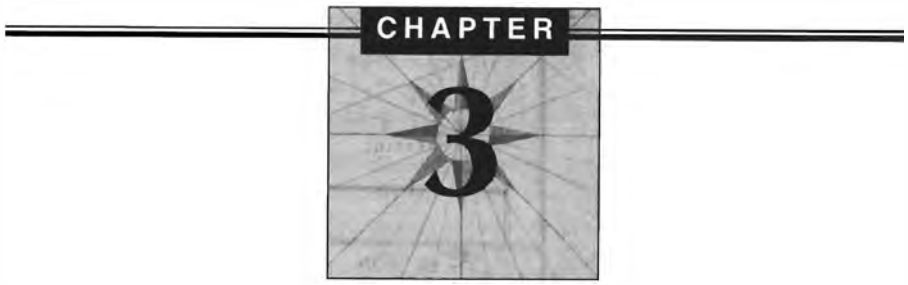


Sugar and Slavery

SUGAR CANE AND SWEET FOODS

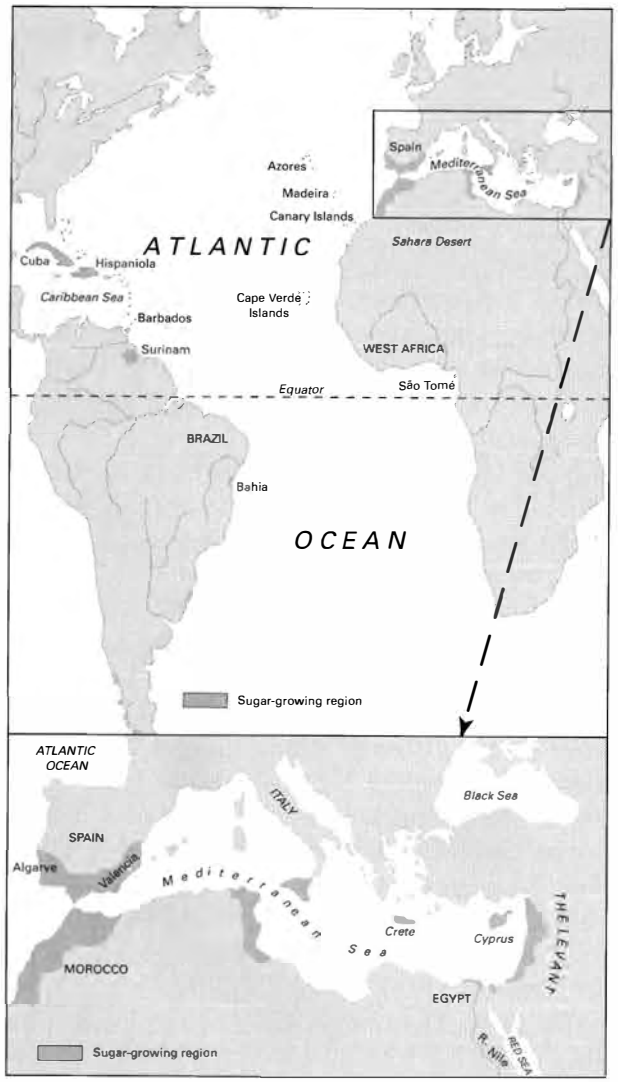
Most mammals like the taste of sweet foods. Humans are no exception. But some regions of the world have made sweet foods a bigger part of their diet than others. In some cases this can be attributed to environment. People who live in the Arctic and eat few plant foods are not destined to eat many sweets. But even in the tropics, where plant sugars are easy to get, some cultures place a greater emphasis on sweet foods than others. In Europe, once sugar became available, the English came to consume more of it than the Italians or Spaniards. So one of the questions we need to consider here is why some people consume so much sugar and others so little. The other question worth thinking about is why one plant source of sugar came to so totally dominate the world's sugar trade.

Some cuisines have embraced sweet foods. India, the Arab world, and Western Europe were the biggest consumers of sugar during the

time period that concerns us (Map 3.1). By contrast, Southeast Asian cooking makes less use of sugar, and sweets are less a part of people's diets. This is despite the fact that Southeast Asia's environment is well-suited to growing sugar cane, much better suited in fact than Europe, where far more sugar was consumed. So environment does not entirely explain the differences in people's consumption of sugar. Sidney Mintz has argued that some people eat larger amounts of sugar than others because macroeconomic and social forces push them in that direction. He sees a strong link between the emerging industrial working class in Britain and the rise in sugar consumption. His explanation works nicely for Europe, but it is harder to make it fit with India or the Arab world. Why some people consume so much sugar and others so much less remains an unresolved question.

Processed sugar may have been an exotic novelty in medieval Europe, but it is quite ancient in South Asia. Long before Europeans encountered sugar, Indians were using it in a number of different forms. India produces a staggering variety of sugars and sweet foods. Just as we in the West have learned to think of salt as a single product rather than something that comes in many forms and varieties, so too have we learned to think of sugar as a single substance that comes in white, brown, and confectioner's varieties. In India, sugars are produced from many different plant sources and these often have unique culinary uses. *Jaggery*, which is made from palm sap, and *gur*, which refers to syrups made from a number of different plant sources, are the names given to these sugars. Sugar can also be made from date syrup or even ground dates. Any of these sugars would have a much more complex taste than plain white sugar and each is often preferred for particular dishes. Even Europeans, who initially had many fewer sweeteners, had honey, the flavor of which is also highly variable. So there are many ways, often culturally determined, of sweetening food.

The dominance of sugar cane is easier to explain than the question of why some cultures consume more processed sugar than others. The plant, a member of the grass family, grows nine or ten feet in height, and its thick stem is full of juice that is rich in sucrose. Like other grasses, it grows back when cut, so once in production cane fields do not need to be replanted. Under modern conditions, a single acre of sugar cane produces 5.6 tons of sugar and 1.35 tons of molasses. That is roughly eight million calories of food. To produce a comparable number of calories would require



MAP 3.1 Sugar producing regions of the Atlantic and Mediterranean Seas.

nine to twelve acres of wheat. Sugar cane outperforms any other plant when it comes to calories per unit of land.

To coax that bounty from the cane requires labor—lots of labor. Before mechanization became a factor, sugar cane required one worker per acre. These high-labor requirements are the result of the plant's finicky nature. Even in the tropics, sugar cane only reaches its

full yield when irrigated. So plantation workers had to create and then manage irrigation systems to keep the crop wet. But the biggest labor demands came during the harvest. Sugar cane juice is rich in sugar when it is harvested, but the amount of sugar in the sap begins to decline as soon as the cane is harvested. So there can be no delay between harvest and moving the cane to the place where it will be processed. And processing is a matter of great urgency lest sugar content drop while cane waits to be processed. As a result sugar cane processing has always taken place close to the point of production and usually on the plantation itself. Thus, at the center of each plantation or cluster of plantations was a mill. In the mill was equipment for crushing the cane and extracting the juice, a boiling house where the juice was cooked down, and storage sheds where the sugar was separated from the molasses and formed into loaves. The final step of refining the sugar was done, if it was done at all, elsewhere (Figure 3.1).

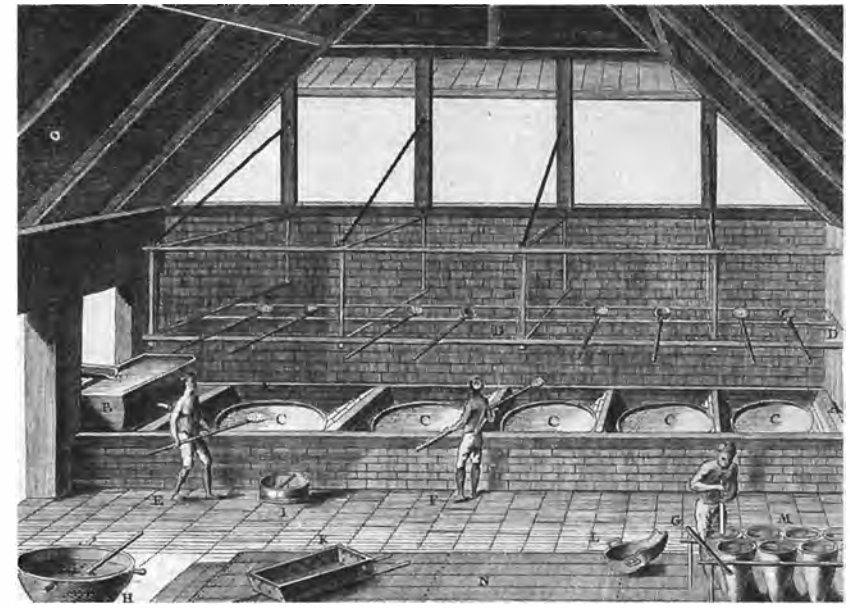


FIGURE 3.1 An eighteenth century image of a sugar-boiling house shows workers using perforated paddles to skim debris from sugar cane juice while it is being reduced by boiling.

Source: University of Bristol, Information Services.

Sugar is refined by removing the molasses that both flavors and colors less refined sugars. This is now done with centrifuges that force the molasses out of the sugar. In earlier times, various degrees of refining were done by rinsing the sugar repeatedly with small amounts of water. The rinsed sugar was placed in inverted conical forms and allowed to sit for months while the molasses sank to the bottom. The result was a solid loaf of sugar that had some portions that were nearly white and others that were darker. Many mountains in New England are named for their resemblance to these loaves. What we now call brown sugar is refined sugar into which molasses has been mixed. The sugars produced by the early sugar industry were probably browner than modern white sugars, but without the moisture of brown sugar.

During the harvest these mills usually ran around the clock to ensure that there was no delay in processing the cane. And the conditions in the mills were hellish. The crushing equipment could crush human limbs as easily as it crushed cane. Axes were kept handy to sever crushed arms. The boiling houses were hot and as the juice thickened it became viscous, sticky, and the source of dangerous burns. The danger to the workers was exacerbated by the long hours they put in during the harvest. This combination of high labor needs and terrible working conditions meant that it was hard to find people seeking careers in the sugar industry. So, wherever sugar has been grown it has been associated with involuntary labor.

THE ORIGINS OF THE PLANTATION COMPLEX

Sugar cane is native to Southeast Asia and was probably domesticated thousands of years ago in New Guinea. It spread from there to India, where it became one of several sources of sugar. Cane sugar seems to have been virtually unknown in the ancient Mediterranean. The Romans made extensive use of honey in their cooking and to sweeten wine. There are a few references in Roman geographical literature to the existence in India of canes that produce a sweet sap, and it is a bit curious that, despite the widespread Roman trade with India, no sugar came to the Mediterranean as part of a shipment of spice, but perhaps the perishable and soluble nature of sugar militated against it in a seaborne trade.

It was not until the rise of Islam and the Arab conquests of the Sind (modern Pakistan) that sugar was introduced into the Mediterranean

world. The Arabs developed a passion for sugar that nearly rivaled that of the Indians, and eventually introduced sugar cane into the wetter parts of the Middle East, including the Eastern Mediterranean. Sugar production also spread into parts of Muslim North Africa, southern Spain and into the islands of Sicily and Sardinia. Almost certainly some of this sugar ended up in the hands of the emerging merchant class and the nobility, but it was not until the crusades that elite Europeans became regular consumers of sugar, and it was in the context of the crusades that they learned to grow it.

The First Crusade (1096–1102) captured Jerusalem in 1099 and, along with it, a good portion of the rest of the Holy Land. The victorious crusaders then carved the captured land into feudal principalities, several of which enjoyed a precarious existence down to the end of the thirteenth century. For almost two hundred years these crusader states attracted numerous additional crusaders, who came to defend the lands against Islamic counter attacks, and colonists from every level of European society. Inevitably, these new arrivals learned new ways and habits while living as a ruling minority among a majority population of Eastern Christians and Muslims. Of course, there were tensions on both sides, but there are accounts, some written by Arabs, that indicate that some Western colonists, or Franks, as they were called, began to dress and eat more like Arabs and Turks. Usamah ibn Munqidh, a twelfth-century Syrian, describes how one of his men was invited to a Frank's home for a meal. He came, but ate nothing fearing that his host might serve him foods that are forbidden to Muslims. His host noticed his reluctance, and told him that he had hired an Egyptian cook and no pork was served in his house. In addition to adopting Muslim dietary practices, the settlers also got into the habit of eating sugar and spices. Overtime, they also began to grow sugar (or at least control lands that produced sugar) and to export it to their homelands. In 1291 the Franks were driven from their last foothold on the mainland of Syria-Palestine but were still entrenched in Greece and on many Eastern Mediterranean islands, including Cyprus, which they held from 1191 to 1571. According to Phillip Curtin, it was on Cyprus that most of the basic features of the plantation complex that would eventually spread to the Americas coalesced.

The key players in this process were Italian merchants, who began to invest in sugar production in Cyprus and other parts of the Mediterranean. To make their estates pay off, they poured funds into extensive irrigation systems and the latest in milling technology, and set out to

get as reliable and manageable a labor force as they could find (Figure 3.2). For this they turned to slave labor. Slave labor had long been part of the Arab sugar industry, and the crusades had kept both Muslim and Christian growers supplied with war captives. But as the crusades petered out, Italian sugar producers turned to new sources for slaves, especially the slave markets of the Black Sea. This approach to sugar production—with heavy investment in irrigation, machinery, and imported slaves—spread through the Frankish-controlled regions of the Mediterranean, accompanied by Italian capital and expertise.

By the late fifteenth century, there was a standard way of growing sugar. It was grown on plantations, the plantations included a small factory that processed the cane into sugar, and the work was done by slaves. This growing supply of sugar was consumed mostly by the European elite, who used it in ways that may seem unfamiliar to us. Often sugar was treated as a spice or as a drug. It appears in lists of spices and was often used to flavor savory dishes and meats, much the way we might now add salt to dishes to enhance other flavors. A modern survival of this is our taste for sugar- or honey-glazed ham. Sugar was also considered to have medicinal uses. Because refined white sugar looked so pure, it was thought to have a variety of positive effects on peoples' health. For a while it was even touted as an excellent dentifrice. One can only imagine the effect of daily brushing with a teaspoon of sugar.

Sugar was also used to demonstrate the wealth and status of the European elites who were able to serve it to guests. This might take several forms. Sugar was served on silver plates that also held other spices for guests to either eat directly or add to their food. It was also combined with spice to make spicy sweets called "subtleties," which were eaten at the table of the rich and powerful. Eating subtleties was a way of ostentatiously consuming wealth. Their symbolic role was sometimes emphasized by wrapping edible silver or gold foil around them. Sugar was also used to create elaborate edible sculptures for use at banquets. No other food is so easily shaped as sugar. The structural possibilities in sugar sculpture were near endless. What is interesting about this is how sugar consumption fit the economic and social patterns of the time. In an aristocratic society, sugar was used to demonstrate the social worth of those who consumed it. It was not a major source of calories, even for the elite.

In the fifteenth century, a number of new developments began to push sugar production into new places and to change the nature of

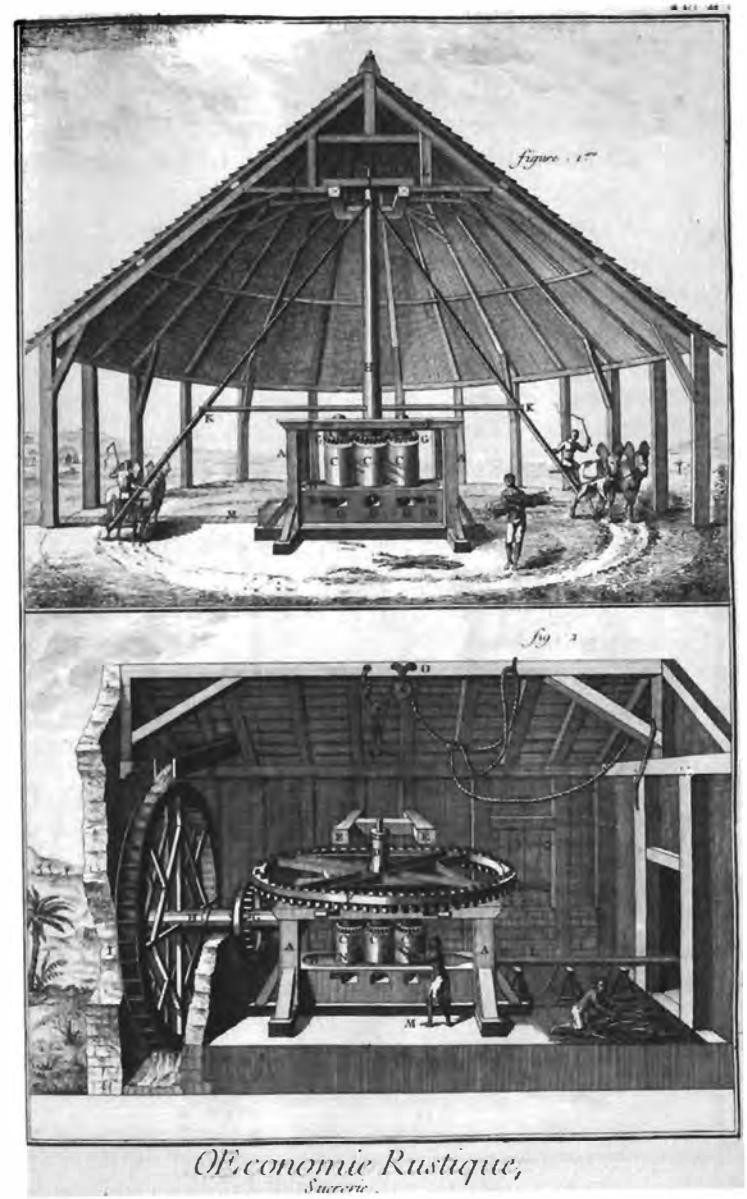


FIGURE 3.2 This image shows two versions of eighteenth century roller mills. One uses animal power, the other water. The presence of these mills in the midst of the sugar plantations made the sugar trade almost as industrial as it was agricultural.

Source: University of Virginia Library.

sugar consumption in Europe. In the early part of the fifteenth century the Portuguese began to explore the Atlantic coast of Africa. In the process of doing this they rediscovered the Canary Islands and discovered Madeira. The Canaries were inhabited by a people called the Guanches; Madeira was uninhabited. It soon dawned in on the Portuguese that Madeira was well-suited to sugar production. In 1455, sugar was introduced to Madeira by the Portuguese who imported slaves, mostly Guanches from the Canaries. Toward the end of the fifteenth century, Madeira was the single biggest sugar supplier to Europe; by 1480 the Belgian port of Antwerp was sending 70 ships a year to Madeira, and in 1493, Madeira produced 760 metric tons of sugar. The island also represented a new type of economic entity. Its sugar had to be transported over long distances to reach its market in Europe, and labor, manufactured goods, capital, and expertise were all imported. Madeira was as economically specialized as a place could be in the fifteenth century.

The other crucial change that occurred in the middle of the fifteenth century was a shift in the source of slaves. In 1453 the Ottoman Turks finally captured Constantinople. With the Byzantine capital, which sits astride the Bosporus, in their hands they were able to prevent the Italians from entering the Black Sea. As a result, the main source of slaves for the Mediterranean slave trade was lost. At almost exactly the same time, the Portuguese began to buy slaves on the West African coast, and Lisbon became the leading slave market in Europe. As the Guanche population of the Canaries died off from disease, warfare, and the effects of slave raiding, enslaved Africans became increasingly associated with sugar production and with the institution of slavery.

That link was further strengthened on the island of Sao Tome. Sao Tome, which is almost exactly on the equator, lies off the coast of the modern Central African country known as Gabon. Sao Tome was colonized by the Portuguese in 1490. It was wet and warm, and sugar cane did well there. The Portuguese, however, did not. Madeira and the Canaries were fairly hospitable to European settlement, thus much of the sugar there was produced by free Portuguese settlers. Sao Tome was much more tropical, so diseases like malaria and yellow fever, another deadly mosquito borne disease, caused Portuguese settlers to die at an appalling rate. In the early sixteenth century there were only 50 Portuguese there, and these were mostly exiled convicts and converts from Judaism. So lethal was the climate that the Portuguese used it as a form of de facto capital punishment for priests, whom church law protected

from the death penalty. Priests they wished to get rid of were given a parish in Sao Tome, with the expectation that they would perish soon after. Thus, the use of free settlers to grow sugar cane was out of the question in Sao Tome and other sources of labor were needed.

The labor problem was resolved by the use of African slaves in all stages of production. Sao Tome was near the Kingdom of Kongo, an African state allied with Portugal. Kongo had a vigorous foreign policy that resulted in the presence of large numbers of war captives. The kings of Kongo were able to strengthen their relationship with the Portuguese, and rid themselves of potentially dangerous war captives, by selling them to the Portuguese as slaves. The Portuguese exchanged some of these slaves for gold in West Africa, they took some to Lisbon to be sold in the European slave market, and they moved some to Sao Tome to serve the sugar industry there.

On Madeira and in the Canaries, the workforce included Africans, Europeans, Guanches, and Arabs. It also included many free laborers who worked alongside the slaves. In Sao Tome, virtually the entire workforce was African and enslaved. There were some Italian technical experts there along with Portuguese landowners and a few forlorn priests, but otherwise Sao Tome was African. Sao Tome was also much farther from its European markets than Madeira. Nonetheless, it was briefly a major force in the sugar trade, producing as much sugar as Madeira by the middle of the sixteenth century.

Sao Tome went into decline in the second half of the sixteenth century for several reasons. The first was competition from the New World, especially Brazil which began to produce sugar in a serious way in the second half of the sixteenth century. The second was a common side effect of the use of slave labor–slave revolts. Given the high mortality rates for recently arrived Europeans in Sao Tome, the Portuguese could only provide the most limited sort of security. One of the major aspects of a slave-based plantation system is violence. Plantation owners need to use violence or the threat of violence to keep their slaves disciplined and at work. In Sao Tome the weakness of the Portuguese administration combined with the rugged mountainous interior of the island made it easy for escaped slaves to hide. Escaped slaves withdrew into the interior from where they conducted raids on the coastal plantations. The volcanic peaks of the interior gave sufficient refuge that they were able to maintain their rebellion into the nineteenth century. The costs they inflicted on the plantations were not the only cause of Sao Tome's decline, but they were a significant factor.

Sao Tome and the other Atlantic islands were a proving ground for sugar production in the Americas. First, the Portuguese experience in the Atlantic demonstrated that sugar could profitably be transported over long distances. When Sao Tome first began to produce sugar it was the most distant outpost of European production on the planet. Silk and spices might have come to Europe from farther afield, but nowhere else on the planet was a colony producing something entirely for so distant a market. It was also the place where the link between African slavery and sugar production was forged, a link that would remain virtually unbroken for the next 400 years. Sao Tome may now be an obscure and impoverished place, but it was once on the leading edge of a commercial revolution.

SUGAR IN THE NEW WORLD

The European discovery of the Americas marks one of the major watersheds in world history. The economic, political, demographic, and biological significance of the event is hard to overstate. The introduction of sugar production into the Americas was only one of the many consequences of the Columbian Exchange, but it was an exceedingly significant one.

The potential of these islands to produce sugar was almost immediately apparent. Columbus' description of Hispaniola in his initial report of 1493 made reference to the presence of mastic, a gum that comes from the islands of the eastern Mediterranean. There is no mastic on Hispaniola, but Columbus seems to have mentally put the island into a category that would include other sugar-producing islands. By 1513 there was a sugar mill on Hispaniola, though at first sugar production was low and overshadowed by attempts at ranching and mining.

Hispaniola is, of course, ideal sugar country, and in the eighteenth and nineteenth centuries it would become a major sugar producer. What initially limited early sugar production there was a shortage of labor. The most obvious answer to the question of who should do the work on the sugar plantations was the local Indians—Arawak speakers called Tainos. But the Tainos, whose world had been totally turned upside down by the arrival of Spanish colonists, died at rate that astonished the Spaniards. The Spaniards, or possibly their animals, had introduced hitherto unknown diseases in the

Caribbean. Those diseases took a tremendous toll on the Tainos, who also seem to have lost the will to resist the destruction of their culture and very identity. The Tainos were at the forefront of a massive die off of native Americans, a process that would claim possibly as much as 90 percent of the populations of Mesoamerica and the Caribbean in the first century after the initial contact.[1] Perhaps because they were the first to experience the trauma, both physiological and psychological, of contact with Europeans, they succumbed more thoroughly than most other groups of Indians. As was the case with the Guanches, the Tainos are no more.

Even though they imported Indians from other areas of the Americas to Hispaniola, the Spaniards could not create a self-sustaining slave population. So, as a labor source, Indians were at best a short-term solution. The other possibility, again following previous Atlantic models, was to use the labor of European settlers. On Madeira and the Canaries this had worked well. The difference, which made European labor work poorly, seems to have been the abundant opportunities in the Americas. People who had come all the way to the Caribbean, did not do so to do the backbreaking work that sugar cane demanded of those called to its service. Even those who crossed the Atlantic under duress soon found they had better options, such as serving as mercenary soldiers, than toiling in the cane fields. Entrepreneurs were also initially not enthusiastic about producing sugar in the New World. Why plow capital and labor into an enterprise that might take years to pay off when there seemed to be far easier and quicker ways of tapping the seemingly inexhaustible riches of the Americas?

The first major effort to profit from sugar production in the American colonies only began in the second half of the sixteenth century in Brazil, a region that initially had been of little interest to the Portuguese, who used it primarily as a source for logwood, a valuable hardwood that is also a dyestuff. This limited Brazil trade did not appeal to the Portuguese nobility, who sought more glamorous opportunity in Asia, but it attracted the attention of Portuguese merchants and even a few from outside of Portugal. That outsiders were dabbling in the Brazil trade, however minor, eventually came to the notice of the Portuguese state, and it took action to consolidate its control over the Brazilian coast. To do this, the Portuguese divided the coast into strips, each with a certain amount of coastline and extending indefinitely into the interior. Each of these was granted as a feudal fief to a "captain," who was essentially sovereign in his

fief. Apparently this was an attempt to use Mediterranean models of colonization in the New World and an example of the continuity of Portuguese efforts at colonization in the Mediterranean, the Atlantic Islands, and the New World.

These feudal land grants soon failed economically and reverted to the crown. But they had drawn merchants and other non-noble Portuguese to Brazil and it was these people who noticed Brazil's potential for sugar production. The center of Brazil's sugar production was the area called Bahia ("bay" in Portuguese) which surrounds the city of Salvador. It is about 12 degrees south of the equator, and contains about 4,000 square miles of ideal sugar ground. As such, it was much larger than any of its potential rivals at the time, dwarfing Sao Tome and Madeira, the main sugar producers at the time. It was also reasonably close to European markets and quite close to West Africa. Bahia and Recife (which is the other major sugar region in Brazil) are on the eastern-most part of the bulge of Brazil that extends far into the Atlantic. Consequently, a ship coming from West Africa could arrive in Bahia weeks earlier than it would arrive in the Caribbean. Thus, mortality rates in the slave trade to Bahia were much lower than those in the trade to the Caribbean, a factor that would later give Brazil a competitive advantage over its future competitors in the Caribbean.

Brazilian merchants began to plant sugar in Bahia in the middle of the sixteenth century. By the end of the century Brazil was the world's leading sugar producer. Once established in the New World, the market for sugar was such that despite slightly higher costs, sugar production spread into the Caribbean in the late seventeenth century and then took off in what is called the Sugar Revolution in the eighteenth century. By 1750, the Portuguese were growing sugar in Brazil, the English were growing it in Jamaica and Barbados, the Dutch in Surinam and the Netherlands Antilles, the Spanish in Santo Domingo, while the French produced it in Saint Domingue, as they called their half of Hispaniola. Sugar islands traded hands in royal dowries and in peace treaties. Sugar had arrived.

It is worth pausing a moment to reflect on what a revolutionary development this was. In 1400 few Europeans would have consumed carbohydrates that came from any great distance. There was a small trade in grains in Europe, but the transportation costs of grain was so high that most people got the bulk of their sustenance from grain grown within a few days' walk of where they lived; indeed, most grew their own grain.

The opening of Brazil and other tropical American regions to sugar production caused a significant increase in the amount of sugar available to Europeans and changed the way it was consumed. As Brazil, Barbados and other Caribbean producers entered the market, sugar increasingly entered the European diet. It was used in tea, coffee, and chocolate, all of which were introduced in the seventeenth century and became wildly popular in the eighteenth century. The combination of caffeine and sugar, previously unknown in the world, became central to the European diet and spread outward from there. Coffee, tea, and chocolate were the basis of what has been called the Hot Drinks Revolution, and all were consumed with sugar. In their homelands all three were originally drunk unsweetened (including chocolate) and even today East Asians do not sweeten their tea. Europeans, however, found them acceptable only with sugar. Thus, the growth in interest in hot stimulating drinks was linked with a growing interest in sweetness. Indeed, one might argue that caffeine and sugar are part of the texture of modern life, whether taken in the form of a mocha latte, sweet tea, the carbonated soft drink, or a cup of sweet chocolate, the potent combination of sugar and stimulant has swept all before it in the last 250 years.

All these foods—coffee, tea, chocolate, and sugar—were produced in tropical places, far from Europe. As their consumption became widespread in the eighteenth century, sugar became the first carbohydrate that could bear the cost of trans-oceanic trade. Europeans drinking a coffee in a café were enjoying an African stimulant mixed with a sweetener from the New World. They were enjoying a cross-cultural dietary experience made possible by world trade.

SLAVERY AND SUGAR

For others, the Hot Drinks Revolution was a bitter cup. An increase in sugar production went hand in hand (or manacle in manacle) with an increase in the use of slave labor (Figure 3.3). The Atlantic slave trade, which had been around since the middle of the fifteenth century, began to develop in a serious way after 1600. It reached its peak in the late eighteenth century. By the time it ended in the nineteenth century, approximately 11 million enslaved Africans had crossed the Atlantic, most to serve the needs of the sugar industry. North Americans tend to assume that the USA's southern states were central to the slave trade, but less than 5 percent of the slaves who crossed the Atlantic were destined

FIGURE 3.3 A nineteenth-century print showing slaves in the Caribbean harvesting sugar cane. It shows the labor intensiveness of sugar cane harvest and the disciplined nature of the work on plantations.

Source: Michael Holford photographs.

for North American markets. The vast majority ended up on sugar plantations in Brazil or the Caribbean. Sugar, more than any other crop or commodity in the Americas, was a ravenous consumer of slave labor.

The origins of the Atlantic slave trade are roughly contemporaneous with the sugar industry's move into the Atlantic. The same Portuguese navigators who found the Atlantic islands that nourished the sugar industry in the fifteenth century also learned that they could buy slaves on the West African coast. Initially the Portuguese attempted to raid for slaves just as they had in the Canaries. West Africans turned out to be much more formidable adversaries than the Guanches. The Guanches had neither metal nor horses and were susceptible to European diseases. West Africans by contrast had an ancient tradition of iron-making; indeed, the high quality ores available in parts of West Africa made local iron superior to Portuguese iron. Furthermore, the use of horses in warfare was common in the Senegambia region, where the Portuguese attempted their slave

raids. In the Canaries the Portuguese confronted an enemy armed with stone-tipped weapons; in the Senegambia they encountered horsemen armed with iron weapons. Any advantage the Portuguese gained from their primitive firearms was more than outweighed by their small numbers. Perhaps more important was the role of disease. European diseases quickly killed off the Guanches, whose millennia of isolation left them vulnerable to Eurasia's many infectious diseases. West Africans, by contrast, were much less isolated and seem to have been part of the larger Afro-Eurasian disease pool. Undoubtedly Europeans introduced a few new diseases to West Africa, but there is no evidence of the type of mass die offs that would occur later in the New World. In fact the disease environment in West Africa posed serious challenges to Europeans. Virulent forms of malaria and yellow fever killed new arrivals but spared people who had survived childhood bouts with the diseases. Thus, most adult West Africans were less susceptible to these diseases than newly arrived Europeans. So any attempt to take slaves by force in West Africa was hampered by well-armed West Africans and a disease environment that made quick work of European soldiers. As a result, Europeans made few military inroads in West Africa until the nineteenth century when their military and medical technologies began to improve rapidly. Given the relatively equal balance of military power, any slaves the Portuguese, or later on the English, Dutch, French, Americans, Danes, Spanish or Germans hoped to obtain in West Africa, they had to buy.

The Portuguese were the pioneers of and the dominant force in the Atlantic slave trade down to the eighteenth century, but their commerce along the West African coast involved much more than slaves. There they, and later other Europeans, bought ivory, malagueta pepper, hides, and above all gold. In fact, the value of the gold that was exported from West Africa far exceeded the value of the slaves until the eighteenth century. Finding something to exchange for these goods was always a problem for the Portuguese and to a lesser extent the northern Europeans who later dominated the trade. West Africans had been involved in trade with North Africa long before Europeans arrived and had certain tastes and expectations that Europeans had to satisfy. They had been buying cloth from North Africa, mostly high-end cloth used by elites. These elites typically found the European woolens unappealing, so the Portuguese were compelled to buy North African cloth and bring it to West Africa. In effect, they were selling their services as sailors, bringing the same cloth West Africans had been buying out of the trans-Saharan

trade, but delivering it by a cheaper route. This sums up the Portuguese approach to trade. They made little that anyone else wanted. What they did have that other people wanted were firearms, which, for obvious reasons, they were hesitant to sell, and ships. They used their ships to move goods a bit more cheaply than anyone else could and used that profit to buy the African (or Asian) goods they wanted.

Just as the Portuguese did not create the West African cloth trade, so too they did not create the slave trade in Africa. Rather they reshaped and reoriented a preexisting slave trade toward new markets. Slaves had been traded across the Sahara for centuries prior to the arrival of Europeans in West Africa. There was also a small slave trade within West Africa that moved enslaved war captives and other types of slaves between West African societies. The Portuguese innovation was to use their ships to move these slaves to places that the older slave trade did not reach—the Atlantic islands and then the Americas. In doing so, they probably created new economic conditions that greatly increased the scale of the slave trade within Africa and quite possibly made the institution of slavery more brutal than it had been prior to their involvement in the trade.[2]

The influx of African slaves into Brazil and later into the Caribbean had a huge economic effect. By replacing Indian laborers, who were dying out and were legally protected from enslavement (though the law often yielded to economic pressure), and European laborers, who played a role in Barbados but enjoyed too many legal protections for their employers' comfort, Africans were coerced into producing sugar in such huge quantities that it became increasingly commonplace in Europe.

This development in the sugar trade left its mark on the entire Atlantic rim. We have discussed the dietary effects of this revolution on Europeans above, but the economic and social effects of sugar extended from New England to West Africa to Brazil to England. In New England, where a long maritime tradition sent sea captains to the West Indies and to West Africa, molasses became central to the economy and to people's diets. Molasses is a liquid byproduct of sugar-making that was exported from the West Indies to New England. Traditional New England foods—specifically brown bread and baked beans—are flavored with molasses. Molasses was added to livestock feed and even put in the water that horses and cows were given (sports drink for animals) to make the water more palatable and to prevent its freezing in the winter.

If the eighteenth century had a Hot Drinks Revolution, it also had a Distilled Drinks Revolution. Rum, which is distilled from fermented molasses, was at the forefront of that revolution, a distinction it shared with gin. New Englanders loved their rum. John Adams commented that "molasses was an essential ingredient in American independence," and he was not referring to Boston baked beans. New Englanders also made rum for export, sending it to Europe and to West Africa, where it was sometimes traded for slaves. Thus, sugar byproducts were traded for the very slaves needed to make the sugar industry work. If West Africans had a taste for rum, it paled in comparison with England. Rum, along with gin, was the first cheap distilled alcohol available in England. Whisky and imported brandy, made from barley and grapes respectively, were too expensive for the average drinker. Rum changed that and as a result the eighteenth century saw the democratization of dissipation. In the late eighteenth century, England imported over two million gallons of rum a year. The Royal Navy provided its sailors with a daily rum ration in the form of grog, which is rum cut with water.

In West Africa the sugar trade brought misery for those whose lives were disrupted by slavery, but also it also brought economic opportunity, and new forms of cultural innovation. Beginning in the fifteenth century, European merchants settled on the coast and they usually married locally. The result was mixed-race families of merchants in trading centers along the West African coast. These merchants were classic examples of the cross-cultural broker. They were European enough to deal comfortably with visiting European merchants, but also African enough to have access to local markets that the visitors could not hope to penetrate. They and many other Africans who lived in trading centers along the coast participated in an Atlantic World. They shared a cuisine with people of African descent in the New World, along with hair styles and taste in cloth and clothing. In addition to importing cloth, West Africans exported it, probably to the New World where uniquely West African types of cloth were sought by people of African descent. Probably the most important African contribution to the common culture of the tropical Atlantic was religious. West African religion crossed the Atlantic and may possibly have been shaped in turn by developments in the Americas. Religions that have their roots in West Africa are found wherever sugar was grown by African slaves. Brazil, Haiti, and Jamaica, all have religions that clearly derive from the Yoruba religious tradition. An interesting, but highly contentious case, has been made suggesting that the form

the Yoruba religion now takes in Nigeria, in fact, owes something to the influence of Afro-Brazilians who returned to West Africa bringing with them an American version of Yoruba religion.

In the Americas, Africa's influence was profound. The number of Africans coming to the Americas was larger than the number of Europeans coming to the Americas until the nineteenth century. African religion, food, and music, to say nothing of the wealth generated by the labor of slaves, shaped the cultural development of parts of the Atlantic coasts of the Americas almost as much Europe did. The Caribbean and tropical Brazil are more African than anything else.

CONCLUSION

The sugar trade provides a window on Europe's changing role in world trade before the industrial revolution. A crop that was virtually unknown to Europeans in classical times and could not be grown in most parts of Europe became central to the diets and economies of Western Europe. By the eighteenth century, Europeans had not only learned to grow sugar cane, they had introduced it to new continents, moved people across oceans to grow it, developed new technologies to produce and transport it, and reshaped their eating and drinking habits around it. There is much debate about the role of the sugar industry in laying the ground for the industrial revolution. A prominent economic historian recently concluded that the sugar industry and its handmaiden the slave trade were not essential to the industrial revolution but probably accelerated the process. Whatever the effect of the sugar industry on the industrial revolution, it certainly foreshadowed the rise of Europe as a global economic power in the nineteenth century.

SOURCES

Portuguese Motives

Gomes Eannes de Azurara, *Chronicle of the Discovery and Conquest of Guinea*

As we have seen, the Portuguese played a crucial role in the creation of the Atlantic sugar industry also pioneered the creation of the sugar industry's companion, the Atlantic slave trade. It was Portuguese ships bringing African slaves from the West African coast to Lisbon and Madeira in the fifteenth century that marked the opening of a trade that would grow hand in hand with the sugar industry into the eighteenth century.

Gomes Eannes de Azurara's *Chronicle* provides a window on the motives of the Portuguese in this era. Azurara worked in the royal library of Portugal, and wrote several commissioned histories of the royal family's exploits. Finished in 1453, the *Chronicle,* describes Prince Henry the Navigator's (1394–1460) life and achievements. Henry played a central, though mostly organizational, role in the Portuguese voyages of discovery. Because he worked for the royal family, Azurara's account is probably an accurate reflection of Henry's own perception of his motives. Perhaps the most interesting feature of the passage that follows is its indifference to matters economic. Considering the economic implications of what they were doing, the Portuguese seem to downplay the economic importance of their explorations.

According to Azurara, did Henry send his ships to West Africa looking for slaves? What were they looking for? How believable is Azurara's account on this point? One of Azurara's earlier books was a history of the conquest in 1415 of Ceuta, a port in North Africa, an event that the Portuguese saw as an extension of the *reconquista,* or reconquest of the Iberian Peninsula from Islamic forces that became an integral part of Christian Europe's crusading ventures and lasted down to 1492. Do you see any evidence in this text that there was also an element of crusading to their ventures in Africa? What is Azurara's attitude toward Africans? How does he justify their enslavement? Does he seem sincere? What do you conclude from your study of this document after having addressed these questions?

Chapter VII: In which five reasons appear why the Lord Infant[3] was moved to command the search for the lands of Guinea.[4]

We imagine that we know a matter when we are acquainted with the doer of it and the end for which he did it. And since former chapters

we have set forth the Lord Infant[5] as the chief actor in these things, giving as clear an understanding of him as we could, it is appropriate that in this present chapter we should know his purpose in doing them. And you should note well that the noble spirit of this Prince, by a sort of natural constraint, was ever urging him both to begin and to carry out very great deeds . . . [H]e always kept ships well armed against the Infidel,[6] both for war and because had also a wish to know the land that lay beyond the isles of Canary that Cape called Bojador,[7] for up to his time, neither by writings, nor by the memory of man, was known with any certainty the nature of the land beyond that Cape . . . And because the said Lord Infant wished to know the truth of this—since it seemed to him that if he or some other lord did not endeavor to that knowledge, no mariner or merchants would ever dare to attempt it—(for it is clear that none of them ever trouble themselves to sail to a place where there is not a sure and certain hope of profit)—and seeing also that no other prince took any pains in this matter, he sent out his own ships against those parts to have manifest certainty of them all. And to this he was stirred up by his zeal for the service of God and the King Edward his Lord and brother who then reigned. And this was the first reason of his action.

The second reason was that if there chanced to be in those lands some population of Christians, or some havens into which it would be possible to sail without peril, any kinds of merchandise might be brought to this realm, which could find a ready market, and reasonably so, because no other people of these parts traded with them, nor yet people of any other that were known; and also the product of this realm might be taken there, which traffic would bring great profit to our countrymen.

The third reason was that, as it was said that the power of the Moors in that land of Africa was very much greater than commonly supposed, and that there were no Christians among them, nor any other race of men; and because every wise man is obliged by natural prudence to wish for knowledge of the power of his enemy; therefore the said Lord Infant exerted himself . . . to make it known determinately how far the power of those infidels extended.

The fourth reason was because during the one and thirty years that he had warred against the Moors, he had never found a Christian king, nor a lord outside this land, who for the love of our Lord Jesus Christ would aid him in the said war. Therefore he sought to know if there were in those parts any Christian princes, in whom the charity

and love of Christ was so ingrained that they would aid him against those enemies of the faith.

The fifth reason was his great desire to make increase in the faith of our Lord Jesus Christ and to bring to him all the souls that should be saved . . . For he perceived that no better offering could be made unto the Lord than this . . . For I who wrote this history saw so many men and women of those parts turned to the holy faith, that even if the Infant had been a heathen, their prayers would have been enough to obtain his salvation. And not only did I see the first captives but their children and grandchildren as true Christians . . .

But over and above these five reasons I have a sixth that would seem the root from which all the others proceed: and this is the inclination of the heavenly wheels . . . I wish to tell you how by the constraint of the influence of nature this glorious Prince was inclined to those actions of his. And that is because his ascendent was Aries, which is the house of Mars and exaltation of the sun . . . [*a long astrological discussion follows*] . . . signified that this Lord should toil at high and mighty conquests, especially in seeking out things that were hidden from other men and secret.

Sugar Production in Barbados

Richard Ligon, *A True and Exact History of the Island of Barbadoes*

Richard Ligon, an Englishman who lived in Barbados between 1647 and 1650, was in a position to observe the early stages of the sugar industry's move into the Caribbean and the functioning of England's first successful sugar colony. His book, published in 1657, is a general account of the island, covering everything from its topography to flora and fauna to social and economic conditions. The book contains a lengthy description of the process of sugar making and advice about techniques that will maximize sugar yields.

Perhaps the most notable feature of the work is its sunny optimism. Sugar planting was just beginning to produce large fortunes, and he included tables that show how a small investment in Barbados could make someone rich. Ligon's optimism extended to a cheerful indifference to the status of the slaves and indentured workers who cultivated the sugar.

Despite his optimism about sugar, Ligon suggests that the situation of planters in Barbados may have been a bit precarious. What precautions have they taken to prevent a slave uprising? Ligon's statements about the

virtues of sugar are generally consistent with seventeenth-century views of it. Does his attitude toward sugar suggest that it was a high value trade good or a lower value commodity in his time? Does Ligon show any reticence or concern about the idea of sugar planters making large amounts of money? What does this tell us about the status of the commercial classes in seventeenth-century England?

On Slaves:
It has been accounted a strange thing, that the Negroes, being more than double the numbers of the Christians that are there, and they accounted a bloody people . . . that these should not commit some horrid massacre upon the Christians, thereby to enfranchise themselves,[8] and become masters of the Island. But there are three reasons that take away this wonder; the one is, they are not suffered[9] to touch or handle any weapon; the other is, that they are held in such awe and slavery, as they are fearful to appear in any daring act . . . a third reason, which stops all designs of that kind . . . They are fetched from several parts of Africa, and speak several languages, and by that means, one of them understands not another.

The early days of Barbadian sugar production:
At the time of our arrival there, we found many sugar works set up, and at work, but yet the sugars they made, were but muscavadoes,[10] and few of them merchantable commodities; so moist, so full of molasses, and so ill-cured, as they were hardly worth the bringing home for England. But about the time I left the island, which was in 1650, they were much bettered; for then they had the skill to know when the canes were ripe, which was not, till they were fifteen months old; and before they gathered them at twelve, which was a main disadvantage to the making of good sugar; for the liquor wanting of the sweetness it ought to have, caused the sugars to be lean, and unfit to keep . . . and now, seeing this commodity, sugar, has gotten so much the start of all the rest of the those, that were held the staple commodities of the land, and so much over topped them, as they are for the most part slighted and neglected . . . sugar making . . . is now grown the sole trade on this island.

On the virtues of Sugar:
I do think fit to give you a Saraband,[11] with my best touches as last; which shall be only this, that this plant [sugar cane] has a faculty, to preserve all fruits, that grow in the world, from corruption and putrefaction; so it has a virtue, being rightly applied, to preserve us

men in our health and fortunes too. Doctor Butler, one of the most learned and famous Physicians that this Nation or world ever bred, was wont to say that,

> If sugar can preserve both our pears and plums,
> Why can it not preserve as well our lungs?

And that it might work the same effect on himself, he always drank in his Claret wine, great store of the best refined sugar, and also prescribed it in several ways to his patients, for colds, coughs, and catarrs;[12] which are diseases, that reign in cold climates, especially in Islands, where the air is moister than in continents; and so much for our health.

Now for our fortunes, they are not only preserved, but made by the powerful operation of this plant.

Colonel James Drax, whose beginning upon that Island, was founded upon a stock not exceeding 300 pounds sterling, has raised his fortune to such a height, as I have heard him say, that he would not look towards England, with a purpose to remain there, the rest of his life, till he were able to purchase an estate of ten thousand pound[s] land yearly; which he hoped in a few years to accomplish, with what he was the owner of; and all by this sugar plant . . . Now if such estates as these may be raised, by the well ordering of this plant, by industrious and painful men, why may not such estates, by careful keeping, and orderly and moderate expending, be preserved, in their posterities, to the tenth generation, and all by the sweet negotiation of sugar?

Sugar Slavery in Surinam
George Warren, *An Impartial Description of Surinam*

Published in 1667, George Warren's account of Surinam dates from the time when Surinam was briefly an English colony. Located on the northern coast of South America, Surinam and its neighbors the two Guyanas were early homes of the plantation complex in the New World. The same year Warren's account was published the British traded Surinam to the Dutch in exchange for New York. At the time most people thought the Dutch had gotten the better end of the deal. Sugar was a huge money maker; New York was less obviously a source of wealth.

The sugar industry in Surinam, under both the English and the Dutch, was associated with an unusually brutal approach to slavery. As had been the case on Sao Tome, the slaves from the sugar plantations in Surinam escaped in large numbers and, following the rivers into the

interior, established maroon, or fugitive slave, societies. The maroons were a magnet for escaped slaves, but they also raided the plantations to carry off slaves for their own use.

Interestingly, almost nothing is known about George Warren, except that he wrote this book. The book follows many of the conventions in Ligon's, *True and Exact History,* in that it covers basically the same topics: climate, topography, flora, fauna, commerce, sugar, and slaves. Where it differs is that Warren does not share Ligon's sunny optimism. Where Ligon sees potential wealth, Warren just sees brutality.

Ligon distinguishes between slaves and Christians, and Warren plainly states that the slaves in Surinam were not Christians. This seems to be at odds with Azurara's justification of the slave trade. Why do you suppose that sugar planters might be reluctant to convert their slaves to Christianity? Or might it have been the slaves' preference to not adopt their masters' religion? In many ways, the mainland colonies like Surinam, with more rainfall and rivers that could be used for transportation, were better suited to sugar production than were islands like Barbados. But ultimately Barbados and other islands proved more successful. Does this account of slavery in Surinam suggest any reasons why this might be the case? Keeping in mind that this book was published 100 years before there was even a rudimentary abolitionist movement, what is Warren's attitude toward slavery in Surinam?

Chapter VII The Plantations:

Canes become fit to break in twelve months when they are about six foot high and as thick as a man's wrist: they bear a top like a flag, which being cut off, and the canes squeezed through a mill, the juice is boiled in coppers to a competent thickness, and then poured into wooden pots, made broad and square at the top, and tapered to the compass of a sixpence at the bottom with a hole through, which is stopped with a little stick, till the sugar begins to be cold and stiffened; when it is pulled out and by that passage, the molasses drains from it; and being cured a while after this manner, is knocked into hogsheads, and shipped off.

Chapter VIII Of the Negroes or Slaves

Who are most brought out from Guinea in Africa to those parts, where they are sold like dogs, and no better esteemed but for their work sake, which they perform all the week with the severest usages for the slightest fault, till Saturday afternoon, when they are allowed to dress[13] their own gardens of plantations, having nothing but what they produce

from thence to live upon; unless perhaps once or twice a year, their masters vouchsafe them, as a great favor, a little rotten salt fish: or if a cow or horse die of itself, they get roast meat: their lodging is a hard board, their black skins their covering. These wretched miseries not seldom drive them to desperate attempts for the recovery of their liberty, endeavoring to escape, and, if like to be retaken, sometimes lay violent hands upon themselves; or if the hope of pardon bring them back again alive into their master's power, they'll manifest their fortitude, or rather obstinacy in suffering the most exquisite tortures can be inflicted upon then, for a terror and example to other without shrinking ... [they] practice no religion there, though many of them are circumcised: But they believe the ancient Pythagorean error of the soul's transmigration out of one body into another,[14] that when they die, they shall return into their own countries and be regenerated, so live in the world by constant revolution; which conceit makes many of them over-fondly woo their deaths, not otherwise hoping to be freed from that indeed unequalled slavery.

Thomas Phillips, *Journal of a Voyage Made in the Hannibal 1694–4*

This is a description of the Atlantic slave trade by a participant. Thomas Phillips was the captain of the slave ship *Hannibal*. Phillips' voyage took him through the Canaries, Cape Verde, and most of the major trading ports of the West African coast. He left the coast after buying provisions at Sao Tome, a major landmark for both the sugar and slave trades. The excerpt below begins in the West African port of Whydah, where, after several months spent buying ivory and gold on other part of the coast, the *Hannibal* bought its cargo of slaves.

From whom did Phillips purchase his slaves? To what extent did Phillips set the terms under which he bought slaves in Whydah? How does Phillips perceive Africans? Does he see them as inferior to Europeans? Does Phillips have any qualms about his profession? Does your answer to this question make sense in light of your answer to the previous question? What does this suggest about seventeenth-century attitudes toward slavery in Europe? What sort of hazards did Europeans involved in the slave trade face? How did that compare with the hazards faced by the enslaved? How profitable was this particular voyage of the *Hannibal* for the Royal Africa Company? Be specific.

... the kings slaves were the first offered to sale, which the cappasheirs[15] would be very urgent with us to buy, and would in a manner

force us to buy it ere they would show us any other . . . and we must not refuse them . . . and we paid more for them than any others, which we could not remedy, it being one of his majesties prerogatives; then the cappasheirs each brought out his slaves according to his degree and quality, the greatest first, etc. and our surgeon examined them well in all kinds, to see if they were sound [of] wind and limb, making them jump, stretch out their arms swiftly, looking in their mouths to judge their age; for the cappasheirs are so cunning, that they shave them all close so we can see no grey hairs in their heads or beards; and then having liquored them well and sleeked them with palm oil, 'tis no easy matter to know an old one from a middle-aged one, but by the teeths decay; but our greatest care of all is to buy none that are poxed, lest they should infect the rest . . . When we had selected from the rest such as we liked, we agreed what goods to pay for them, the prices already being stated before the king, how much of each sort of merchandise we should give for a man, woman, and child, which gave us much ease . . . then we marked the slaves we had bought in the breast, or shoulder, with a hot iron, having the ship's name on it, the place being before anointed with a little palm oil, which caused but little pain . . .

The negros are so willful and loth to leave their own country, that they have often leap out of the canoes, boat and ship, into the sea, and kept under water till they were drowned, to avoid being taken up and saved by our boats, which pursue them; they having a more dreadful apprehension of Barbados than we can have of hell, tho' in reality they live much better there than in their own country; but home is home.

. . . [they] are as much the works of God's hand, and no doubt as dear to him as ourselves; nor can I imagine why they should be despised for their color, being what they cannot help, and the effect of the climate it has pleased God to appoint them. I can't think there is any intrinsic value in one color more than another, nor that white is better than black, only that we think it so because we are so, and are prone to judge favorably in our own case, as well as the blacks, who in odium of the color, say, the devil is white, and so paint him.

[Referring to Saint Thomas as he calls Sao Tome] The town may contain about 200 White inhabitants, who all look like shadows, and seldom arrive at[16] the age of fifty years, tho' the negros which are in great numbers, agree well enough with the climate, which is so very malignant, that few or none of the Portuguese would come to live here but such as are forced to flee, or are banished [from] their country for some villanies . . . We spent in our passage from St. Thomas to Barbados two

months eleven days . . . in which time there happened such sickness and mortality among my poor men and negros, that of the first we buried 14, and of the last 320, which was a great detriment to our voyage, the Royal Africa company losing ten pounds by every slave that died . . . I delivered alive to at Barbados to the company's factors 372, which being sold came out at about nineteen pounds per head with another.

NOTES

1. It is worth noting that the exact number is unknowable and is the source of a fierce scholarly debate. Suffice it to say that many died, and we will probably never know the exact numbers or the even percentages.
2. This is a hotly debated topic and has been for the last 30 years. Some scholars contend that the Portuguese merely tapped into an already significant slave trade in West Africa; others argue that slavery was virtually unknown before the arrival of Europeans.
3. Prince Henry. An *infante* was any son of a Portuguese or Spanish monarch who was not the first in line to the Crown.
4. A general term of the West Africa.
5. Henry.
6. Nonbelievers. Namely Muslims, who are, of course, not Christians.
7. A cape on the Atlantic coast of Africa in modern Mauritania.
8. To free themselves.
9. Allowed.
10. Coarse, unrefined sugar.
11. A type of dance, here in the sense of a grand finale.
12. Inflammations of the nose and throat.
13. To tend or cultivate.
14. The Pythagorean school of philosophy, founded in southern Italy in the sixth-century B.C.E. by the Greek thinker Pythagoras (circa 580–500 B.C.E.), taught that the immortal soul is imprisoned in a cycle of bodily rebirths until it is released through a process of purification, which is best achieved through study of nature and the cosmos.
15. A term that refers to the notables, or chiefs.
16. Live to.