the informer, another to the Judge, and the other is to be put into the Fine Chest, which will be treated afterwards; and in case the before mentioned Fines should not produce the desired effect, and they should commit the same fault again, other greater punishments shall be inflicted upon them as disobedient to my Royal Orders; and as soon as I am informed of their disobedience I shall take my measures accordingly. When their Masters or their Stewards are guilty of excess in punishing the slaves, causing them contusion, effusion of blood or mutilation of members, besides paying the above Fines they shall be prosecuted as criminals, and have a punishment inflicted upon them according to the crime which they had committed, and the slave shall be confiscated and sold to another master if he is able to work, putting the amount into the Fine Chest; and if he cannot be sold on account of being unable to work, he shall not be returned to his master who shall be obliged to allow him a daily sum which shall be fixed upon by the justice for his maintenance and clothes during the remainder of his life, paying it every three months in advance.

Chapter XI – Of Those Who Injure Slaves

As Masters and Stewards can only chastise slaves with that moderation which is required, no other person, who is not their Master or his Steward, shall injure, chastise, wound or kill them without incurring the punishment enacted by the Laws against those who commit the like excesses towards free people; and the master of the slave who has been injured, chastised or killed shall commence a Law suit against the criminal, and the Attorney as Protector of Slaves, shall defend his cause.

Chapter XII – List of Slaves

The Masters of slaves shall be obliged every year to deliver into the justice of the Town or Village in the district of which their Estates are situated a List signed and sworn to by them of all the slaves which they have, with distinction of sexes and ages, in order that the notary of the Town House may take account of them in a separate Book which is to be kept for this purpose at the said Town House together with the List presented by the master who whenever any of his slaves die or absent themselves from his Estate, must inform the justice of it within the term of three days, that by order of the Attorney General it may be noted in the Book, in order to avoid all suspicion of having been killed; and if the Master does not fulfil this, he

shall be obliged fully to prove either the absence of the slave or his natural death, for on the contrary, a Law suit will be entered against him.

Chapter XIII – Method of Investigating the Excesses of Masters or Stewards

The distance of some Estates from the Towns, the inconvenience which would result from permitting slaves to go out without an order from their master, under the pretext of complaining, and the just regulation of the Law which orders that no fugitive slave shall be assisted, protected or concealed, require that means be facilitated which are proportioned to all those circumstances in order that it may be known how they are treated by their masters; and one of those is that the priests who go to the Estates to explain to them the Christian doctrine and to say mass, do obtain information from the said slaves how they are treated by their Masters and the Stewards, and if every thing be observed which is ordered in the beforegoing Chapters in order that they may give a secret and reserved notice of it to the Attorney General and that he may cause it to be investigated, whether the Masters or their Stewards are wanting in the whole or in part to their respective obligations; and the said priests who by reason of their ministry do give the said secret notice shall not be answerable for any thing even if supposing that the complaints of the slaves were not just; for this notice is only given to the Attorney General that he may demand from the justice to nominate an individual of the Town House, or another person of approved conduct who is to investigate the business, and to form the first proceeding, which he is to deliver into the justice, who shall pursue the proceedings and determine the cause according to the Law, giving information of it to the Audience of the District, and admitting of appeals in all such cases as they are authorized by the Laws.

Besides those means it will be necessary that people of good character and conduct be appointed by the justices and magistrates to visit the Estates three times a year and to make enquiry whether every thing be observed which is ordered in the beforegoing Chapters, informing the said justices of it, who must apply the remedy; and it is likewise declared to be a population action, that of informing against a master or his steward for not having fulfilled one or the whole of the said Chapters; as the name of the informer shall not be made known and he shall have the part of the fine which he is entitled to, without being responsible in any other case than in that where it is proved that the information is false.

And lastly, it is likewise declared that the justices and Attorney General, as Protector of Slaves, will be made answerable for any neglect of theirs of not having made use of the necessary means to have my Royal Resolutions put into execution.

Chapter XIV – Chest of Fines

In the Towns and Villages where the before mentioned regulations are to be formed, and where the Courts of Justice are, a Chest with three keys shall be made and kept in the Town House, one of which keys shall be delivered to the Justice of the Peace, another to the Governor and the third to the Attorney General in order to keep in the said Chest the produce of the fines which are to be laid on those who do not fulfil my Royal Orders; and the said produce shall be employed in the necessary means of

making them to be observed, neither can that be a single maravedis taken out of it for any other purpose without an order signed by the three who keep the keys, expressing its destination, and they shall remain responsible and under the obligation of restoring what has been spent or employed to other purposes, for fear, that for those reasons or for others, their accounts which must be remitted every year to the Intendant of the Province together with the attestation of the produce of fines, may not be approved by him.

In order that all the Rules prescribed in the beforegoing chapters may be fulfilled, I annul every Law, Royal Order and custom which are opposed to them; and I command my Supreme Council of the Indies, Viceroys, Presidents, Audiences, Governors, Intendants, Justices, Ministers, etc., that they fulfil and cause to be executed what ever is decreed in this my Royal Order: for this is my will.

Published at Aranjuez 31 May 1789.

Slave Code of 1800[1]

Ordinance of the Governor, Lt.-Colonel Thomas Picton, proclaimed June 30th, 1800

Whereas, in a West Indian Colony settled by different nations, varying in customs and opinions, it is important to incite the inhabitants of every class to mitigate the situation of their slaves, by rendering their servitude as limited and easy as possible and by promoting their natural increase, so as that in course of time the importation of slaves from Africa may be considerably diminished, if not totally dispensed with; and whereas, those desirable ends cannot be more effectually attained, than by compelling owners of slaves to lodge, clothe, and maintain them sufficiently, as well as in health, while able to work, as in time of sickness, age and infirmity; by prescribing reasonable grounds to the power of masters and others, having charge of slaves, and by instructing them in the principles of Christianity, to inspire them with some degree of morality.

We have therefore resolved to issue the present Ordinance, by virtue of the authority with which His Majesty has invested us, in order that the regulations it contains may be publicly and generally known, and have their due execution from the date of their publication: charging all persons under our government to pay due obedience thereto, on pain, in cases of negligence or contumacy, of incurring the penalties hereinafter specified.

Article 1. Every proprietor or possessor of a plantation shall provide the slaves attached thereto with good and comfortable houses, well wattled and thatched, so as to be perfectly wind and watertight. The head or chief of every family shall have a house for himself, separated into two or more apartments, according to the number of that family, and there shall be cabanes or bed-places in those apartments, raised at least eighteen inches, to preserve them from the dangerous effects of sleeping on the moist ground. Young Negroes of fourteen and upwards, who have no family, shall be lodged at the rate of three to a house, and they are to have their cabanes raised

[1] Gertrude Carmichael, *History of the West Indian Islands of Trinidad and Tobago*, pp. 379–83.

eighteen inches from the ground as aforesaid. The slaves shall be allowed to enclose their houses with a fence or hedge, to form a little yard for their stock, and defend them from the incursions of the cattle in the pasturage, etc.

Article 2. The proprietor or attorney of every plantation shall have one quarree, or three acres, 11/12 of a fanegue of land for every ten working Negroes, planted and cultivated in provisions for the maintenance of his gang, and he shall also, on the Monday or Saturday of every week, distribute to every Negro of fourteen years and upwards under his care, three pounds of salt meat, or four pounds of salt fish (being the weekly allowance), and to all slaves under age, and children, a weekly allowance of salt meat or fish in that proportion.

Exclusive of the allowance of salt meat or fish (in which there can be no exception) every working Negro of fourteen years or upwards, shall have a portion of land allotted to him adequate to produce, by cultivating it, a sufficiency of ground provisions for himself and his family; and to furnish him more effectively, the means of so doing, he shall be allowed the Saturday from noon, to work his grounds, from the first day of July to the first day of January, if he belongs to a sugar plantation; and from the first day of January to the first day of July, if he belongs to a coffee, cacao or manioc plantation; he will also have his Sundays, and the four great annual holidays of Christmas Day, New Year's Day, Good Friday and Corpus Christi.

The portion of land allotted the slave for his garden cannot be taken from him, or exchanged, without his consent; if the owner or attorney thinks proper to change the situation of the Negro grounds, he must give the slaves a year's warning, unless he prefers obtaining their consent by paying them their improvements and assigning them grounds for gardens, to their satisfaction, elsewhere; And it is a duty most incumbent on managers and overseers, to take care that the Negroes have their grounds in good cultivation, and that they do not lavish or misemploy the surplus time allowed them for that purpose.

Article 3. Owners of plantations whose locality does not admit of allowing Negro grounds, nor having provision grounds, shall furnish weekly to every working Negro under his care, sixty full-grown plantains, or six quarts of manioc, i.e. cassava meal; and in case they cannot procure plantains or cassava meal, it shall be commuted in money, at three bits a week, in lieu of the vegetable allowance, independent of the allowance of salt meat or fish, to which, . . . , there can be no exemption.

Article 4. To every Negro two shifts of clothing, complete, shall be furnished yearly, one in May, the other in December, and in the case of refusal, there shall be inflicted on the owner a penalty of $12 for every Negro who is not clothed at the time appointed.

Article 5. Owners or attorneys shall not punish slaves by more than thirty-nine lashes;* and managers and overseers shall not punish by more than twelve lashes for

* This by an Order of February 7th, 1815, was commuted to 25 stripes, being the number fixed by the Royal Cedula of May 31st, 1789.

any one offence; the slave who has received thirty-nine lashes shall not be flogged again on the same day, nor until he be recovered from the effects of that punishment; and an infractor of this article will be fined fifty dollars. Should the crime of the slave, however, be of a nature to deserve a severer chastisement, he shall be conducted before the Commandant of the District, who will order such corporal punishment as the case deserves; it being well understood that it cannot extend to death or mutilation, nor shall it be permitted the owner to inflict any further punishment for the same crime, under penalty of fifty dollars.

Article 6. Whoever shall be convicted of having inhumanely struck a slave with an edged weapon, such as a cutlass, axe, sword, or with a bludgeon or loaded beau-stick, will be prosecuted and punished according to law; and if the crime be committed by his master or owner, he (the slave) shall be immediately removed from his (the master's) authority, and deposited with the Commandant of the District, or Alcalde de Barrio, to be sold to some person of known humanity; and the sum arising from the sale shall be applied in whole or in part to the relief of the wounded slave, or in such other charitable purposes as may be deemed proper; and the sale of such slave, it is hereby declared, shall be valid, nor shall the purchaser be disturbed in the possession thereof.

Article 7. The field slave shall have half an hour in the morning for breakfast and two hours at noon for dinner. Nurses having children at the breast shall be permitted to leave the field at noon and night, half an hour before the others, and are exempted of throwing grass. Field slaves are not to go to the field before five o'clock in the morning, nor to work there after six in the evening, except in bringing grass at noon and night for the sick, but it is not meant that this regulation should interfere with the night work on sugar estates in crop time, which cannot possibly be dispensed with.

Article 8. Negroes superannuated, infirm, or invalided by sickness or accident, shall not be abandoned by their owner; on the contrary, he shall lodge, feed and clothe them as usual, and if any person should be so inhuman as to treat them ill, he shall be punished.

Article 9. It has been for many years a custom with some of the inhabitants to give their Negroes Saturday in place of allowance; and with gangs of laborious active Creole slaves, it was found to answer the purpose; but in gangs composed of new Africans, those who adopt it have had reason to repent of the experiment, a new Negro being naturally so lazy and inactive, that he would rather suffer hunger and enjoy his repose than procure himself his subsistence by industry. The increasing opulence of the inhabitants having literally enabled them to augment their force by considerable purchases of this description of Negro, the custom of giving Saturday becomes highly imprudent and would occasion great losses to the Colony: Wherefore it is hereby abolished and prohibited, under penalty of fifty dollars for every delinquent.

Article 10. Owners or managers of plantations shall not oblige their slaves to work on Sundays or holidays hereinbefore specified; but this regulation shall not extend to

watchmen or pasture boys (who will continue as heretofore to do that duty in turn), nor to family domestics, the intention being simply to assure the field Negro the free enjoyment of his holiday to work his own grounds.

Article 11. Any Negro who shall assume the reputation of being a spell-doctor or obeah-man, and shall be found with an amulet, a fetishe, or the customary attributes and ingredients of the profession, shall be carried before the Commandant of the District, who will take cognizance of the accusation; and provided the crime be not capital, inflict proper punishment; but should it appear probable that the culprit has been the cause of death of any person by his prescriptions (as very frequently happens), the Commandant will then transmit him to the common gaol, as a criminal, to be prosecuted and dealt with according to law.

Article 12. It is the duty incumbent on Christians, not only to feed and clothe those who are dependent upon them, but also to instruct them in their duty towards their Maker. Planters who have attended this precept have found the benefit of it in the improvement of their slaves' dispositions. It should be therefore the essential duty of the master to teach his slaves the first elements of the Christian religion, to prepare them for Baptism; and we expressly recommend the parish curates the observance of this part of their office, reminding them that it is the principal object of their mission to preach the gospel to the poor.

Article 13. There shall be on every plantation a hospital, proportioned to the number of its slaves, and one or more female attendants attached thereto. The Negro who from sickness is incapable of doing his duty shall there be lodged and attended until he is perfectly recovered; and here it is proper to observe that careful nursing is generally found the most efficacious remedy in Negro disorders. The owner or manager will keep a hospital diary, on which he will note the date of admission and discharge, or decease of the slave; and on giving in the annual enumeration of the estate, he will make also an obituary report.

Article 14. It is a prevalent opinion that owners of plantations, by humane and moderate treatment, might preserve the offspring of their slaves and thereby considerably increase their population. To encourage so beneficial a measure, we have ordained that every mother of a family having more than three children on her master's plantation shall be allowed one day in the week extraordinary, from July 1st to 1st of January, if attached to a sugar or cotton estate, and from 1st January to 1st July, if to a coffee, cacao or manioc estate, and at the end of every year she shall receive from her master a dollar a head, for her future encouragement in the care of her children.

A mother of a family having seven children living on her master's estate shall be exempted from all labour, and she shall be furnished her allowance and maintenance in common with other slaves, and receive the reward, already specified, of one dollar per annum for her children.

The same motive obliges us to prohibit women being put to work before they are perfectly recovered from child-bed, nor shall the infant be carried to the field, but

remain under the care of a prudent woman, to be appointed guardian of the children, who will take charge of them in her own house, or a house appropriated to the purpose, until the mothers return from their work, or in their absence.

Article 15. Penalties incurred by infractions of these regulations to be recovered by warrants, signed and sealed by the Commandant of the District in which they have been incurred, which warrants are hereby approved: And all fines recovered in virtue thereof shall be paid into the hands of the Treasurer of the Illustrious Cabildo, to be applied to defray the charges of justice and of public work; for such is our will and pleasure.

Article 16. The present Ordinance shall be printed, and published and proclaimed in date of publication until further orders.

Order in Council, March 26, 1812

WHEREAS it is deemed expedient to provide more effectually for the prevention of the illegal and clandestine importation of Slaves into the Island of Trinidada, it is therefore this day ordered by His Royal Highness the Prince Regent, in the name and on the behalf of His Majesty, and by and with the advice of His Majesty's Privy Council:

That there shall be established within the Island of Trinidada a public registry, for the registration and enrolment of the names and descriptions of all Negroes, Mulattoes, and Mustees, who now are, or at any time hereafter shall be held in a state of slavery within the said island, and of the births and deaths of all such Slaves.

And it is further hereby ordered, That within the term of one week from and after the arrival of this present order at Trinidada, and the receipt thereof by the governor, lieutenant-governor, or other person having the chief civil command under His Majesty within the said island, the same shall be publicly notified to the inhabitants of the said island in such manner as to the said governor, lieutenant-governor, or civil commander in chief shall seem most fit and effectual, and shall be enrolled at length in the book of minutes of the Board of Council, and among the records of the Cabildo, and of the court of the Order or Chief Judge; and the said governor, lieutenant-governor, or civil commander in chief, shall forthwith proceed to appoint some fit and proper person, unless some person then resident there shall have been previously appointed by His Majesty, to the office of Registrar of Slaves for the said Island; which person, before he enters on the execution of his said office, shall take the following oath before the said governor, lieutenant-governor, or commander in chief, in council:

"I *A. B.* do solemnly promise and swear, that I will not willingly or knowingly make or permit, or suffer to be made, any false or fraudulent entry, erazure, or obliteration in the registry of Slaves to be committed to my charge; but if any such false or fraudulent act shall become known to me, will immediately notice thereof to the govenor, lieutenant-governor, or civil commander in chief, and to the order or chief judge of this island for the time being, and will in all respects faithfully and uprightly perform the duties of the office of Registrar of Slaves for this island. So help me GOD."

And the said person so appointed to the said office of Registrar of Slaves shall also, before he enters on the execution of his said office, become bound by bond or

recognizance to His Majesty, his heirs and successors, with two sufficient sureties, to be approved by the said governor, lieutenant-governor, or civil commander in chief, himself in the penal sum of two thousand pounds, and his sureties each in the sum of one thousand pounds sterling money, with condition for the faithful performance by him, the said registrar, of all the duties of his said office; and in case of the death, absence, or incapacity of the said registrar, from time to time, appointed by His Majesty, his heirs or successors, or by the governor, lieutenant-governor, or civil commander in chief for the time being, (until the royal pleasure in respect of such appointment shall be signified,) who shall take the same oath, and enter into like securities, before he enters on the execution of the said office.

And it is hereby further ordered, That the said governor, lieutenant-governor, or civil commander in chief, shall also forthwith proceed to provide a proper and convenient house or building within or near to the town of Port of Spain, in the said island, for the sole purpose of the registry hereby established, wherein the books and papers belonging thereto may be at all times safely kept; and if no such house or building can be immediately found, the best temporary house or room that can be procured or allotted for the said purpose shall be provided and appointed by the said governor, lieutenant-governor, or civil commander in chief, until a proper and convenient registry office can be procured or erected in or near to the said town.

And it is hereby further ordered, That the said Registrar shall forthwith provide two large blank paper books, strongly and durably bound, for the purpose of the registry and enrolment hereinafter directed, one of which books shall be entitled "Registry of Plantation Slaves," and the other "Registry of Personal Slaves;" in which said first-mentioned book shall be entered and registered, as hereinafter directed, the names and descriptions of all Slaves which belong to, and are usually worked or employed upon any particular plantation or plantations within the said island; and in the other of which said books shall be entered and registered, in like manner, the names and descriptions of all Slaves employed in domestic labour, or in any handicraft, art, or trade within the said island, or in manning or navigating any vessels or boats belonging to the ports of the said island, or which are let or hired by their owners for the purpose of agricultural labour, commonly called taskwork, on plantations not belonging to the owners of such Slaves; and, in general, all Slaves within or belonging to the said island, which are not attached to any particular plantation or plantations, and therewith owned, held, or possessed; all which several descriptions of Slaves shall, for the purposes of this order, be distinguished from Plantation Slaves by the general name of Personal Slaves.

And it is hereby further ordered, That within one calendar month from and after the public notification of this order at Trinidada as aforesaid, every person who shall then be resident in the said island, and who shall be in possession of any plantation, Slaves or Slave within the said island, whether as proprietor, mortgagee, trustee, or receiver, manager or attorney, whatever their title, trust, or interest therein may be, or who then shall own or possess any Slave or Slaves whatsoever within the said island, whatever his or her tenure of or title to the same may be, shall respectively make and deliver upon oath to the registrar so to be appointed such schedules, lists and particulars, in writing, subscribed by him, her, or them, to be called his or her original return of Slaves, as are hereinafter mentioned (that is to say), every person

in possession of any plantation as aforesaid shall so make and return a schedule or list in writing for each plantation within the said island of which he or she shall be then in possession, in any of the rights or characters aforesaid, therein specifying, in the first place, the name by which the plantation is usually called or known, and when two or more plantations are held and occupied together by the same person, and cultivated by the same body or gang of Negro Slaves, the names of each of the said plantations so jointly held and cultivated, and in what parish, quarter, or other division of the said island every such plantation is situated, and whether the same is a sugar plantation, or a coffee or cotton plantation, or of what other description; and in the next place the name or names of the present owner or owners of such plantation or plantations, as well as of the person or persons then in possession of the same, and making such return, and the right or character in which he, she, or they then held such possession, namely, whether as proprietor, lessee, mortgagee, trustee, receiver, attorney, manager, or otherwise; and when the property or possession of any such plantation has been changed within seven years prior to such return thereof, then the said schedule shall also mention the name of the late owner or proprietor, and in whose tenure or occupation the same lately was, and every person making a return of any Slave or Slaves not attached or belonging to any plantation in the said island hereby called "Personal Slaves," shall so return a list or schedule in writing, containing in the first place his own name and description, or the name and description of such other person or persons being the owner or owners of such Slave or Slaves on whose behalf the return is made, and the right or character in which he, she, or they then hold possession of and claim title to such Slave or Slaves, namely, whether as proprietor, lessee, mortgagee, sequestrator, guardian, committee, trustee, receiver, executor, administrator or otherwise; and if such personal Slave or Slaves shall have been purchased or acquired within seven years prior to such return, then the name or names of the seller or former owner thereof; and after such descriptions as aforesaid of such plantation and of the owner or owners of such Personal Slaves respectively in the said schedule, the parties making the said returns shall proceed to name, describe and enumerate distinctly thereon the several Negro, Mullatto, or other Slaves then attached or belonging to the same plantation, or to the same owner or owners, by distinct lists, in manner following; that is to say – in the first place such schedule shall contain a list of all Slaves who have husbands or wives, either by actual marriage, or known and constant cohabitation, or who have parents or children, brothers or sisters, among the Slaves of the said plantation, or of the same owner or owners, which list shall be entitled the "List of Families of Slaves on the Plantation of *A. B.*" (inserting the proper names of the Plantation, or "of *C. D.* the owner of Personal Slaves," as the case may be); and the said list shall be divided into as many sections as there are different families to be inserted therein, and each section shall be entitled, "The Family of *A. B.*" inserting the name of the superior relation, or, where there are only brothers, or other relations of the same degree, the name of the elder individual; and each of the said schedules shall also contain two other lists, in one of which shall be inserted the names of such male Slaves, and in the other of such female Slaves, as have no wives or husbands, parents or children, brothers or sisters, among the Slaves of the same plantation; or the same owner or owners; which lists shall be respectively entitled, "General List of

Male Slaves" and "General List of Female Slaves" on the plantation of *A. B.* (inserting the proper name of the plantation) or "belonging to *C. D.*" as the case may be.

And all the Slaves attached or belonging to the same plantation, or the same owner or owners, shall be named and described in the said schedule respectively, in the particular lists or sections to which they respectively belong, in the manner and form following, (that is to say) –

The schedule or paper containing each of the said lists shall be divided into eight perpendicular columns, of convenient breadths, respectively entitled at the heads thereof, names, surnames, colours, employment, age, stature, country, and marks; to which shall be added, in the lists of families, a ninth column, of convenient breadth, entitled Relations; and the more clearly to distinguish the description of each particular Slave, as many horizontal lines, with convenient spaces between them, shall be drawn across the said perpendicular lines or columns, as are equal in number to the number of Slaves to be inserted in each list.

And in the first of the said columns shall be inserted the name of baptism of each Slave, if he or she shall have been baptised, and if not, the name by which he or she has been usually called and known. In the second of the said columns shall be inserted the surname or second name of the Slave, if he or she has ever been called or known by any surname or second name, and if not, then, in cases of Family Slaves included in the said lists of families, the name of the superior relation; and in the cases of Slaves who are included in the said general lists of males and females, such name as the owner or party making the return shall think fit to insert therein as the surname by which the Slave and his lawful issue, or her natural issue, and their descendants respectively, shall thereafter always be called; provided, nevertheless, that in cases of Family Slaves, the owner or party making the return may also give, if he thinks fit, some other family name instead of that of the superior relation, so as no two families on the same plantation, or belonging to the same owner, shall have the same surname in the said schedule or return; but for all the purposes of the order, the surname by which each Slave shall first be returned and registered, shall continue for ever after to be the surname of such Slave, and of his lawful issue, if a male, or her natural issue, if a female, and of their respective descendants, and shall not afterwards be changed. In the third of the said columns shall be inserted Negro, Mulatto, or Mustee, as the case may be, or such designation of intermediate shades of colour within the limited degrees of slavery, if any, as are in use within the said island. In the fourth of the said columns shall be inserted the particular trade, occupation, or ordinary employment of the Slave, specifying, in the cases of mechanics, artisans, or handicraft-men, the particular art or business in which he or she is usually employed; in the cases of Family Slaves, the particular domestic service or department in which he or she is usually employed; and in cases of ordinary Plantation Slaves, describing them as labourers only; and in the fifth of the said columns shall be inserted the age of the Slave, according to the best of the knowledge and belief of the owner, or other party making the return. In the sixth of the said columns shall be inserted the exact stature, in feet and inches, by actual measurement of the Slave, which measurement, in cases of infant Slaves, or such as have not clearly attained to their full growth, shall be repeated prior to every annual return hereinafter directed to be made. In the seventh of the said columns shall be

inserted, not only whether the Slave is an African or Creole Negro, but if an African, the name of the country or district of Africa from which he or she was brought, and if a Creole Slave, the name of the island or colony in which such Slave was born, or from which he or she was brought, according to the best of the knowledge or information and belief of the owner or other party making the return. And in the eighth of the said columns shall be inserted, whether the Slave has any, and what scars and marks on the face, or other parts of the body, such as African Slaves commonly have, and which are usually called country marks, or any such brands or marks as are used in some of the colonies for distinguishing the owners property, or has any apparent bodily singularity, defect, or deformity, all which shall be specified, with convenient certainty, so as at least to mention the part of the face or body wherein the marks, brands, defects, or other singularity appears; and lastly, in the further column, to be added as aforesaid in the lists of Family Slaves, shall be inserted the relation that the Slave bears to the superior relative, or Slave, by whose name the Family Section of the list to which he belongs is entitled as aforesaid, with such further particulars of genealogy or family connection, as the owner or party making the return shall think fit to add; and at the end of the said returns respectively, shall be summed up and set down, in words at length ≤ the whole number of Slaves then belonging to the plantation, for which, or the owner or owners of Personal Slaves, on whose behalf such returns are made.

And for the better ascertaining of the proper form of such returns of Slaves as are hereby required to be made, so that no person may pretend ignorance thereof, a form or example of such returns is contained in a schedule to this order annexed, to which all persons are required, so far as shall be found practicable, to conform; and at the time of promulgating and publishing this order in the said island as aforesaid, public notice shall be given by the said governor, lieutenant-governor, or civil commander in chief, in such manner as to him shall seem most fit and effectual, that a form or example of the returns hereby required to be made may be seen, and a printed copy thereof, with blanks, to be filled up according to the rule aforesaid, obtained at the registrar office to be appointed as aforesaid, and printed blank copies of the said forms shall accordingly be provided by the registrar, and delivered to all persons applying for the same, at a price not exceeding three pence for each printed copy.

And it is further hereby ordered, That every person making and subscribing any and every such schedule or return shall personally deliver the same, either to the said registrar, or to some other person that shall be by him appointed, and deputed to receive such returns or schedules in the proper district of the said island, in which the party making the same shall reside, and shall at the same time take the following oath, which the said registrar, and every person to be by him appointed and deputed as aforesaid, is hereby empowered and required to administer, (that is to say) –

"I *A. B.* (name the Deponent) do solemnly swear, that the schedule or return now by me delivered to be registered contains, as I verily believe, a just, true, and full return, account, and description of all the Slaves now attached or belonging to the plantation therein named, (or belonging to the owner or owners therein named,) and being within this island; and that the said return is made by me according to the best of my knowledge and belief, truly and without fraud, deceit, or evasion. So help me GOD."

And it is further hereby ordered, That within one calendar month, to be computed from the time hereinbefore appointed for the making and delivery of the said returns or schedules, every return or schedule that shall have been duly made and delivered to the said registrar, or any of his said deputies shall, by him, his clerks, or assistants, be entered and copied in a fair, distinct, and legible manner, in the proper book to be by the said registrar appointed for the registry and enrolment of Slaves as aforesaid, (that is to say) –

Every such return or schedule of Slaves attached or belonging to any plantation or plantations, in the book to be entitled "Registry of Plantation Slaves," and every other such return or schedule in the book to be entitled "Registry of Personal Slaves," the former under the name of the plantation, and the latter under the name or names of the owner or owners mentioned in the return; which name or names shall be written in a large hand at the top of every double page or folio containing the return.

That every double page or folio of each of the said books, (that is to say) – the whole breadth of the book when open, from the left to the right hand, shall be divided by perpendicular lines into ten different columns of such breadth, and by horizontal lines into spaces of such dimensions as will most conveniently contain the various particulars hereinbefore directed to be returned in the said schedules or lists of Slaves; and such farther entries in the tenth column as are hereinafter directed to be made, leaving at the top of each folio a space for the name of the particular plantation or owner whose Slaves are registered therein; which name shall be always there written in large and distinct letters: and at the top of the first of the said ten columns shall be written "Names;" of the second, "Surnames;" of the third, "Colour;" of the fourth, "Employment;" of the fifth, "Age;" of the sixth, "Stature;" of the seventh, "Country;" of the eighth, "Marks;" of the ninth, "Relations;" and of the tenth, "Corrections;" and under each of the said titles in the nine former columns shall be entered, in a plain, distinct, and durable hand, according to the different schedules or lists returned, the particulars respectively contained in the same, distinguishing the families of Slaves from each other, and from the general lists of individual Slaves, by their proper titles; and at the end of the registry of each original return shall be summed up and written, in words at length, the whole number of Slaves returned and registered as belonging to the plantation, or to the owner or owners mentioned in such return; that the pages of the said books shall be distinctly numbered at the top of each double page or folio, from the beginning to the end of each book respectively, before any entry shall be made therein; and at the bottom of each page, containing any registry of Slaves, as well as at the end of the registry of each original return, the registrar shall subscribe his name at length, in testimony of the fidelity and accuracy of the entries therein contained.

That whenever the said books, or either of them, shall be fully occupied with the said original entries, and with future entries and registries, so that there shall not remain room enough therein for the future annual entries and registries hereinafter required to be made, a new book or books, of a like form and size, shall be provided and opened; but the pages thereof respectively shall be continued in the same series of numbers with that of the original book or books respectively, and a reference shall always be made to and from the page in the registry, at or from which the

entries of Slaves belonging to the same plantation, owner or owners, are carried forward or continued, when the same cannot be done in the next following page of the same book.

That a convenient number of leaves shall be left in the beginning of each of the said books respectively, for an index of plantations and owners' names, and therein shall be inserted, in alphabetical divisions, at the time of entering and registering every return, the name or names of the plantation for which, or the owner by, or for whom, such return is made, with proper references to the folio or folios, book or books, in which such return is registered, and in which it shall be afterwards continued.

And it is hereby further ordered, that no erazure shall, on any pretence, or for any cause whatever, be at any time permitted to be made in the said books of registry; but if any clerical error shall occur in the insertion of any name or other particular in any schedule or return contained, or otherwise, in the making up and keeping the said books of registry, a line of red ink shall be drawn through the word or words improperly inserted, so as to leave the original word or words legible; and the correction thereof, or any word or words which may have been erroneously omitted, shall either be interlined or written in the margin, and always, when practicable, by the same hand as the rest of the same list or entry; and the registrar shall, either under such word or words written in the margin, or under a mark of reference there made to any such interlineation, subscribe his name at length; but after the registry of original returns of Slaves shall have been completed and certified upon oath, as hereinafter directed, no interlineation, insertion, or other correction of the registry of any such original returns shall, on any account, be made or permitted, except as is hereinafter expressly provided.

And it is hereby further ordered, That an office copy, certified as such by the said registrar, of the registry of the Slaves belonging to any plantation, or to any particular owner or owners, shall, at the request and charge of the owner or owners, or party or parties who made the return, be made and delivered to him, her, or them, by the said registrar, and for which there shall be charged no more than at the rate of one penny sterling for every Slave therein named; and all persons shall have free liberty to inspect the said register books, in the presence of the registrar or his assistants, for the purpose of ascertaining that the returns and lists by them, or on their behalf delivered, have been accurately registered in manner aforesaid.

And it is hereby further ordered, That when and so soon as all the original returns or schedules, which shall have been delivered to the said registrar pursuant to this order, shall have been fairly entered and registered as aforesaid, which shall be done and completed within the term of two calendar months from and after the first public notification of this order at Trinidada aforesaid, the registrar shall give notice thereof forthwith to the governor, lieutenant-governor, or other person having the chief civil command under His Majesty within the said island, for the time being; and such governor, lieutenant-governor, or commander in chief, shall thereupon publicly notify to the inhabitants of the said island, in such manner as he shall deem most fit and effectual, that the registry of Slaves is ready to be verified before him, as far as respects the original registry of Slaves now within the said island, or belonging thereto, and is and will continue open at the proper office, for the inspection of all per-

sons who have made returns of Slaves for insertion, therein, for the term of one calendar month from the date of such notification, to the intent that they may be satisfied of the accuracy of the said registry; and that if any owners or possessors of Slaves, within or belonging to the said island, have, from any accident or unavoidable impediment, hitherto omitted to return proper schedules or lists of their Slaves into the said registry, as by this order required, they must immediately apply to the said governor, lieutenant-governor, or civil commander in chief, who, upon satisfactory proof that such omission has not been wilful, has power to make an order for the admission and registration of their returns or schedules by the registrar within the said term of one month, the omission cannot afterwards be supplied.

And it is hereby further ordered, That if, during the said last-mentioned term of one month, any owner or possessor, owners or possessors of Slaves, shall apply to the said governor, lieutenant-governor, or civil commander in chief, and make it appear to his satisfaction that the non-delivery of his, her, or their return or returns of Slaves to the said registrar, within the term formerly prescribed, has arisen from accident, or some unavoidable impediment, and not from wilful delay, and shall then produce such his, her, or their return or returns, and make oath before the said governor, lieutenant-governor, or civil commander in chief, that no Slave therein named has been imported or brought into the said island within three calendar months preceding, it shall and may be lawful for the said governor, lieutenant-governor, or civil commander in chief, if he shall think fit, to make an order in writing by him subscribed, and addressed to the said registrar, commanding him to receive and register any such return or returns, as if the same had been delivered in due time, which order the registrar is hereby required to obey, so as any such new or further return may be registered in the said books in manner aforesaid, before the end of the said term of one calendar month last before mentioned.

And it is hereby further ordered, That at the end of the said last-mentioned term of one month, the said registrar shall proceed finally to close and authenticate the said primary registration of all the Slaves in the said island, which shall thenceforth be called, "The original Registry of the Slaves of Trinidada," in manner following; (to wit) – in each of the said books, the said registrar shall write with his own hand, in large legible characters, immediately after the last entry of the said returns or lists of Slaves, either on the same folio, or double page, or on the back of the last leaf, containing the same, "Here ends the original Registry of the Plantation (or Personal) Slaves of Trinidada;" and the said registrar shall thereto subscribe his name, and affix his seal of office, and below the said signature shall be written, in like characters, by the said registrar, the following affidavit: –

"Before *A. B.* (inserting the name and title of the governor, lieutenant-governor, or civil commander in chief, for the time being) personally appeared *C. D.* (naming himself) the registrar of Slaves in this island of Trinidada, who being duly sworn on the Holy Evangelists, makes oath and says, that he the said *C. D.* has twice carefully examined, and compared all the preceeding entries in this book, with all the different returns of plantation (or Personal Slaves) delivered to him, or to his knowledge or belief, to any deputy, clerk, or assistant, by him appointed, first by examining the said entries while his clerk or assistant read the original returns respectively entered therefrom; and that he is enabled thereby to depose, and does depose, that the pre-

ceding original registry of the Plantation (or Personal) Slaves of Trinidada, is in all respects correctly and faithfully made."

Which affidavit being subscribed by the said registrar, shall be sworn before the said governor, lieutenant-governor, or civil commander in chief, who shall subjoin thereto, the following certificate, under his hand, and the great seal of the said island: –

"I, *A. B.* (inserting his name and title of office) do hereby certify that the above affidavit was duly sworn before me, this day of one thousand eight hundred and ____ witness my hand, and the great seal of Trinidada, this _____ day of one thousand eight hundred and ____. *A. B.*"

And it is hereby further ordered, That the said registrar shall next proceed to make out, for each of the said books of original registry, a full and correct alphabetical index, both of the names and surnames of all the Slaves registered in each of the said books respectively, with correct references to the proper page of the book, in which they are respectively entered, registered, and described as aforesaid; and each index shall, after a careful comparison of the same with the book to which it belongs, be therein transcribed and entered in a large legible hand, in the pages next following the said affidavit and certificate; and at the end of each index the registrar shall write, "This is the index of the names of Slaves in the foregoing original registry of the Plantation (or Personal) Slaves of Trinidada, carefully made out, and compared by me, this _____ day of_____ in the year one thousand eight hundred and _____. Witness my hand, *A. B.* Registrar." – And shall accordingly subscribe the same; and for the easier research in the said indexes, and better preservation of the said books, the said registrar shall afterwards transcribe, into a small general index book, to be prepared for that purpose, as well the said indexes of plantations and owners names, which are to be written at the beginning of the said books of original registry as aforesaid, as the said indexes of the names of Slaves; and shall carefully compare the copies thereof with the respective originals, and shall write at the end thereof, "This general index book is faithfully and correctly compiled from the several indexes contained in the books of original registry of Plantation Slaves, and of Personal Slaves respectively, with which I have carefully compared the copies thereof respectively, herein contained. *A. B.* Registrar." – And if the said general index shall, by frequent use, or otherwise, at any time become defaced, or illegible, the same shall be renewed and certified in like manner by the registrar for the time being.

And it is hereby further ordered, That within two months after the said original registry shall be closed and authenticated as aforesaid, the said registrar shall prepare accurate and perfect duplicates of both the said books of original registry, with their respective indexes; and also a duplicate of the said general index book, by causing the same respectively to be carefully transcribed into other books of like sizes and forms, to be provided for that purpose; and shall authenticate and certify each of the said duplicates, in the same manner and form, in all respects, as is herein before directed, in regard to the said originals respectively, except that in the affidavits and certificates to be thereunto annexed, the same shall be described as duplicates of the original registries and indexes, and the said duplicate books, when so authenticated and certified, shall be delivered by the said registrar to the governor, lieutenant-

governor, or civil commander in chief, for the time being, who shall, by the first safe conveyance, transmit the same, under his official seal, to His Majesty's Principal Secretary of State for the Colonial Department in England, to be carefully preserved in his office.

And it is hereby further ordered, That after the expiration of twelve calendar months, to be computed from the time when the said original registry shall be completed and authenticated as aforesaid, on the 1st day of January, or within ten days after that day in every year, every person resident in the said island, who shall be in possession of any plantation within the same, whether as proprietor or mortgagee, sequestrator, trustee, or receiver, manager, or attorney, or whatever their estate, title, trust, or interest therein may be, or who shall own or possess any Slave or Slaves whatsoever, within the said island, whatsoever his or her tenure of, or title to the same may be, shall make and deliver, upon oath, to the registrar of Slaves for the time being, an account, or schedule, in writing, by him or her subscribed, to be called "The annual return of Slaves," containing a true and particular account of all births and deaths of Plantation Slaves belonging to the person or persons on whose behalf such annual return is made, within the year preceding; or in the case of the first of such annual returns, within the year and portion of a year that shall have elapsed since the said original returns were made; and also an account of all deductions from, or additions to, the former stock of Slaves belonging to such plantation, or to such person or persons, within the same periods, by other means than deaths or births, whether the same shall have happened by permanent desertion, sale, or other transfer of property, or enfranchisement, or by the return of fugitive Slaves, formerly registered as permanent deserters, or by purchase, succession, reversion, or other lawful acquisition, within the said island, or lawful importation from other British colonies, which particular cause, or mode of deduction or addition, shall, in all cases, be distinctly specified in such annual returns: and in cases of purchase, or other acquisition or sale, or other transfer or manumission of Slaves formerly registered, the registered name and description of every such newly-purchased, or acquired, or transferred, or manumitted Slave, and of his or her former plantation, owner or owners, shall also be set forth at large in such annual return: and in respect of infant Slaves, formerly registered, or Slaves who had not, at the time of the original registration thereof, attained to their full stature, the said annual returns shall specify their then existing stature, by actual measurement, and shall also state and describe any existing bodily defect or deformity, the effect of accident or disease, which may have materially altered the former description of any Slaves, under the title of "Marks," since the last return, with the causes of any such alteration; and every such annual return shall also contain all such further particulars, in respect of every newly-acquired Slave named therein, as are hereinbefore directed to be contained in the said original returns; and when, by the death of the owner, or any other cause, there shall have been, within the period to which the return relates, any change of property in, and possession of, any personal Slave, from the owner or owners under whose names the same were registered, to any new owner or owners, such change of property and possession shall also be mentioned in the said annual returns; and such annual returns shall also state the whole number of Slaves then belonging to the plantation, owner or

owners, mentioned in such returns; but when there has been no alteration since the last return, in the number or description of the Slaves belonging to the plantation for which, or the person by, or for whom the return is made, or the property thereof, it shall be sufficient to state the whole number of Slaves, and to add, "No alteration, required by law to be specified, has taken place since the last return."

And it is hereby further ordered, That every person making and subscribing any such annual return, shall personally deliver the same, either to the said registrar, or to such other person as shall by him be appointed and deputed to receive such returns as aforesaid, and shall at the same time take the following oath, which the said registrar is hereby empowered to administer, viz. –

"I, *A. B.* do solemnly swear, that the contents of the schedule or return, now by me delivered, are true, and that the same contains, to the best of my knowledge and belief, a full, fair, and correct account of all the births and deaths which have happened, among the Slaves attached, or belonging to the plantation therein named, (or belonging to the owner or owners therein named) and being within this island, since the original return and registration thereof, (or during the last year) and of all other additions to, or deductions from the said Slaves, within the same period, and of the whole number of Slaves now actually belonging to the said plantation, (or to the said owner or owners. So help me GOD."

And it is hereby further ordered, That the said registrar, on the receipt of such annual returns at his office, shall forthwith proceed to correct, enlarge, and continue, pursuant thereto, the former registry of the Plantation Slaves, and Personal Slaves, to which such returns respectively relate, in manner following (that is to say) – The said registrar shall, in the first place, carefully compare such returns, and the names and descriptions of Slaves therein contained, with the original registry of the Slaves of the same plantation or plantations respectively, and of such other plantation within the said island from which any of the said Slaves may be stated to have been newly purchased or transferred, or of the same owner or owners of personal Slaves, and of any former owner or owners thereof under whom the present owner or owners thereof shall derive his or their title, and also with all intermediate continuations and corrections of the said original registry by former annual returns, so as to ascertain not only that the whole number of Slaves mentioned in the said returns corresponds with the original and former entries of Slaves belonging to the same plantation or plantations, owner or owners respectively, having regard to all former continuations and corrections, but also that the descriptions of all Slaves in such annual returns named and described, correspond with such former descriptions thereof, (if any) as are in the said books of registry contained, except so far as such descriptions are in any particular stated to have been altered, in respect to stature or bodily marks, since the last registered returns; and in case there shall be found any apparent inconsistency between any such returns, and the said original, or former annual registries of Slaves, belonging to the same plantation or plantations, owner or owners respectively, or if in the case of any Slave or Slaves, returned as newly acquired, by purchase or transfer, succession or reversion, from any other plantation or plantations, or former owner or owners, within the said island, there shall not appear, in

the return of the same year, for such other plantation, or former owner or owners, a corresponding entry of the same Slaves, as deducted by sale or transfer, determination of estate, or otherwise, from the last registered stock of such other plantation or plantations, or former owner or owners, the registrar shall give notice thereof to the owner or owners, or other party or parties, making any such return or returns, and require him or them to attend before him, the said registrar, to explain or remove such apparent inconsistency or defect; and until the same shall be accordingly done, to the entire satisfaction of the said registrar, by an examination, upon oath, if necessary, (which oath the said registrar is hereby empowered to administer) the said registrar shall not proceed to register any such annual returns, so apparently defective or erroneous; but the party or parties refusing or omitting so to explain, and, if necessary, to correct the same, shall, for all the purposes of this order, be deemed and taken to have omitted to make any return for the year to which such defective return relates; saving, nevertheless, to him or them, such remedy, by appeal, as is hereinafter provided, in case of any error or misconduct herein by the said registrar.

And it is hereby further ordered, That immediately from and after such comparison and examination as aforesaid, every annual return which shall be found to be not inconsistent with the said original and preceding annual registries, or which shall have been satisfactorily explained or corrected as aforesaid, shall be registered in the said books of registry, (that is to say) when any such returns shall state that there has been no alteration in the number or descriptions of the Slaves since the last returns for the same plantation, or the said owner or owners, of Personal Slaves, the said registrar shall carry forward the whole number, so last returned, to a new folio or double page in the said original book of registry, and shall enter and insert under the same, "No alteration by return for the year 18__ as by return dated" and shall subscribe his name to such entry; but as to Slaves stated in any such annual returns to have died, or to have been sold, or otherwise transferred, or to have been manumitted, or to have permanently deserted, the said registrar shall write in the column of corrections of the said original registry, and of every intermediate annual registry wherein the name of any such deceased, sold, transferred, or manumitted Slave or deserter shall have been inserted, in the proper space of the said column, opposite to the name of such Slave, the word "Dead," or "Sold," "Transferred," "Manumitted," or "Deserted," as the case may be; and the said registrar shall then proceed to sum up the number of all Slaves which, by any of the means aforesaid, have been deducted from the former and last registered account of the stock of Slaves belonging to the same plantation, or to the same owner or owners of personal Slaves, as the case may be, since the said last registered returns, and shall deduct the whole number thereof from the last registered amount of Slaves of such plantation, owner or owners, and shall carry forward the remaining number thereof to a new folio or double page of the proper book of registry, making a written reference thereto at the foot of the folio from which the same is carried, and subscribing the same with his name; and in such new folio or double page, and in as many successive folios as may be necessary, shall be afterwards inserted the names and descriptions of all Slaves mentioned in the same annual returns to have been newly added to the former registered stock, by any of the lawful means aforesaid, distinguishing, not only the

several families, and all other particulars, as in the said original registry, but also the particular mode of acquisition of every such newly added Slave, by the word "Born," "Purchased," "Returned," "Imported," or such other brief designation as may be applicable to each case.

And it hereby further ordered, That the said registrar shall be entitled to demand and receive, for registering every return of Slaves by him registered, the sum of ten shillings sterling money, and the further sum of one shilling like money for every Slave mentioned or described in every such return, and no more to be paid by the party or parties making such return; provided always, that no Slave so returned as newly imported into the said island shall be registered, nor shall any return containing any Slave or Slaves so described be received as a correct return, unless it shall appear, by a certificate from the collector or chief officer of the customs, as well as by the affidavit in writing of the importer or party making such return, (which certificate and affidavit shall always be brought into and filed in the registry within twenty-one days from the time of the importation of any such Slave or Slaves) that such Slave or Slaves was or were lawfully imported, with regular certificates, from some other British colony, pursuant to the directions of an Act of Parliament made in the forty-sixth year of His Majesty's Reign, intitled, "An Act to prevent the importation of Slaves, by any of His Majesty's subjects, into any islands, colonies, plantations, or territories; belonging to any foreign sovereign, state or power, and also to render more effectual a certain order made by His Majesty in Council, on the fifteenth day of August, one thousand eight hundred and five, for prohibiting the importation of Slaves, except in certain cases, into any of the settlements, islands, colonies, or plantations, on the continent of America, or in the West Indies, which have been surrendered to His Majesty's Arms during the present war, and to prevent the fitting out of any foreign Slave-ships from British ports."

And it is hereby further ordered, That, at the end of every such registration of each annual return, the said registrar shall carefully sum up and insert, in words at length, the whole number of Slaves appearing by the same return then to belong to the said plantation for which, or the owner or owners by whom, or on whose behalf, the return is made, and shall subscribe the same with his name, and shall also subscribe his name at the bottom of each folio, or double page, containing the said annual returns.

And it hereby further ordered, That no annual return of Slaves shall, on any pretext, be received to be registered, after the said time herein-before limited (to wit) the eleventh day of January in each year; but if any owner or owners, possessor or possessors of Slaves within the said island, shall have omitted to make his, her, or their return thereof, in any year, at or before the said annual period; and if such owner or owners, possessor or possessors, or any other person, who, at the time of such omission, was or shall have since become the owner or possessor, whether in his own right, or in the right of any other person or persons as aforesaid, of any Slave or Slaves so omitted to be returned, shall, at the time of making his or their next annual return, make oath before the said regsitrar, and prove to his satisfaction, by such other credible evidence, as from the nature of the case may be reasonably expected, and required, that such omission was not wilful, but arose from some

specified accident, or other unavoidable impediment, or from the neglect or default of some person or persons, other than the true and absolute owner of the said Slave or Slaves, who was in possession thereof, at the time of such neglect or default, it shall be lawful for such party or parties, so making his, her, or their return for the next following year, with the consent of the said registrar, to insert in such return for the next following year, (but not afterwards,) such account as is herein-before directed, of the births and deaths, and of all other deductions from, or additions to, the stock of Slaves, in respect of which such return is made, which happened within the two last preceding years, distinguishing nevertheless the respective deductions and additions in each year; and such return, when duly made and registered, together with the cause of the former omission, which shall be certified and signed by the said registrar, on the registry of such return in the proper book, shall from thenceforth be deemed and taken to be as valid and effectual, for all the purposes of this order, as if the matters therein contained had been duly returned and registered in each of the said two years respectively.

And it is hereby further ordered, That, on or before the first day of March in each year, the said registrar shall carefully make out a general account or abstract of all the annual returns that shall have been made and registered in that year as aforesaid, wherein shall be inserted, in alphabetical order, and in two divisions, the one containing Plantation Slaves, and the other Personal Slaves, the effect of each annual return, according to the registration thereof (to wit) the registered names of the plantations or owners, the numbers of births and deaths of Slaves, with their names and descriptions, and the amount and particulars of all other deductions or additions, respectively specified in each return; and also the whole remaining or existing number of Slaves, then appearing by the registry to belong to such plantation or owner, for which, or whom the return has been made; and the registrar shall also make out a fair copy or duplicate of every such general account or abstract, and shall subscribe both the original and duplicate thereof with his name, and shall subjoin to each of the same an affidavit in the following form; viz. –

"Before *A. B.* (inserting the name and title of the governor, lieutenant-governor, or civil commander in chief, for the time being) personally appeared *C. D.* (naming himself) the registrar of Slaves of the island of Trinidada, who being duly sworn on the Holy Evangelists, makes oath and says, that the preceding account or abstract is a true account or abstract of all the returns of Plantation or Personal Slaves that have been to, and registered in, the registry of Slaves of the said island in the present year, and that the same contains, and truly and accurately specifies, all such particulars as he, the said registrar, is required by law to make therein, according to the best of his knowledge and belief, he having carefully compared the same with the said returns and the registry thereof remaining in his said office."

Which affidavit being subscribed by the said registrar, shall be sworn before the said governor, lieutenant-governor, or civil commander in chief, who shall certify the same to have been sworn in manner herein-before directed, in respect of the said books of registry, and the said annual abstracts or accounts shall be thereupon delivered to the said governor, lieutenant-governor, or civil commander in chief, who shall carefully transmit one of the said accounts or abstracts by the first safe

conveyance, under his official seal, to His Majesty's Principal Secretary of State for the Colonial Department in England, retaining the said duplicate or copy until he shall be informed that the original thereof has been received, or that the same has miscarried, in which latter case he shall in like manner transmit the duplicate or copy, and on the receipt of such annual abstracts or returns, the said Secretary of State shall cause the respective divisions thereof to be forthwith, or as soon as conveniently may be, registered in the said duplicate books of Plantation Slaves, and Personal Slaves respectively, which are to remain in his office as aforesaid, with the proper corrections of the said respective duplicate books of registry, such as are herein-before directed to be made and entered in the said island, so that the said duplicate books in the office of the said Secretary of State shall from time to time, and at all times after the transmission and receipt of the last annual returns, and the registrations thereof in the said office of the Secretary of State, in all points correspond and agree with the registry of Slaves in the said island of Trinidada.

Provided always, and it is hereby further ordered, That, if the said registrar shall, in the exercise of his said office, refuse to receive for registration any return, or to make any entry which he ought to receive or make, according to the directions herein contained, and the true intent and meaning of this order, or shall, contrary to the said directions, or to the true intent and meaning hereof, receive for registration any return, or make or cause, or suffer to be made any entry which ought not to be received or made, it shall be lawful for any person or persons thereby aggrieved or liable so to be, to present a petition or complaint in writing, in the nature of an appeal to the court of the order, or such other court or judge as shall have the supreme jurisdiction, in civil causes, within the said island, praying relief against such default or misconduct of the said registrar, which court or judge shall forthwith cause a copy of such petition or complaint to be served upon the said registrar, with notice to him to answer the matter thereof in writing, by an early day, to be for that purpose appointed, and the said court or judge shall thereupon proceed, in a summary manner, but upon written evidence, to examine the matter of such petition or complaint, and to make such order thereupon, and as to the costs of the controversy, as shall seem proper and expedient, which order the said registrar, and the said party or parties petitioning and complaining respectively, shall be bound to obey: but it shall nevertheless be lawful for either of the said parties to appeal from the decision of such court or judge, to His Majesty in His Privy Council, giving such security or securities thereupon, as are usual in other cases of such appeals; and whenever, in pursuance of any decision of the said court or judge, or of His Majesty in his Privy Council, any entry in either of the said books of registry shall be made, expunged, or altered, the insertion, correction, or alternation so made, shall be valid and effectual for all the purposes of this order; any thing herein contained to the contrary thereof notwithstanding.

And whereas, by the provisions of the twelfth chapter or article of the cedula or ordinance for regulating the education and treatment of Slaves in the Spanish colonies, made and published by the King of Spain on the thirty-first day of May, one thousand seven hundred and eighty-nine, and which still has the force of law within the said island, as part of the laws in force therein at the time of the conquest thereof by His Majesty's arms, which, by His Majesty's authority have been hitherto re-

tained, it was ordered and directed, that the masters of Slaves shall be obliged, every year, to deliver in to the judge or magistrate of the city or town within the district of which their estates are situation, a list, signed and sworn to by them, of all the Slaves which they possess, in order that the notary of the town-house may take an account of them in a separate book, to be kept for that purpose at the town-house, together with the list presented by the master, who is further thereby required, whenever any of his Slaves die or absent themselves from his estate, to inform the said judge or magistrate of it within the term of three days, that by the order of the procurator syndic it may be noted in the said book. It is hereby further ordered, that from and after the opening of the public registry of Slaves hereby established, it shall not be necessary for any master or owner of Slaves within the said island to deliver to the said judge or magistrate any such annual lists or returns, or to give any such notices of the deaths or absence of Slaves as are by the said cedula or ordinance required, but the said annual returns and registry hereby directed shall in that respect supply the place of the said annual lists or returns, and notices, and the said twelfth article of the said cedula or ordinance shall from thenceforth cease to have any force or effect within the said island.

And it is hereby further ordered, That if the said registrar shall, in the exercise of any of the duties thereby imposed upon him, or any of the functions of his said office, or otherwise, wilfully make or knowingly permit or suffer to be made any false or fraudulent entry in the said books of registry, or either of them, or in the said accounts or abstracts, or shall fraudulently eraze, obliterate, or alter, or knowingly permit or suffer to be fraudulently erazed, obliterated or altered, any entry which shall have been duly made in the said books of registry, or either of them, the said registrar shall, upon conviction of any such offence, not only be liable to all such pains and penalties as ought by the laws in force within the said island, at the time of such offence, to be inflicted upon persons convicted of forging or fraudulently altering public judicial records; but shall for ever forfeit his said office, and shall be incapable of ever after holding the same, or any other public office within the said island, and shall moreover be liable to the civil suits or actions of all and every person or persons who shall sustain any damage or injury by any such offence, who, besides full reparation for every such damage or injury, shall recover against such registrar double costs of suit; and if any deputy, assistant, or clerk of the said registrar, shall commit, or knowingly permit, or suffer to be committed, any such offence as aforesaid, he shall, upon conviction thereof, not only in like manner be liable to all such pains and penalties as ought by the said laws to be inflicted upon persons convicted of forging or fraudulently altering public judicial records, but shall forfeit such his office or employment, and be incapable of ever after holding the same, or any other public office within the said island; and if any other person or persons shall wilfully make, or cause, or procure to be made, any false or fraudent [sic] entry in the said books of registry eraze, obliterate, or alter, or cause, or procure to be erazed, obliterated or altered, any entry which shall have been made in the said books of registry, accounts or abstracts, or either of them, every such person or persons so offending shall, upon conviction, not only be liable to all such pains and penalties as aforesaid, but shall forfeit to His Majesty, his heirs or successors, all his and their estate, right, title, property, and interest of, in and to any Slave or Slaves

that shall be the subject or subjects of any such false or fraudulent entry, erazure, obliteration, or alteration; and if such person or persons so offending shall be the sole owner or owners of such Slave or Slaves, every such Slave or Slaves shall, upon conviction, be adjudged to be, and shall from thenceforth be absolutely enfranchised and free.

And it is hereby further ordered, That if any person or persons making any such original or annual return of Slaves as aforesaid, shall falsely and wilfully insert therein any name or names, description or descriptions, of any Slave or Slaves, or pretended Slave or Slaves, belonging to any plantation or plantations, owner or owners, knowing that such Slave or Slaves, or pretended Slave or Slaves, as shall be so named or described, doth not, or do not in fact belong, at the time of making such return, to such plantation or plantations, owner or owners, any person or persons so offending shall forfeit, for every Slave or pretended Slave, so falsely returned, the sum of one hundred pounds sterling money, to be recovered in such manner as any other penalty or forfeiture may be recovered in the said island by any law thereof, or any statute of this kingdom then in force therein, the one moiety thereof to the use of the governor, lieutenant-governor, or civil commander in chief, within the said island for the time being, and the other moiety thereof to the use of such person as shall inform, sue and prosecute for the same: Provided always, that no person shall be liable to any such penalty or forfeiture as last aforesaid, in respect of any Slave or Slaves which he shall prove to have been at the time of the return actually employed upon the plantation, or in the service of the asserted owner or owners, to which the same were represented by such return to belong, although he shall not be able to prove that the property in such Slave or Slaves was such as was stated in the return, except when the prosecutor shall give evidence beyond the falsification of the return in the point of property, to shew that the same was fraudent [sic], or wilfully false.

And it is hereby further ordered, That, from and after the final closing and authentication of the said original registry of Slaves in the said island, as herein-before directed, no estate, right, title, property or interest whatsoever, at law or in equity, of, in or to any Slave or Slaves in the said island, shall be created or transferred, or shall in any manner pass by sale or mortgage, gift, grant, judgment, decree, execution, or other voluntary alienation, nor by marriage, succession, inheritance, will, devise, administration, or otherwise howsoever, unless such Slave or Slaves shall have been first duly registered, according to the directions herein-before contained.

And it is hereby further ordered, That, from and after the said final closing and authentication of the said original registry of Slaves in the said island, it shall not be lawful to hold or detain in Slavery, nor to use or treat as a Slave, in the said island, any Negro, or Mulatto, or other person, who shall not have been first duly registered as a Slave, according to the directions hereinbefore contained, but that every Negro, Mulatto, or other person within the said island, not so registered as a Slave, shall be deemed and taken to be free, except only fugitive Slaves from any other island or place in the West Indies, who may be apprehended within the said island, and who shall be detained in custody, by authority of any court or magistrate, for the purpose of being delivered up to their owners.

Provided always, that nothing herein contained, shall entitle any Negro, Mulatto, or other person, not duly registered as a Slave, upon any annual return of Slaves, to his or her freedom for that cause alone, until it shall be seen whether at the next annual period for making such returns, or within such further period as are hereinafter in certain cases allowed, such defect of registration may not be proved, on the part of his or her owner or owners, to have arisen from accident, or some unavoidable or excuseable cause, such as is herein-before and hereinafter, in certain cases, allowed and provided for; and whether such defect may not be thereupon, at such next annual period of registration, or within such further periods as aforesaid, lawfully remedied and supplied, in manner herein-before and hereinafter directed; but if, in the mean time, and prior to such next annual period of registration, or within such further period as is hereinafter in certain cases allowed, any question shall arise as to the right of any such Negro, Mulatto, or other person to enjoy his or her freedom, by force and virtue of this present order, or the right of the alleged owner or owners to treat him or her as a Slave, the court or magistrate before whom any such question shall be brought, shall forthwith give notice thereof to the governor, lieutenant-governor, or civil commander in chief of the said island for the time being, who is hereby empowered and directed to make all such orders for the employment, support, protection, government, and restraint of such Negro, Mulatto, or other person, as shall be necessary or proper, for the prevention, on the one hand, of his or her being sent out of the jurisdiction of the courts of the said island, or otherwise illtreated or oppressed by the authority of the asserted owner or owners; and on the other hand, for the preventing such Negro, Mulatto, or other person, from withdrawing himself or herself from the said jurisdiction, until his or her lawful condition, as a Slave, or free person, so far as the same may depend on this present order, shall, by the registration or non-registration of him or her as a Slave, pursuant to the directions herein-before contained, at the next annual period of registration, or within such further period as is hereinafter in certain cases allowed for that purpose, be ascertained and decided.

And it is hereby further ordered, That whenever, in any action, suit, or other judicial proceeding, within the said island, it shall be necessary for the master or mistress, owner or claimant of any Slave or Slaves, or of any Negro, Mulatto, or other person or persons, asserted to be a Slave or Slaves, to prove his or her property therein, such master or mistress, owner or claimant, shall, in the first place, be bound to shew that such Slave or Slaves hath or have been duly registered as such, according to the directions herein contained, either by or on behalf of such master or mistress, owner or claimant, or by or on behalf of the person or persons from, by, or under whom his or her title is derived.

Provided always, That no default of any tenant or tenants, for life or years, or other particular estate, in not returning to the registry any Slave or Slaves which ought by him, her, or them, to be returned for registration, pursuant to the directions herein contained, shall entitle such Slave or Slaves to freedom, to the prejudice of any person or persons entitled to such Slave or Slaves, in remainder or reversion; but all the estate, right, title, and interest, at law, and in equity, of any tenant for life or years, or other particular estate, of, in, and to any Slave or Slaves, in his or her possession, which he or she shall omit to return for registration as aforesaid, con-

trary to the directions of this order, shall be forfeited to the person or persons next in remainder or reversion, who shall and may forthwith after, take or recover the possession thereof, and hold the same in slavery, any thing herein contained to the contrary notwithstanding; so as such Slave or Slaves be, by him, her or them, duly returned for registration, according to the directions herein-before contained, within such time, and in such manner, as is hereinafter in that behalf limited and directed.

Provided also, That no default of any mortgagee or mortgagees, in possession of any Slave or Slaves within the said island, in not returning any Slave or Slaves, which ought by him, her, or them, to be returned for registration, pursuant to the directions herein contained, shall entitle such Slave or Slaves to freedom, to the prejudice of the mortgagor or mortgagors of any such Slave or Slaves, his, her, or their representatives, or any other person or persons claiming under any second or subsequent mortgage, charge or incumbrance, or under any sale or conveyance, executed, made, or suffered, by such mortgagor or mortgagors, but all the estate, right, title, and interest, at law and in equity, of such mortgagee or mortgagees, in possession of, in, and to such Slave or Slaves as he, she, or they shall omit to return for registration as aforesaid, contrary to the directions of this order, shall from thenceforth cease and determine, as if such Slave or Slaves had been actually redeemed by the mortgagor or mortgagors, or by such person or persons as would have been entitled to such redemption, on payment of the mortgage debt; and such Slave or Slaves shall and may accordingly be recovered and taken possession of, by such mortgagor or mortgagors, or such other person entitled to the benefit of such redemption, and held in slavery by him, her, or them, (any thing herein-contained to the contrary notwithstanding) discharged of the said mortgage debt, so as such Slave or Slaves be afterwards, by such mortgagor or mortgagors, or such other person or persons as aforesaid, duly returned for registration, according to the directions hereinbefore contained, within such time, and in such manner as is hereinafter in that behalf limited and directed.

Provided also, That no default of any trustee, guardian, receiver, committee, sequestrator, or other person appointed by any court of justice, who shall be in possession of any Slave or Slaves within the said island, in returning any Slave or Slaves for registration, pursuant to the directions herein contained, shall entitle such Slave or Slaves to freedom, to the prejudice of the person or persons beneficially entitled to, or interested in, such Slave or Slaves, if such person or persons so beneficially entitled to, or interested in such Slave or Slaves, shall afterwards duly return the same for registration (which he or they, whether in possession of the same or not, is and are hereby empowered to do,) within such time, and in such manner, as is hereinafter in that behalf limited and directed; (that is to say) – Provided nevertheless, and it is hereby further ordered, That in order to entitle any remainder-man, reversioner, mortgagor or mortgagee, or person beneficially interested under any trust, or otherwise, to keep and hold in slavery any Negro, Mullatto, or other person, who, by the default of the tenant for life or years, or other particular tenant, or of the mortgagee or mortgagor in possession, or of any trustee, guardian, receiver, committee, or sequestrator, shall not have been duly registered as a Slave, according to the directions herein-before contained, it shall be necessary for such remainder-man, or reversioner, mortgagor, mortgagee, or other person beneficially interested,

at the annual period hereby appointed for the registration of Slaves in the said island, next after he, she, or they shall have taken possession of any such Slave, and within three years at most from the time of such default of registration, (except in cases of defaults in the annual returning of any new-born Slave, the issue of any female Slave, previously registered as such, and in respect of such new-born Slaves, within ten years at most from the time of such default, and within one year from the time of taking possession thereof,) to make such full and particular return and description of such Slave, in writing, and upon oath, to the said registrar, as is herein-before directed to be made, for the purpose of the original registration of the Slaves in the said island, together with an affidavit in writing, to be sworn before the said registrar, stating the time, and the particular nature of the former default of registration, and by whom the same was committed or incurred, and by what title, and for what estate and interest such defaulter was in possession of such Slave at the time of such default of registration, and shewing under what settlement, or conveyance, or by what other means he or they, the said reversioner, remainder-man, mortgagor, or mortgagee, or person beneficially interested, making such return, was entitled to, some specified estate in remainder or reversion, or to some right or equity of redemption, or some mortgage, term, or estate, or equitable estate, or interest of, in, to, or upon such Slave, at the time of such default of registration, and averring positively that such Negro, or Mullatto, or other person so returned as a Slave, is really and rightfully such, the former default of registration only excepted, and specifying how such servile condition lawfully arose, namely, whether by the alledged Slave having been lawfully held in slavery in the said island, prior to the original registration of Slaves hereby directed, or having been since born of some, and what female Slave, duly registered as such within the said island, or having been lawfully imported into the said island from some and what other British colony, at some time, and when subsequent to the said original registration of Slaves; and it is hereby provided and ordered, that such affidavit, being duly filed in the said registry, the registrar shall examine the return to which the same relates; and if it appears on the face thereof to be such a return as ought, if true, to be received and registered, according to the intent and meaning of this order, he shall proceed to require such further proof thereof, as the nature of the case may afford, and especially by the production of any Negro, or Mulatto, or other person inscribed in the said return as a Slave, to be by him the said registrar personally inspected, and privately examined, and also by the production of any deeds, or other instruments mentioned in the said affidavit, or duly authenticated copies thereof, and by reference to entries in the said registry, as to the alledged mother or female ancestors of such asserted Slave, and by reference in respect of any Slave asserted to have been imported from other British colonies, to the certificates of his or her lawful importation, herein-before directed to be brought into and filed in the said office; and for the better investigation of any facts stated in any such return, the said registrar shall have power to examine the party or parties making the same, upon oath, if he shall think fit, and if after such examination and proof, the said registrar shall think the said return to be sufficiently verified, and not otherwise, he shall proceed duly to register the same, according to the directions and regulations herein-before contained, in respect to annual returns; but any party or parties, aggrieved by an

erroneous decision of the said registrar herein, shall and may have such remedy, by appeal, as is hereinbefore provided, in respect of any default or misconduct of the said registrar.

Provided always nevertheless, and it is hereby farther ordered, That whensoever, by reason of any such default as aforesaid, by persons in possession of Slaves not being their own absolute property, in any of the cases aforesaid, it shall be allowable and necessary for any owner or owners, innocent of such default, to return for registration any Slave or Slaves, after the time at which the same ought to have been registered by any tenant for life or years, or other particular estate, mortgagee, or mortgagor, in possession, trustee, guardian, committee, sequestrator, or other officer, if the party or parties charged with such default or defaults, is, or are, still living and resident within the jurisdiction of the courts of the said island, or a copy thereof, before the attorney-general, procurator syndic, or other proper law office, whose province it is to prosecute for the crown in the said island, who shall consider the same, and if it appears to him that any penalty or penalties, forfeiture or forfeitures, has, or have been incurred by the alledged default or defaults, he shall forthwith give notice to the party or parties charged with the same, to attend him, and shew cause why a prosecution, to recover such penalty or penalties, forfeiture or forfeitures, shall not be commenced; and if the said party or parties shall not so attend, or, attending, shall not shew sufficient cause in that behalf, the said attorney-general, procurator syndic, or other law-officer, shall cause a prosecution, for such penalty or penalties, to be instituted in the proper court of the said island, against such party or parties so offending, and shall prosecute the same to trial, judgment, and execution; and the person or persons making such return shall be bound, on such trial, to furnish sufficient evidence for the conviction of the defendant or defendants; or on failure thereof, his said return shall be rejected, and the asserted Slave or Slaves in question, as against the party or parties making such return, shall be deemed and taken to be free; and until the event of such prosecution, the registrar shall not proceed to register such return, notwithstanding any such evidence as aforesaid adduced or offered to him, but shall reserve the same, if need be, for registration, in case the same shall be ultimately allowed, at the next annual period for registering returns after such allowance, when the registration thereof, if duly made, shall be as valid and effectual as if made at the regular time.

And, for the better enabling all remainder-men, and reversioners, and all mortgagors and mortgagees, not in possession, and all other persons beneficially intitled to, or interested in, any Slaves in the said island, in the possession of any tenants for life or years, or other particular tenants, or of any mortgagees, mortgagors, trustees, guardians, receivers, committees, or sequestrators, to discover any default of the party or parties in possession of such Slaves, in not duly returning the same to be registered in the said original registration of Slaves, and thereupon to have and use the remedies hereby provided; it is hereby further ordered, That it shall and may be lawful, to and for every person that is, or shall, or may be, legally or beneficially entitled to, or interested in, any Slave or Slaves in the said island, in remainder or reversion, or by virtue of any mortgage or equity of redemption, or of any settlement, or conveyance, or will, or otherwise howsoever, which Slave or Slaves are in the immediate possession of any tenant for life or other particular estate, or of any

mortgagor, mortgagee, trustee, guardian, receiver, committee, or sequestrator thereof, once within the term of three years, from the time of the said original registration of Slaves, and at any part of that term, by himself or herself, or his or her attorney or agent, to give notice, in writing, to the parties in possession of any such Slave or Slaves, that he or she, the said person, legally or beneficially entitled or interested, or his or her attorney, therein named and described, will attend at the house, plantation, or place, where such Slave or Slaves is or are usually kept and employed, at some day, and some convenient hour in the day-time, specified in such notice, and not less than ten days after the service thereof, then and there to inspect the said Slave or Slaves, and compare him, her, or them, in point of numbers and descriptions, with an office copy of the registered returns; at which time and place, the party in possession of such Slave or Slaves shall, by himself, or herself, or his or her attorney, manager, or agent, produce the same accordingly, and submit him, her, or them, to the inspection and examination of the said party so entitled or interested, or his or her said attorney; or in default thereof, without some necessary and unavoidable impediment, (the proof whereof shall lie upon such defaulter) shall forfeit and pay, for every Slave omitted to be so produced, the sum of twenty pounds sterling money.

And, for the better protection and security of infants, married women, lunatics, and all other persons under any disability or incapacity, who are, or shall, or may be, beneficially entitled to, or interested in, any Slave or Slaves within the said island; it is hereby further ordered, That within three months from and after the closing and authentication of the original registry of the Slaves of the said island, as herein-before directed, the registrar shall make out, and certify in writing, and transmit to the court of order, or such other court or judge as shall have the supreme jurisdiction in civil causes within the said island, an abstract, or list in writing, of all returns which shall have been made by persons in possession of Slaves, as trustees, guardians, receivers, committees, or sequestrators, and such court shall thereupon, ex-officio, issue a commission, directed to three or more trustworthy and intelligent persons, empowering and requiring them to repair to the several plantations in respect of which such returns have been made, and to the places of abode of such trustees, guardians, receivers, committees, or sequestrators, as have made any returns of personal Slaves in their possession, there, by inspection of the Slaves, to verify or correct the said registered returns, to which commissioners, all such trustees, guardians, receivers, committees, or sequestrators, shall be bound, on reasonable notice, to be allowed by such court or judge, to produce all the Slaves by them respectively returned, for the inspection of the said commissioners; and the said commissioners shall thereupon proceed to compare the same, with the descriptions thereof in the said returns; and the said commissioners shall have power to examine the said trustees, guardians, receivers, committees, and sequestrators, upon oath, as to the truth of the said returns, so as to ascertain whether all the Slaves are included therein that ought to have been returns, and also to inquire whether any trustees, guardians, receivers, committees, or sequestrators, in possession of any Slave or Slaves within the said island, have omitted to make any returns; and for that purpose to call before them and examine witnesses, and to examine all public registries and records; and the said commissioners shall, within six months from and

after the closing and authentication of the said original registry, make a full and distinct return to the said court or judge, specifying any defaults or defects in the said original and registered returns, or any omissions to make returns, which they shall have discovered, with the names of the defaulters; and all such descriptions of the Slaves, the subjects of any such defaults as are herein-before required to be specified in the said original returns; and the said court or judge shall thereupon cause all such defaulters to be summoned to appear and shew cause why such defaults or defects of registration should not be corrected and supplied, and why they, the said defaulters, should not pay the penalties hereby imposed for such defaults, and shall proceed, in a summary manner, to examine the truth of the return that shall have been made by the said commissioners, and the causes that shall be shewn against the allowance thereof, and shall allow or disallow the said return, in the various particulars therein contained; and if any defaults or defects of returns for original registration shall be established, to the satisfaction of the said court or judge, an order shall be made thereupon, distinctly and fully specifying the same, with all such particulars as shall be necessary for supplying and correcting such defaults and defects, and reforming the said original registry, and commanding the same to be reformed accordingly at the next annual period of registration, and such order shall, by the said court or judge, be transmitted, at or before the said annual period of registration, to the said registrar, who shall transcribe the same at large in the said books appointed for the registration of Plantation Slaves and Personal Slaves respectively, and the same shall from thenceforth be deemed and taken to be a part of the said original registry of Slaves, and shall have the same force and effect as if the corrections or additions, by such order made, had been contained in the said original returns, any thing herein contained to the contrary thereof notwithstanding.

And it is further hereby ordered, That, every trustee, guardian, receiver, committee, or sequestrator, who shall wilfully refuse or omit to produce any Slave in his possession, for the inspection of the said commissioners, being thereto by them required as aforesaid, or who shall be found to have wilfully omitted to return, for original registrations, any Slave or Slaves in his possession, or wilfully to have described the same improperly in such his return, shall forfeit and pay, for every Slave, the subject of any such offence, such sum as the said court or judge shall adjudge and order, not exceeding the sum of twenty pounds sterling for every such Slave, to be recovered in the same court; the produce of which fines shall be applied towards defraying the expenses attending the said commission.

And it further hereby ordered, That the said court or judge shall adjust and award a reasonable allowance and compensation to the said commissioners, and any clerk or clerks to be by them appointed, as well for their time and trouble, as their expenses in executing the said commission, to defray which, or the residue thereof, after the application of the produce of the said fines as aforesaid, the said trustees, guardians, receivers, committees, and sequestrators, shall be respectively assessed, in proportion to the number of Slaves by them respectively possessed in their said respective characters; such sums (to be paid by them respectively, and allowed to them in their accounts with the estates, or person beneficially interested in such Slaves) as shall be ordered by the said court or judge, not exceeding the sum of five shillings sterling money for each Slave so by them respectively possessed.

Provided also, and it is hereby further ordered, That after any Slave shall have been duly registered as such in the said island, either in the said original registration, or by such corrections thereof as are herein-before allowed and provided, or in any annual return and registration, either as a new-born Slave, the issue of a registered Female Slave, or as newly imported from some other British colony, with such certificate of lawful importation as is herein-before in that case required, such Slave shall not be entitled to his or her freedom by reason of any subsequent default of annual registration, in any case in which such registration is hereby required to be made, except as against the party or parties making such default; and all persons claiming by, from, or under him or them, by title subsequent to such default, unless such other person or persons as may thereupon be, or become entitled, beneficially, to such Slave, being of full age, and under no personal disability, shall omit duly to return such Slave for registration, in manner herein-before directed and provided, at or before the annual period of registration next but one after his, her, or their right and title to, and actual possession of such Slave, shall have accrued.

And it is hereby further ordered, That whenever, by reason of the wilful default of any tenant for life or years, or other particular estate, or of any mortgagee or mortgagor in possession, or any trustee, guardian, receiver, committee, sequestrator, or other person in possession of any Slave or Slaves, the same shall become entitled to his, her, or their freedom, by force and virtue of any of the provisions herein contained, the party or parties making such default shall be liable to pay and satisfy to such persons, not privy and consenting to such default, as shall be prejudiced thereby, in respect of his or their former property or interest in such enfranchised Slave or Slaves, the full amount of all damages by him or them sustained, not exceeding the value of such Slave or Slaves at the time of such default, together with costs of suit.

And it is hereby further ordered, That if any person or persons shall, by means of any false or fraudulent return or entry of him, her, or them, or by or with his, her, or their procurement, consent, privity, or knowledge, made in the said registry, keep or hold, or attempt to keep or hold, in Slavery, any African or other Negro, or Mulatto, or other Coloured Person, which shall have been illegally imported or brought into the said island, and shall be thereof lawfully convicted, he, she, or they shall forfeit and pay for every offence, the sum of Three Hundred Pounds Sterling Money, the one moeity to the governor, lieutenant-governor, or civil commander in chief within the said island, and the other moiety thereof to such person as shall sue, inform, and prosecute for the same, with full costs of suit, to be recovered as aforesaid; and shall moreover, after any such conviction, be for ever after incapable of owning, holding, or possessing any Slave or Slaves within the said island.

And it is hereby further ordered, That in any suit or presentation to be commenced, sued, or prosecuted in any court, or before any judge of the said island, for the recovery of any of the penalties or forfeitures herein contained, or for enforcing of the directions or provisions of this order, or obtaining relief or reparation for any breach of the same, it shall not be an admissible defence, plea, or exception, to alledge, that the plaintiff, prosecutor, or person suing or complaining is a slave, when his or her right to freedom may be established by the success of such suit or pro-

secution; nor shall the testimony of any indifferent witness, being, or alledged to be a Slave, be rejected, for that cause, in any such suit or prosecution, but the same shall be admitted; subject, nevertheless, to all such objections to the credit of such testimony, as from the condition of the witness, or the nature of the case, may in the discretion of the court or judge, be reasonably allowed.

And it is hereby further ordered, That the certificate of the said registrar, by him subscribed, certifying any extracts from the books in his office, shall be received in all courts, and by all judges in the said island, as sufficient evidence of the authenticity of such extract; saving, nevertheless, to the party or parties against whom such evidence is adduced, the right of contradicting, impeaching, or correcting the same, by an inspection of, and a comparison with, the original book or books of registry in the said island, or the duplicates thereof, to remain in the office of the said Secretary of State, as aforesaid.

And it is hereby further ordered, That the said registrar shall be entitled to have and receive, for every certificate by him given, of any extract from, or entry in, the said registry, the sum of Ten Shillings sterling; and for every hundred words therein contained beyond the first hundred words, the sum of two shillings like money, and no more; which fees, and all other fees hereby appointed in sterling money, shall be calculated at the rate of exchange prevalent in the said island at the time of the service performed.

And it is hereby further ordered, That it shall not be lawful for the said registrar, while he shall hold his said office, directly or indirectly, to be the owner, part owner, or mortgagee, of any Slaves or Slaves, and that the said registrar shall be personally resident in the said island, while he shall continue to hold his said office, except when from ill health, or other necessary cause, his temporary absence from the said island shall be permitted by a licence in writing under the hand and seal of the governor, lieutenant-governor, or other person having the chief civil command in the said island for the time being, specifying the cause of such temporary leave of absence, a copy of which licence shall be forthwith transmitted to His Majesty's Principal Secretary of State for the colonial department; and if the said registrar shall be at any time absent from the said island without such licence, or after the expiration thereof, or any disallowance thereof by His Majesty, his heirs or successors, or shall be owner, part owner, or mortgagee of any Slave or Slaves, directly or indirectly, by his own act, consent or agreement, he shall absolutely forfeit his said office, and during any such licensed absence as aforesaid, or any other temporary incapacity of the said registrar, a deputy registrar shall be appointed by the said governor, lieutenant-governor, or civil commander in chief for the time being, who shall and may exercise and perform all the duties hereby imposed on the said principal registrar, as fully and effectually for all the purposes of this order, as if the same were executed and performed by the said principal registrar in person.

And lastly, all governors, lieutenant-governors and civil commander in chief [sic] of the said island, and the council and cabildo of the said island, and the oidor, and all other courts, judges, magistrates, and other officers, within the same are required to take notice of, observe and obey this present order, and to cause the same to be effectully observed, obeyed, and executed, by all persons within the said island, as they shall answer the contrary at their peril.

And the Right Honourable, the Lords Commissioners of His Majesty's Treasury, and the Right Honourable the Earl of Liverpool, One of His Majesty's Principal Secretaries of State, are to give the necessary directions herein as to them may respectively appertain.

CHETWYND.

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