
6 MASTERS AND SLAVES

From Slave Labor to Free Labor

From the sixteenth to the nineteenth century the enslavement of Africans was the European solution to the problem of labor in the colonies of the New World where Indian labor proved unreliable. On the cotton plantations of the American South, in the sugar mills of the Antilles and Brazil, slaves constituted the principal labor force. Slavery was accepted as a legitimate institution and slave labor considered the ideal type of labor.

At the beginning of the nineteenth century, however, when the traditional colonial system collapsed and new techniques of control and exploitation replaced the old relationships between Europe and the New World, slavery came into question. In the European countries most affected by capital accumulation and economic growth, new groups tied to industrial capital began to condemn slavery. To some, the existence of millions of slaves in colonial areas seemed to contradict their fundamental liberal ideas—a moral outrage. To others, it seemed an obstacle to the expansion of markets for manufactured products. From this point on slavery, as a system, was doomed.

But slavery did not simply disappear overnight. The independence of the colonies in North and South America did not mean an abrupt change in prevailing economic structures. In many areas slavery survived as the preferred form of labor. In fact, with the disappearance of the old commercial monopolies that had tied the colonies to the mother countries and with the increasing demand for tropical products in European markets, plantation economies boomed and the slave trade increased.

The transition from slavery to free labor was a long and difficult process which varied from region to region according to local economic, social, political, and ideological conditions. In some parts of America, abolition was carried out peacefully by the parliaments. In others, it could only be won on the battlefield.

Though Brazil gained political autonomy in 1822, her traditional economic structure continued essentially unchanged. Some of the leaders of independence made conscious, if rather timid, attempts to pro-

more national industries. But their projects died at birth. After independence, Brazilian markets were flooded with European manufactured goods, especially British, favored by commercial treaties. In the Parliament, representatives of landowners and of merchants linked to the export economy stressed Brazil's agrarian vocation. They defended the principles of free trade and opposed measures that would have protected industry. A classic statement of the liberal position was made by Bernardo Pereira de Vasconcelos, one of the most eminent political figures of the First Empire and the regency. He said, "Government has no authority to interfere actively and directly in the affairs of industry, which needs no other guidance than that of private interest." In his *Letter to the Gentlemen Electors of the Province of Minas Gerais*, Vasconcelos opposed government aid to industries and argued that Brazil should export what she could produce best—sugar, cotton, tobacco, cacao—and should receive in return the manufactured products she could not produce competitively. These ideas were to become fundamental doctrines of the empire.

Controlled by representatives of the agrarian and mercantile groups, Brazil remained bound to the traditional types of land use. All the features of colonial agriculture survived: an economy oriented toward the international market, latifundia, slave labor, and backward systems of production. Thus, although the country had become politically independent and new perspectives were opened to trade, traditional economic and social structures remained fundamentally unchanged. Slaves were everywhere: in the cane fields, at the sugar mills, in the cotton fields, on cacao plantations, in the meat jerking plants of the South, and on the new coffee estates opening in the Paraíba Valley. In the countryside and in the city they continued to be the principal instruments of labor.

Meanwhile, the country was organized in the most fashionable political modes. In Parliament politicians recited the liberal credo and debated the most modern theories of representative forms of government. The Constitution of 1824 included the formulas consecrated in the Declaration of the Rights of Man. Individual liberties were assured. Privileges were abolished and all were made equal before the law. Slavery was not mentioned in the text of the constitution, but, by considering property an inalienable right, the constitution kept more than a million people enslaved.

The contradiction between liberalism and slavery did not worry most politicians. Few during those years denounced the evils of the slave system or urged the abolition of the slave trade. And they were mostly men who had been educated in Europe, who were well ac-

quainted with liberal thought and with the doctrines of the classical economists, and who condemned slavery from this perspective. Such was the case of Hipólito da Costa, a Brazilian living in London who stated in 1811 in the *Correio Braziliense* that slavery was contrary both to the laws of nature and to the moral inclinations of man.¹ Maciel da Costa in 1821, José Bonifácio in 1823, José Eloy Pessoa da Silva in 1826, and Burlamaque some years later also denounced the system as immoral and inefficient.² They argued that slave labor brought lower returns than free labor, retarded the process of industrialization, and cheapened the idea of work itself. Slavery, they argued, threatened national security, divided society into hostile groups, generated a regime of violence, degraded social customs, corrupted the family, and was responsible for the "bastardization" of the Portuguese race, a remark that reveals their racist bias. They also emphasized the ethical nature of the question, insisting that slavery violated natural law, the rules of morality, and the teachings of Christianity.

Neither the pessimistic picture they presented nor the eloquence with which they denounced the evils of slavery made much of an impression on the country as a whole. The slaveholding classes remained deaf to such arguments. Proposals for ending the slave trade and for gradual emancipation were systematically rejected. Not even the most advanced thinkers dared propose a drastic solution to the problem. Abolition, everyone agreed, would bring social chaos. Even José Bonifácio—who had gone as far as to say that the slaveholders were defending the right of force rather than the right of property—feared the consequences of immediate abolition. Instead, he proposed ending the trade within four or five years and suggested interim measures for protecting the slaves. But, as we have seen, despite their moderation, his plans did not win adherents during this period.

The best writings from these years are quite objective in analyzing the effects of slavery on society and the economy. Some even point out the ties between the colonial system and slavery. The most progressive propose freeing the newborn and establishing a definite schedule for emancipation. Yet all the authors of these proposals considered premature any radical measure that had not been previously prepared for by the replacement of slaves with free workers, and they all included provisions for compensating the slaveholders.

The arguments of these early writers foreshadow the reasoning of theorists and politicians who in the years to come closed ranks on behalf of abolition. From this point on, nothing essentially new was said about the evils of the slaveholding system or the incompatibility of Christian morality and slavery. The note of commiseration with the

slaves intensified with the passage of time and the gradual measures suggested by emancipationists at the beginning of the century gave way to more drastic solutions urged by radical abolitionists. But the basic arguments against slavery did not change. What did change was the setting, the country as a whole. As a result of this change, words that before had little effect began to electrify audiences, mobilize the press, stir up crowds, and provoke heated parliamentary debates. After 1870, the slavery debate became one of the most impassioned of the Second Empire.

Those who wrote against slavery in the first half of the century had sought to demonstrate its drawbacks to the nation. As good children of the Enlightenment they had placed their confidence on the efficacy of knowledge and reason. They believed that they could obtain the abolition of slavery merely by informing public opinion. But they were mistaken. Socioeconomic realities at the time of independence nullified their efforts. Slavery continued for another fifty years and would be abolished only in 1888.

Shortly after independence there were 2,813,351 free inhabitants of Brazil and 1,147,515 slaves. The slaves were concentrated in the traditional sugar-growing areas of the Northeast and Bahia, the old gold-mining areas of Minas, and in Rio de Janeiro.³ By that time the coffee plantations, then opening in the Paraíba Valley, were beginning to acquire substantial numbers of slaves. Brazil possessed vast areas of uninhabited land and her population was small and unevenly distributed. In order to mobilize the necessary labor force to bring land under cultivation, the coffee planters had to resort to African slaves. Ideologies and values expressed this reality. As in the colonial period, owning land and owning slaves were among the highest aspirations of the age. Land and slaves were signs of wealth and conferred social prestige. And most people still believe that slave labor was the only form of labor compatible with large-scale agriculture.⁴

Free labor, however, never disappeared completely. It had been associated with the plantations since the colonial period as a supplementary form of labor. To free laborers were given the most dangerous tasks—or those jobs at which slaves had proven to be inefficient. Clearing forests, accompanying mule trains, and supervising slaves were often freeman tasks.

Free workers formed part of the master's network of dependents and clients. They followed their master in his political battles and made up his private militia. On the sugar plantations sharecroppers often had a few slaves of their own and some livestock, but they did not own their own land. They grew cane in the plots assigned to them by the plan-

tation owners, with whom they shared a percentage of the sugar produced. Sharecroppers usually cultivated the land without contractual guarantees and could be driven off at any time. This lack of guarantee of land use explains the precariousness of their living arrangements. They constructed provisional huts and fences and were always prepared to lose any improvements they had made. Tenants were in even worse conditions. Holding no land and living on whatever was assigned to them by the landowner, they were completely dependent on his benevolence and lived under his "paternalistic" protection. Tenants usually produced only enough for their own survival, occasionally providing additional labor for the plantation. On the coffee plantations the situation of the free workers was no better. Tenants were subject to the arbitrary whims of the owners and their living conditions were not different from those of the slaves. Sharecropper arrangements were exceptional in the coffee areas, where most of the work was done by slaves.⁵

Until mid-century, in the rural areas the slaves continued to be "the hands and feet of the master." Even in the cities slaves performed most of the crafts and household work. Some masters lived from the rental of their slaves, while others maintained large numbers working for fees. City slaves were involved in a great variety of activities. There were slave shoemakers, carpenters, tinsmiths, tailors, potters, street vendors, carriers, and masons. They went out in the morning to their work and returned in the evening to turn over their earnings to the master.⁶

Since slave labor predominated in both the countryside and the cities, slave trade continued despite international pressures to halt it. But while slavery continued to prevail in Brazil, it was being internationally proscribed. In Britain, the antislavery movement had gained momentum in the early nineteenth century and the slave trade to British colonies had been abolished in 1807. From this point on, the British government opposed slave trade. When the Portuguese court moved to Brazil in 1808, João VI had promised the British government that he would cooperate in the campaign against the trade and restrict the trading activities of his subjects to the African territories under his rule. After the Congress of Vienna (1814) had decided to end the slave trade north of the equator, Portuguese traders had been deprived of some of their traditional sources of supply, but they had continued to trade in other parts of Africa. And despite its pledges to terminate the trade at the earliest possible moment, the Portuguese government had taken no concrete action in that direction. After independence, the Brazilian government, needing British support, had endorsed the agree-

reports of illegal slave trading saw their efforts frustrated, while slave smuggling continued, protected by the connivance of the population.⁸

The development of coffee plantations in the decades that followed independence could only stimulate the demand for labor. During those earlier years Parliament was flooded with petitions calling for the repeal of the 1831 law. But although completely ineffective, the law was kept. Neither British cruisers nor the Brazilian authorities managed to put a stop to the action of the smugglers. The blacks they brought in, though legally free after 1831, were still sold as slaves. Plantation owners and slave traders simply defied the law, resisted British pressures, and disregarded Brazilian authorities. The slave trade continued after 1831 at an increasing rate. Between 1840 and 1850 an average of 30,000 to 40,000 blacks were smuggled into Brazil each year, under the complaisant eyes of the Brazilian authorities.⁹

The British attempts to suppress contraband angered the Brazilians, even more so because British subjects living in Brazil did not hesitate to own slaves. This caused doubts about British philanthropy and strengthened longstanding animosity toward Britain. In fact, since 1810 exceptional treaty provisions had favored English products. Those provisions had been renewed in 1826. British products and merchants had invaded the Brazilian market. These facts gave rise to xenophobic sentiment, which surfaced in the various revolts that troubled Brazil during this period. Brazilian hostility toward Britain was ably exploited by those interested in maintaining the slave trade. Craftily, they argued that to give in to British pressure would be to bow before oppression. The question thus turned into one of national honor. Tensions increased in 1842 when the Brazilian government approved a new tariff law increasing taxes on British products. It reached its peak in 1845 after the British Parliament, apparently in retaliation, voted a bill known in Brazil as the Aberdeen Bill, which not only authorized the seizure of any ship involved in the slave trade but stipulated that violators be considered pirates and tried in Admiralty courts.

From then on, British cruisers repeatedly violated Brazilian waters in search of suspect ships. Such incursions, seen as attacks on national sovereignty, created an uproar in the Brazilian Parliament and stirred up the entire nation. The slave trade continued even more intensely than before. From 1845 onward, more than 50,000 slaves a year were smuggled into the country. It was in this climate of international tension and internal unrest that the Parliament began to reconsider earlier proposals aimed at the suppression of the trade.

Brazilian public opinion was divided. Planters well supplied with slaves or in debt from their purchases of slaves viewed the possible end-



Fig. 9. Slaves departing to the fields

ments previously signed between Britain and Portugal and promised to prohibit the slave trade. In accord with these agreements, the government had issued a law in 1831 freeing all slaves arriving from outside the empire and imposing severe penalties on slave smugglers.⁷

The law, however, had proved ineffective. The government, in which the agrarian interests and the slave traders were well represented, had no real desire to displace them. Besides, the imperial authorities were powerless against the oligarchies who held political and administrative power in the provinces. The courts, controlled by the oligarchies, posed little threat to their interests. Those who administered the law were generally tied by family, friendship, or convenience to the dominant local groups, and even when this was not the case, judges and attorneys lacked sufficient independence to implement the law. Their jobs were jeopardized when they attempted to incriminate leading figures in the local society—men of social and political influence. Frequently, a single important family dominated a whole region. These families, large in themselves, could enlist support from a vast network of allies and clients. On the rare occasions when some local potentate was indicted in a trial for slave smuggling, no one dared to testify against him. And despite all the evidence presented by the prosecutor, the smuggler would inevitably be absolved by the jury. Thus the zeal of a few officials came up against the stout opposition of the slaveowners. The agents of the imperial government occasionally sent to investigate

ing of the trade rather calmly. They saw that such a measure might well raise the value of their property. Opposed to the abolition of the slave trade were the slave traders themselves and the planters in the frontier areas who could not yet count on a sufficient number of workers to cultivate their plantations. The question passed into the realm of partisan maneuvering as politicians realized its political importance. Finally, severe measures were taken against the slave smugglers in a law of 4 September 1850.¹⁰ The authorities reinforced their vigilance and foreign slavers were expelled from the country. Contraband continued on a small scale for a few more years and finally ended once and for all.¹¹

The ending of the trade doomed slavery because of the high rate of mortality among slaves. After the abolition of the trade planters recognized the need to improve the living conditions of the slaves and at the same time to consider other solutions for the problem of the labor force.

Before the suppression of the slave trade, the lives of slaves in rural areas had been quite precarious.¹² Their work day was long, often reaching sixteen or eighteen hours, including additional night work. They lived in wattle and daub huts thatched with palm leaves or *sapé* grass—generally windowless or equipped with barred windows. The slaves slept on mats spread over wooden platforms two and a half or three feet wide. They received at most two or three changes of clothing a year. Men wore pants and shirts of coarse cotton with a *surtum*—a sort of sleeveless jacket of rough cloth lined with baize. On the majority of plantations these clothes were replaced only once a year and slaves went around in rags. Municipal ordinances aimed at preventing their being seen dirty or half-naked in the streets of the towns imposed fees on careless slaveholders but they seem not to have had great success since they constantly had to be renewed. In any case, such measures did not extend to the plantations where the will of the master was law.

The slave diet did not vary: beans, gruel, manioc flour, from time to time a piece of jerked beef or salt pork, more rarely yams, cassava, pumpkins, or sweet potatoes. In the sugar-growing areas, molasses and white rum accompanied meals, and in the coffee regions, coffee. On the poorer plantations the diet was reduced to beans and a little manioc flour. Slaves often suffered from parasites, fevers, tuberculosis, and syphilis; they also were subject to the epidemics of smallpox, cholera, and yellow fever that periodically swept the country.

Medical treatment on the plantations was inadequate. Planters used medical manuals and also resorted to folk healers and curers who used

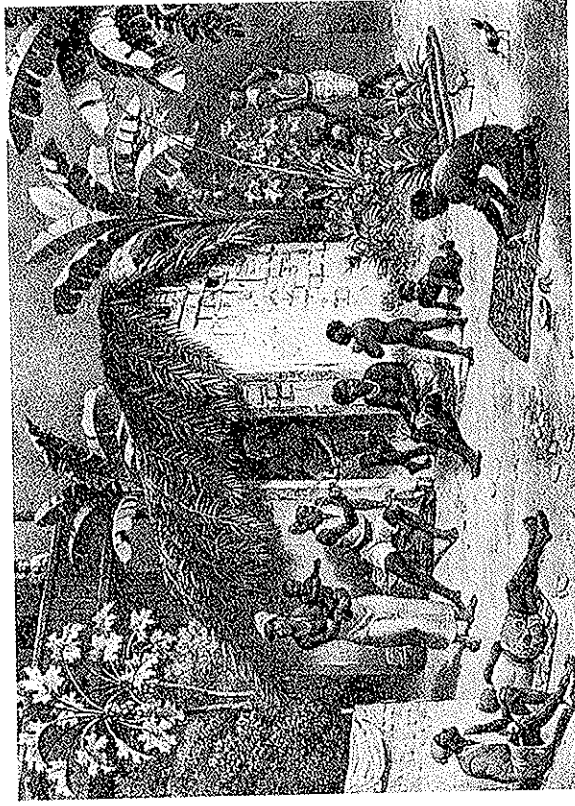


FIG. 10. Master's house and slave's quarters (*senzalas*)

magic and sorcery along with remedies made of herbs. With these they sought to cure everything from venereal diseases to snakebites. Both blacks and whites, slaves and masters commonly believed that saints provided protection against certain illnesses, and they invoked Santa Luzia, protectress of the eyes, Santa Ágata for the diseases of the chest, Santa Apolonia for toothaches, São Lázaro for leprosy, and São Tomé for worms. Medical science itself was not far removed, in the countryside, from the primitiveness of the folk healers. This was the age of miraculous remedies: of Leroy's Purgative to treat pneumonia, dysentery, dropsy, and poisoning. It was the time of purges and bleeding, of home remedies, of balsam and absinthe teas, of orange and elderberry blossoms, of guava and nettle leaves.

The religious hospitals, or *santas casas*, performed a substantial service for the planters, taking in their ill and disabled slaves. Still, old and invalid blacks, abandoned by their masters, could often be seen along the roads or begging in the towns, and frequent attempts to restrict such abuses—in both the local and national legislatures—met with little success. In 1854, in São Paulo, a provincial law provided that "any master who, having adequate means, abandons his leprous, insane, crippled, or incurably ill slaves, and who allows them to become beggars," should pay a fine of 30,000 and be obligated to care for them properly, support them, and clothe them. The legislature's

efforts, however, were futile. Though Parliament complained and the press protested, throngs of old, sick, and hungry free blacks continued to be seen along the roads, begging alms from travelers or wandering on the streets of the cities. Since they were no longer of any value in the labor force, their maintenance constituted a burden that many masters were happy to dismiss.

In short, many factors contributed to the high mortality rates of the slave population: insufficient medical knowledge and primitive treatment, poor sanitary conditions in the slave quarters, inadequate diet and clothing, harsh working conditions, dust inhaled in the preparation of coffee, the heat of the furnaces in the sugar mills, and the bites of poisonous snakes and insects in the fields. But most of all, high mortality was due to the hazardous sanitary conditions in the country as a whole.

In the 1870s it was said, probably with some exaggeration, that if a planter bought a lot of one hundred healthy slaves, after three years he would find twenty-five of them, at best, still able to work. On the plantations there were always some slaves—perhaps as many as 10 or 20 percent—temporarily unable to work, and pessimistic observers estimated the working life of the labor force to be fifteen years. Planters often complained about the high infant mortality, which according to some reached more than 80 percent. It was common to say that it was easier to raise three or four white children than one black—a situation attributed to “the greater fragility of the black race.” The owner of one of the largest sugar mills in the province of Rio de Janeiro, and one of the first to introduce steam-operated machines—a measure of her progressive spirit—told the English traveler Maria Graham that not even half of the blacks born on her plantation lived to the age of ten. The baron of Piauí, a planter in Paraíba do Sul, in the province of Rio de Janeiro, confessed some years later that, despite good treatment and care, the number of his slaves declined about 5 percent a year.

Contrary to these pessimistic evaluations, recent research has demonstrated that mortality, although high, was not as high as planters said, and certainly not much higher than mortality among the free lower classes.¹³ Measuring infant mortality in a coffee district, one author has arrived at the conclusion that it reached 470 per 1000. Of the 36,807 children registered as born to slave mothers between 1871 and 1887, 8,454 died, which gives an index of 229 per 1000. If mortality was not as high as planters said it was, certainly it was high enough to make the balance between birth and death negative. Mortality as well as fertility seems to have differed widely from one province to another. Attempts to measure fertility have resulted in figures that vary from

210 per 1000 in Rio Claro, to 61 per 1000 in Rio de Janeiro, 160 per 1000 in Rio Grande do Norte, and 150 per 1000 in São Paulo.

While fertility in Brazil was lower than in the United States, slave mortality in Brazil was apparently much higher. The higher rate of mortality has been attributed to the general health and epidemiologic conditions that prevailed in Brazil at the time. On the other hand, the lower fertility rate has been attributed to the imbalance between males and females and to the higher instability of the slave family in Brazil. Indeed, during the nineteenth century, particularly in areas of new settlement, there were always fewer women than men. In some regions the proportion was as low as one to five. This difference—more striking before the interruption of the slave trade—tended to diminish after that, sometimes disappearing completely in areas of old settlement.

Throughout the nineteenth century, travelers, slaveowners, priests, politicians, and abolitionists, all talked about the “promiscuity” that reigned in the slave quarters. We could argue that the documents are inherently biased, that priests were overconcerned with moral problems, that puritan travelers went out of their way to make slavery look evil, that politicians were merely debating points, that abolitionists always exaggerated the corruptions of slavery, and that slaveowners were prejudiced against blacks. In fact, recent historiography seems to contradict the testimony of the contemporary. Perhaps influenced by recent trends in United States historiography, historians found that the monogamous family was not uncommon among Brazilian slaves. It is often difficult, however, to reconstitute the slave family because common law unions were not registered and slaves in Brazil as well as most of the lower class often did not marry. The census of 1872 counted only 9 percent of the total slave population as married, compared to 27.1 percent of the free population. The situation did not seem to improve very much as time passed. In 1888, only 10.6 percent of the slaves were listed as married, though an additional 2.2 percent of the slaves were enrolled as widows and widowers. The figures for the nation as a whole can be very misleading, since there were marked variations from region to region. In Pará and Santa Catarina, only 1 percent of the slave population was registered as married in 1888. In Minas the figure was 17 percent, in Bahia 4.5, and in São Paulo 22. The figures for the city of Rio de Janeiro are particularly striking. In a total slave population of 7,488, there were only 38 married slaves. These variations are difficult to explain. Demographic imbalance between male and female does not correlate to marriage rates as one might expect. São Paulo, for example, which showed a predominantly male population of 62,688 males for 44,641 females, was also the province with the highest pro-

portion of married slaves, while in Pará and Rio, where the marriage rates were lower, the male-female ratio was nearly one to one. It seems, thus, that only when the demographic imbalance was acute, as in the case cited by Stanley Stein in Vassouras, where 77 percent of the slaves were men, might demographic factors have any bearing on marriage. Nor does the number of priests and churches correlate to the number of marriages. There were more married slaves on plantations than in the cities, where there were more churches.

It is thus difficult to make generalizations about the slave family that are valid for the country as a whole, and one should not dismiss too quickly the testimony of contemporaries when they commented that sexual freedom, which for them was licentious behavior or promiscuity, was common in the slave quarters. It is also difficult to dismiss the tales about how masters, overseers, or other free whites used their position of authority to have affairs with slave women. Although we cannot measure how widespread these practices were, it is impossible to deny that from these unions emerged a large mestizo population. These situations created problems that concerned not only jealous wives and pious missionaries but also zealous legislators. By the time of independence, unsuccessful attempts had been made by some politicians to put into law a measure requiring slaveholders to free a slave who gave birth to her master's child. Such a law would have required a public admission of the slaveowners' responsibility. The ambiguous situation of many planters, who kept their children, their siblings, and even their mothers enslaved, seemed to them to be preferable to public scandal. Only in 1871 did a judicial ruling following the Free Birth Law of that year hold that a slave mother owned by her own son would have preference under the newly created Emancipation Fund. But, oddly enough in this same period, an appeals court prohibited a master from selling his illegitimate children, requiring him to continue to keep the mother and children as his own slaves.

The legislation aimed at the protection of slaves was always of dubious effectiveness, especially in the countryside, where the master's authority went unchecked. In the plantation, he represented the church, the law, and the police. His dominion was unhindered and his will limited only by his own benevolence.

Nevertheless, cases of kindness and paternalism on the part of the masters and examples of loyalty on the part of the slaves could always be found. In Brazil as in the United States, many a woman of the slaveholding class maintained all her life and passed on to her children the affection she retained for the nursemaid who had raised her and watched her children grow up. Many sons of planters kept throughout

their lives sentimental childhood memories of the old black who had initiated them into the arts of hunting and fishing and the mysteries of nature. More than a few young students, on the day of their graduation, freed black boyhood companions who had accompanied them as servants during their years in school.

The images of the devoted "Black Mammy," of the loyal "Old Black Joe," of the childhood mate—these are not just inventions of romantic literature or artificial constructs of the planter's mind. They were found in real life. But equally real was the vengeful slave who tried to kill his master or overseer, who burned the fields, who ran away, or who incited rebellion in the slave quarters. And the truth is that most of the slaves probably did not fit in either of these extreme and opposite categories. Pictures of the faithful slave and the benevolent master—pictures fixed in Brazilian literature and history—represent not so much the actual behavior of slaves and masters, but myths created by a slaveholding society to defend a system which that society regarded as indispensable. They affected people's behavior only as much as any other idealization does.

Too much has been said recently about the paternalism of the slaveowners.¹⁵ Historians have argued that paternalism was more than just a myth—an actual practice regulating the relations between master and slaves—a means of social control. This opinion, however, seems questionable when contrasted with the overwhelming evidence suggesting the violence of the system. Masters may have resorted to restraints as well as to punishment; they may have tried to impose order and discipline by presenting themselves as father figures. But all this should not blind us to the ultimate violence of a system which made slaves the property of their masters—a property that could be bought and sold and whose fate depended on the master's whim.

The forms of ritual kinship (*compadrio*) and the paternalistic relationships that slaveholding society developed as mechanisms of accommodation and social control could not eliminate the barriers that separated the two opposing and irreconcilable worlds of the slave and the master. Racial prejudice always separated the owner from the owned. Most whites, even those who considered slavery an economic and political aberration, believed in the moral inferiority and political and social incapacity of the African race. Racial prejudice served to maintain and legitimize the distance between a world of privileges and rights and one of deprivation and duties.

Even if the slaveholders often rewarded good behavior by granting manumission or conferring to their most loyal slaves a position of prestige within the slave community, more often they resorted to threats or

punishments to keep up the rhythms of work, prevent escapes or revolts, and keep slaves obedient and submissive. Physical punishment was universally accepted as a method of coercion, although society disapproved of both the masters who were excessive in their punishments and the ones who were overly benevolent. Leniency and cruelty were considered equally dangerous.

Religion was another means of social control. Since the colonial period, the Church had undertaken to reconcile the masters' financial interests with the dictates of religion and philanthropy. Discipline on the *fazendas*, according to one traveler in the mid-nineteenth century (who did not include paternalism as one of the means of social control), had two forms: the whip and the confessional. Patience, resignation, and obedience were the catechism the priests taught the slaves. Some went as far as to say that blacks were "cursed" and constituted a condemned race whose salvation depended on their serving whites patiently and with devotion. Others played the role of mediators between masters and slaves, preaching moderation and benevolence to the masters and obedience to the slaves. But whatever the priests' role was, most people believed that religion and the confessional were the best antidotes to insurrections.

When rewards, admonition, and advice did not produce the desired result, slaveholders resorted to punishment. The most common methods were the *palmatória*, the stocks, and various kinds of whips and lashes. Rare, but not absent, were neck shackles, manacles, iron rings for squeezing fingers, brass masks, and imprisonment. Whipping and the *palmatória* were common disciplinary punishments, recognized and authorized by law. Slaves were not alone: soldiers and sailors were also whipped when they committed certain offenses, and children were subjected to the *palmatória* in school. Sometimes lower-class free men were also beaten when they displeased a slaveholder or failed to treat him with "proper" respect. In the nineteenth century, social relations were based on dominance and oppression; on the power of father over son, of husband over wife, of master over slave, of the rich over the poor. Physical violence was an integral part of most people's lives.

The harshest punishments were applied to slaves who committed murder, led other slaves to run away, or instigated rebellions. A murderer or his family and to chain gangs or prison otherwise. Runaways received three hundred lashes, administered over several days. For a long time it was the custom to brand slaves with a hot iron. Even on the eve of abolition, the newspapers carried advertisements of runaway slaves who could be indentified by those brands. All these devices for

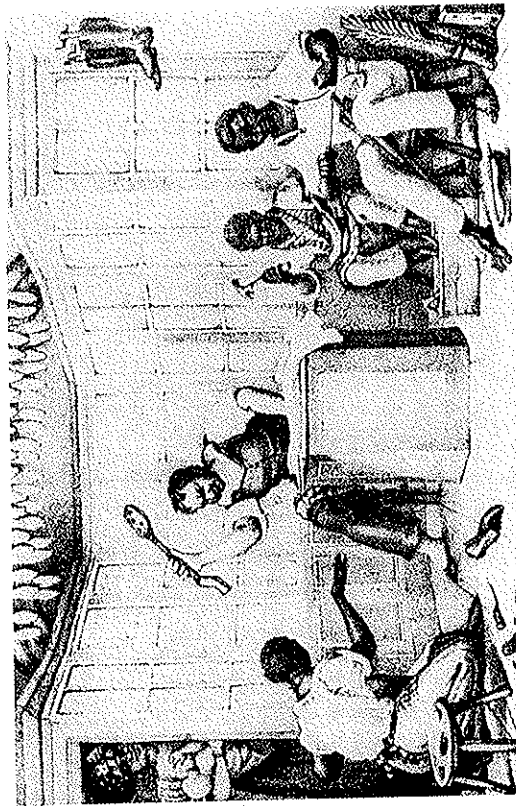


FIG. 11. A master punishing his slave with the *palmatória*

torture and punishment were in frequent use until the middle of the nineteenth century. Such practices declined thereafter, but the history of Brazilian slavery is replete with cases of death or permanent injury from excessive punishment, enough to make us doubt the paternalistic pretensions of the masters.

Various travelers in nineteenth-century Brazil praised the excellence of the legislation that sought to protect the slave. They forgot, however, that the effectiveness of a law always depends on compliance and enforcement. And it is difficult to believe that these laws were implemented when, as we have seen before, slaveowners often interfered with the action of the courts. Before the abolitionist campaign, the slave was always seen as guilty by the jury, while the master always seemed to be in the right. Thus, most of the time the law was ineffective in the defense of the slaves but quite effective on behalf of the slaveholders.

In spite of all the mechanisms conceived to keep the slave population submissive, the planters lived in perpetual fear of slave insurrection. At the least rumor, severe measures were taken to prevent an uprising. The news spread swiftly: troops were mobilized, slaveholders warned, suspects arrested and interrogated, and the guilty severely punished. Laws were enacted to strengthen security measures. Both municipal and provincial legislatures reinforced the legal provisions that limited the slaves' movements. In the towns, every slave found on the street after curfew without his master's authorization was arrested.

Slaves were prohibited from congregating in shops or public places, and they were forbidden to enter gambling houses or taverns. The sale of arms or poison to slaves was severely punished, as was the renting of rooms or houses to them. It was illegal to buy any merchandise from slaves, unless they showed authorization from their masters. This was intended to reduce thefts, but neither vigilance nor repressive measures worked. Masters constantly complained that roadside stores traded in goods stolen by the slaves.

Despite the rumors of insurrections that periodically alarmed the slaveholding class, large-scale revolts were rare in nineteenth-century Brazil. Some of those that did occur, however, were quite impressive. The most famous slave revolts of this period had a religious character and were provoked by Muslim blacks. They occurred in the cities, where communication among the insurgents was easier than in the country and the concentration of slaves from the same part of Africa was greater.¹⁶ Those revolts took place principally in the Northeast, where many Muslim blacks were to be found. The Malé revolts in Alagoas (1815) and Bahia (1835) were of this type. In Minas Gerais a famous uprising occurred shortly before independence. Some 15,000 slaves assembled in Ouro Preto and another 6,000 in São João do Morro. They spoke of a constitution and freedom and spread the rumor that in Portugal a constitution had already been approved in which blacks had been made equal to whites. Revolts of such size, however, were rare in the coffee areas and only occasionally took on the frightening aspects of the one that broke out in Vassouras in 1838, when about three hundred slaves, mostly Haussás, rose in revolt and troops had to be summoned from Rio de Janeiro to suppress them.

The repressive mechanisms that slave society had developed against uprisings were usually quite effective, and when a revolt did break out, it was quickly put down by the police or the army. But even careful vigilance could not prevent slaves from escaping to the forests and raiding plantations and villages. Communities of runaway slaves, known as *quilombos*, had been widespread since the colonial period, and in the nineteenth century some became famous, such as Jabaquara in São Paulo and Gávea in Rio de Janeiro. *Quilombos* grew in importance during the final years of slavery because slaves could count on the help of abolitionists and on the goodwill of the urban population.

Insurrections, crimes, work badly done, orders not fulfilled, lies, negligence were the many ways slaves fought oppression. But most of all, they ran away. The newspapers of the period are filled with advertisements dealing with escaped slaves and promising rewards to anyone who captured them. In 1855, up to 30,000 was offered. Twenty

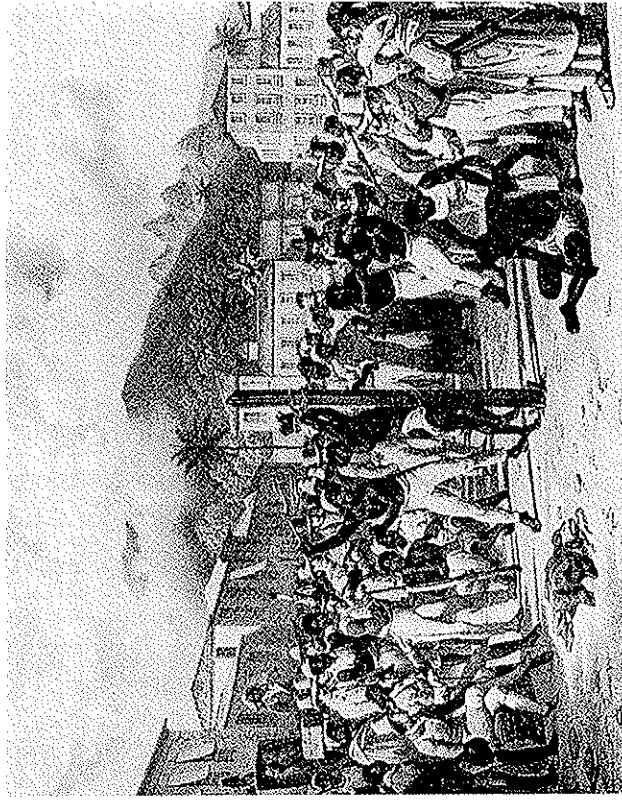


FIG. 12. Punishment in the public square

years later, when slave prices had risen to two and a half *contos* (2:500\$000) or even more, some owners would offer up to 400\$000 for the capture of a runaway slave.

The profession of *capitão do mato* (hunter of runaway slaves) had existed since the colonial period. In the nineteenth century, *capitães do mato* did not hesitate to put advertisements in the newspapers offering their services. But with the spread of abolitionist ideas they gradually became targets of popular satire and sometimes even of physical attacks.

The slaves' potential for rebellion was contained not only by repression, but also by the rivalries and enmities that divided the slave community. In rural areas, the household servants often considered themselves better than slaves who worked in the fields. Maids, cooks, seamstresses, coachmen, pages, washerwomen, and nursemaids received special treatment and had greater opportunities to gain their freedom through manumission than did fieldhands. The household servants often lived more or less separated from their fellow slaves. Their apparent superior status tended to separate them from their natural group and imposed on them a code of etiquette full of prohibitions. They did not belong to the slave quarter, but they were not accepted in the world of the masters. Their position was not without am-

of origin). And sometimes they kept old hierarchies. Some African princes are said to have maintained the respect of their subjects in slavery. To the traditional African hierarchical positions, new distinctions were added based on occupation. As one traveler noted at midcentury, "A well-dressed and well-turned out high-class female slave feels no compassion or sympathy for her ragged and dirty fellow." The master's position also reflected on the slave, and one who belonged to a plantation owner felt himself superior to another who worked for a modest official—even though he might be subject to a more rigorous discipline. In spite of these divisions, feelings of solidarity also developed among slaves. And in the second half of the nineteenth century the activities of the abolitionists were important not only in spurring the slaves to join together in winning their freedom but in providing them with the means to do so.

African traditions had an important role to play in keeping the slave community united. Cultural traditions were apparently more easily retained in the cities than in the countryside. In urban areas, blacks from the same parts of Africa had at least the possibility of seeing one another and forming groups. On the plantations, where masters tried to prevent the formation of homogeneous groups, such contacts were more difficult. People of different cultural traditions were mixed together. The family or kin that had constituted the basis of the social structure in Africa fell apart. The traditional collective symbolic systems took on new meanings. Cults and rituals brought from Africa underwent a process of interpretation based on new circumstances imposed by slavery.

Music, religion, and magic were intimately related and played an immense part in the life of the slaves. Some masters permitted their slaves to dance and sing on Saturdays, Sundays, or holidays. In the cities and towns, African songs and dances were usually prohibited, out of a fear that any gathering of slaves could degenerate into a subversive movement. The only authorized celebrations were those of a Christian character, such as that of Nossa Senhora do Rosário, patron saint of blacks, and a few dances, such as the *congadas*.¹⁸

For the most part, however, Christianity was little more than a veneer over African traditions and practices. Few masters made much effort at Christianizing their slaves. Although most plantations had chapels, mass was rarely celebrated. Priests were in short supply, and the few who appeared from time to time had no opportunity to initiate the slaves in the real practices of Christianity. Household rites and family prayers prevailed. The master would lead prayers, aided by the slaves, who repeated them mechanically often without understanding

biguities, and ambiguous was their behavior. Some were bound by ties of affection to the master's family; others hated their masters to such an extent that they did not hesitate to eliminate them. The accounts of crimes committed by household slaves kept the master class apprehensive and watchful as long as slavery lasted.¹⁷

Many other forms of rivalry further divided the slave population. In the cities blacks often organized themselves by "nations" (their places



Fig. 13. Capitão do Mato

their meaning. In practice, African and Christian traditions became thoroughly mixed, and African deities survived under Christian guise. The inclusion of African cultural elements in Catholicism made possible their preservation under a Christian exterior. But in this process, many African deities acquired a sinister character and often the warlike ones came to be preferred. The Muslim slaves, who were heavily concentrated in the Northeast, were the most resistant to Christianity, and some even managed to maintain their own places of worship. Nevertheless, slavery often made it impossible to observe religious requirements strictly, and it was mainly among free blacks that African traditions survived, however modified.

The fate of the slave actually depended as much on the prosperity of the master as on his benevolence and humanity. And it varied from region to region, from one plantation to another. It was said that Rio was better than Maranhão and that the worst masters were to be found in Campinas. "I will sell you to Campinas," said masters in western São Paulo to rebellious or lazy slaves. In Bahía, unruly blacks were threatened with being sent to the south. In Pernambuco the threat was to sell them to Maranhão. There was considerable mystification in this insinuation, but slave treatment did vary with the productivity of the various regions. In areas suffering from soil exhaustion—but still productive—such as the Paraíba Valley after 1870, the planter demanded longer hours and the care of a larger number of trees from his slaves to compensate for the decline in productivity of the coffee trees. In totally decadent areas, poverty sometimes brought slave and master closer together, and when slaves were not sold, master and slave relations became somewhat more civilized as they both struggled for survival. In the most prosperous areas, where productivity was higher and labor abundant, living conditions for the slaves were usually better.¹⁹

On the whole, living conditions seem to have improved after the abolition of the slave trade in 1850, when the price of slaves increased and slaveowners became more concerned with keeping their slaves in good health. In the twenty years from 1855 to 1875, slave prices almost tripled, going from one *conto* to two and a half and even three. While slave prices in Rio and São Paulo (in the coffee areas) maintained an upward trend from mid-century to about 1880, rising abruptly in the 1850s and then more gradually during the next decades, in the sugar areas prices began to decrease from the late 1850s on, reaching their lowest point in the 1870s. The fall of slave prices was related to changes in commodity prices; while sugar prices tended to decline, coffee

prices reached their highest levels during the 1870s.²⁰ The difference between slave prices in the Northeast and in the South and the higher demand for slaves in the South led to a dislocation of the slave population from the Northeast to the South. The majority of bondsmen sold in the southern provinces, however, seem to have come not from plantations but from urban areas or small farms less dependent on slave labor.

During the first years after the interruption of the slave trade, there was a movement of slaves from the less productive regions to the more productive, from the cities to the countryside. Intra- and interprovincial trade replaced the external trade. Slave traders scoured the Northeast, offering high prices for slaves whom they then sold to the coffee planters of the South. Concerned about this loss of labor, the governments of the northeastern provinces tried to limit departures by imposing high taxes on them. A report by the president of the province of Maranhão in 1853 noted that the tax on the export of slaves had brought in more than in prior years because of the high slave prices prevailing in the Rio de Janeiro market. In Pernambuco, the tax on slaves leaving the province, which was 5\$000 in 1842, reached 200\$000 in 1859. In 1866 the provincial president reported that from 1855 to 1864, 4,023 slaves had been transferred to other provinces. In Bahía in 1860, over 200,000\$000 was collected in taxes on slaves leaving the province. The situation was similar in Alagoas, where the largest source of revenue in 1862 was the tax on the export of slaves. Wanderley, representing the planters of Bahía, tried unsuccessfully in 1854 to secure approval in the House of Representatives for a bill prohibiting the interprovincial slave trade. The interests of large-scale agriculture in the South were stronger. The northeastern provinces, suffering from chronic crisis, thus lost much of their slave population.

It is impossible to calculate the exact number of slaves transferred to the coffee-growing areas from other provinces. Ferreira Soares provides data that permit an estimate of slightly over 5,000 slaves imported annually from the Northeast to Rio. Tavares Bastos writes of around 37,000 slaves entering Rio between 1850 and 1862. Recent scholarship has evaluated the internal slave trade at between 6,000 (Klein) and 9,000 (Slenes) a year.²¹ Using port records of Rio de Janeiro and Santos, Slenes arrived at the conclusion that between 1873 and 1881, 71,000 bondsmen entered the coffee areas. This does not include slaves brought through other ways or to other ports.

Internal trade followed the pattern of external trade. More men than women were traded and more young men than adults. The major-

ity of slaves traded were below forty years of age. Males were more prized than females. Many were registered as African-born, having originally come from Cabinda, Congo, Benguela, and Mozambique.

Whatever the precise numbers and qualifications, the fact is that intra- and interprovincial trade led to a concentration of slaves in the coffee-growing provinces. In 1823, Minas Gerais, Rio de Janeiro, and São Paulo contained approximately 386,000 slaves while Bahia, Pernambuco, and Maranhão reported around 484,000. Fifty years later the situation was reversed, and the latter provinces held 346,000 while the coffee-growing provinces contained almost 800,000 slaves.

The growing disproportion between the slave population of the North and that of the South finally alarmed southern politicians who saw this imbalance as a threat to the maintenance of the slave system. In 1874 the president of São Paulo requested a new tax on slaves entering the province. To emphasize the risks that would result from the transfer of slaves from North to South, he recalled what had happened in the United States. Some years later, a São Paulo deputy, Moreira Barros, presented a bill to the Chamber prohibiting the sale and trans-

fer of slaves from one province to another. He said that this measure would end the antagonism that was developing between the two parts of the empire over slavery and would put all provinces on an even footing to resolve the question of slavery when that might be opportune. All these men feared, not unreasonably, that the North, after exporting its slaves to the South, would come to view the plans of the abolitionists with greater complacency.

What was happening in the cities showed that they were right. Abolitionists had more success in urban centers, where free labor had made progress. While slaves were increasingly concentrated in the coffee-growing areas, free labor made headway in the cities where free blacks and immigrants replaced the slaves. In 1860 Ferreira Soares noted that in Rio de Janeiro the number of slaves on the street had fallen noticeably; most peddling and selling, transportation, and other tasks previously done by slaves were done by freemen. The number of foreigners employed in these occupations was also growing.

As this was happening in the cities, high prices received for coffee seduced the planters, who expanded their coffee fields. Plantations spread westward in search of virgin land and their owners complained

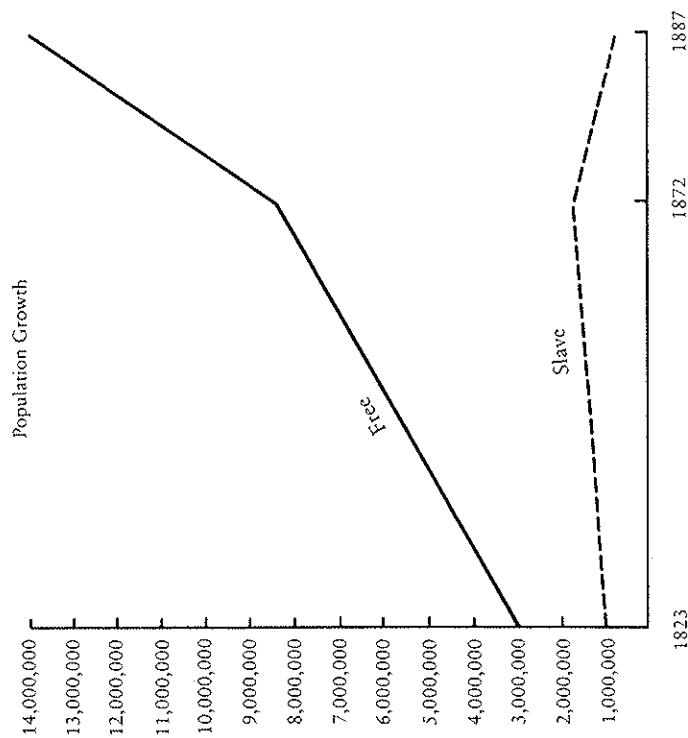


FIG. 14. Population growth in Brazil from 1823 to 1887

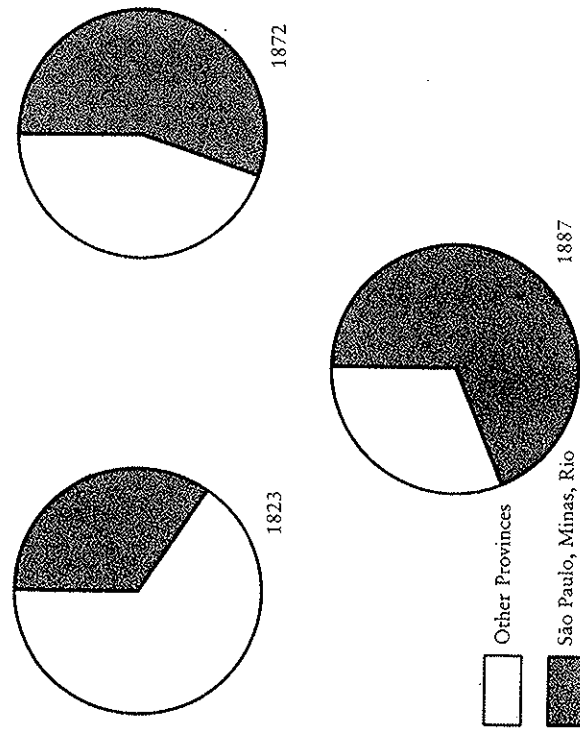


FIG. 15. Slave and free population by region in 1823, 1872, and 1887

of the shortage of labor and the high price of slaves. The demand for labor required a search for new solutions.

The lack of success with sharecropping, the failure of most of the immigrant settlements based on independent small farming in the coffee areas, and the difficulties involved in other sorts of contracts for agricultural labor had temporarily discredited attempts to promote immigration. The planters then turned to possible means of forcing the Brazilian rural population to work on plantations. Some argued, however, that Brazilian workers were lazy and shiftless and blamed the backwardness and ignorance in which workers lived as well as the ease with which people could support themselves in a country where nature was so generous. Sometimes it seemed that laziness was a "natural tendency of the Brazilian people, a trait of its national character." There were, however, a few observers who gave somewhat more objective explanations. Millet, a sugar planter in Pernambuco, wrote that

whoever travels through the interior notes, along with the extraordinarily rich and uncultivated vegetation, the miserable huts which this class inhabits, the frugality, privation, and poverty in which they live. . . . Some attribute their idleness partly to the fact that they are settled on land which does not belong to them, the owners of which refuse to sell it even though they cannot cultivate it, and one cannot expect a man to acquire habits of work in a place where work provides no profits at all.²²

André Rebouças voiced a similar opinion in 1883 in *Agricultura Nacional*, a book in which he analyzed the problems of Brazilian agriculture. Rebouças denied the charges of idleness leveled against the rural population and insisted that the empire needed profound reforms in order to permit the utilization of the thousands of individuals living a vegetative existence in the interior. Some years later, A. Taunay, trying to promote colonization, pointed out that "The obstacles to laying claim to a bit of land of their own provide good arguments for idleness and make it difficult for tenants [*agregados*], though free, to move very far from the lowly and submissive state peculiar to the condition of slaves."²³

In spite of these opinions, the majority continued to believe that Brazilians were not much inclined to work and needed to be forced to it. The more profound reasons for the reluctance of the free population to work on plantations escaped them: the existence of slavery, the extremely low wages, and the easy access to land, although not to landownership. In such circumstances, it was unreasonable to expect that men who lived on subsistence agriculture would submit themselves, in

exchange for meager salaries, to the extremely hard work on the plantations, not to mention that such work on plantations meant, for them, to be reduced to the level of slaves. Nevertheless, in those regions in which slave labor declined, free workers increasingly came to be used on plantations. This was particularly true in the Northeast, where droughts in the 1870s forced the population of the backlands to move to the sugar cane areas for employment on plantations. A study of the sugar economy in Pernambuco has shown that, by the middle of the century, slaves outnumbered free laborers by a ratio of over three to one. But by 1872 free workers already outnumbered slaves both in skilled and unskilled labor.²⁴

In the new coffee areas, however, the planters struggled with the problem of labor supply. Faced with growing labor needs, some of the coffee planters most affected by the shortage of slaves considered importing Chinese coolies. Those who advocated such a solution claimed that in other areas coolies constituted the basis of wealth and prosperity, as in some of the French and British colonies, in some parts of the United States, and in such Latin American countries as Cuba, and in Peru. During the Simibu cabinet (1878—79), Chinese immigration was seriously considered. In the agricultural congress that met in Rio de Janeiro in 1878, representatives of the most important coffee-growing areas recommended the importation of coolies.²⁵

Most planters seemed convinced that the thousands of *contos* spent on European immigration had brought no benefits at all to the great estates. They wanted cheap, hardworking, and submissive labor. Coolies seemed to be the only workers capable of adapting to the low standard of living offered in Brazilian agriculture. Pamphlets and articles favoring and opposing Chinese immigration appeared, but the advocates of Chinese immigration met considerable resistance both in Brazil and abroad. In Parliament the dangers of "mongolizing" the country were discussed, and frightening charges were made against the Chinese: they were drug addicts, naturally corrupt, weak, and indolent. The Brazilian Immigration Society and the Central Immigration Society, both involved in encouraging European immigration, lobbied against the proposal. In the Chamber of Deputies, Martinho Prado, representing some of the most dynamic coffee-growing sectors, attacked the supporters of coolie immigration.

The company founded to promote the importation of Chinese workers encountered difficulties in carrying out its mission. The British and Portuguese prohibited the enlistment of such workers from Hong Kong and Macáo. Unable to fulfill its commitments, the Company for Commerce and Chinese Immigration was dissolved on 14 November

1883, a few days after the hasty departure of the Chinese envoy Ti-Kung-Sing, mediator of the negotiations. Thus vanished the hopes of those who had expected to be able to replace blacks with coolies, slaves with serfs.

While the old and least productive coffee plantations continued to use slaves, in some of the more productive frontier areas, more in need of labor, planters expressed interest again in promoting European immigration.²⁶ Free labor, some began to argue, was more productive than slave labor. In the Northeast also, those planters who had managed to modernize their methods of production came to view free labor more favorably. This tendency had grown more marked as the transportation system expanded with the building of railroads, ports were improved, sugar and coffee processing advanced, and the opening of new possibilities for investment in banks and railroads and industries made immobilization of capital in slaves less attractive than before.

The precarious means of transportation had always been an obstacle to economic development. During the rainy season, transport

was interrupted by landslides, flash floods tore up roads, and bridges, usually wooden, were wrecked by high water. In many places, mule drivers were forced to ford rivers because of the lack of bridges. Many of the economically important routes, such as that from São Paulo to Santos, were dirt roads, and until midcentury roads that could be used by even simple wheeled vehicles were rare. Oxcarts tore up the roads and constant use by mule trains turned them often into impassable quagmires.²⁷

The conditions of such vital roads as that from São Paulo to Santos were so bad in the 1860s that carts could not carry more than forty to forty-five *arrobas*, and a round trip that today would take less than two hours took a minimum of ten to twelve days. The problems of transportation were so serious that often the merchandise deteriorated in storage bins before the muleteer came to pick it up. Even when coffee was shipped in time, spoilage in transit damaged its quality. The inadequacy of the communication routes retarded distribution, raised transportation costs, diverted a considerable part of the labor force to transport, and limited the expansion of the coffee plantations beyond a certain point, after which the costs of transportation were too high to make the enterprise viable. Most of all, the difficult means of transportation inhibited the development of an internal market.

Conditions in the Northeast were not better. A large number of sugar mills had to use river transportation because transportation by land was quite difficult. The animals got bogged down in mud, their loads were lost, and trips dragged on endlessly in obligatory stops and in long waits for rain to end, a bridge to be repaired, or a road to be made passable again.

In the coffee-growing areas the problem became increasingly pressing with the expansion of production and the growing traffic of mules carrying their loads to the ports. Planters were quite aware of the losses resulting from this state of affairs and pressured the government for improvements. They put their hopes on the construction of railroads, which would allow them to ship their goods rapidly, and more cheaply.²⁸

Railroads changed the economy profoundly, benefiting some regions and ruining others. In the sugar-growing areas, the mills far from the tracks could not compete with those directly served by railroads. They continued to export their products by the traditional means—boat or muletrain—and to suffer the economic disadvantages of this type of transportation. But railroads quickly multiplied and by 1881 Millet could say that the cars of the Palmares railroad alone transported half the sugar exported from the port of Recife and two-

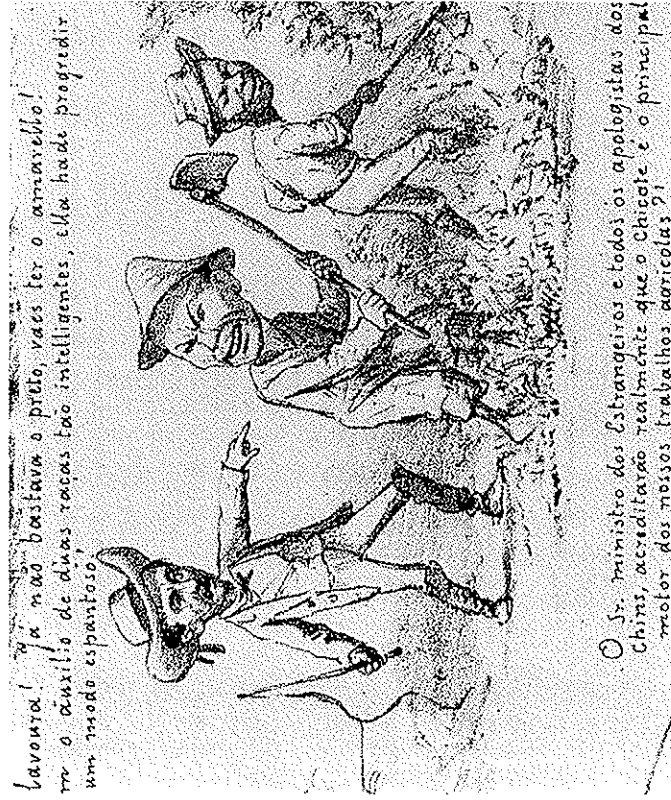


FIG. 16. Caricature of Chinese immigrants, published in the *Revista Ilustrada* in 1879

thirds of the entire production of the province of Pernambuco. Some years later, in 1882, 12,421,172 kilos of sugar and 318,295 of cotton were carried on the Pernambuco railways.

In the coffee-growing areas of the South, the rail network began to develop in the 1860s. The Santos-Jundiaí line was inaugurated in 1867 and extended to Campinas in 1872. The railway between São Paulo and Rio de Janeiro was completed, and elsewhere branch lines extended into the interior of the province, tying the plantations to the port cities. In Minas Gerais, progress was slower, in part because mountainous terrain made construction more difficult and expensive. In 1882 the province had 441 kilometers constructed, while São Paulo and Rio de Janeiro had 1,400 and 1,634 kilometers, respectively. All the other provinces had a total of 1,451 kilometers.

The construction of the railroads caused profound changes in the economic structure of the country: capital invested in the acquisition and maintenance of mule teams was freed and to some extent labor previously tied up in transportation could now be utilized in agriculture. Predictably, transport capacity and the speed of distribution increased enormously, and costs were reduced. Products shipped by rail were in better condition and so commanded higher prices on the world market. The possibilities for profit increased. On the other hand, the railroads furthered the process of urbanization and made it easier for planters and slaves to move about. The railroads offered, in short, new perspectives for free labor, new areas of investment, and new possibilities for the creation of a market economy.

Equally important in the transition from slavery to free labor were the steady improvements in the technology of sugar production and coffee processing.²⁹ In the coffee-growing areas, drying yards were now made of brick or macadam, and primitive mortars and grinders were widely replaced in western São Paulo during the second half of the nineteenth century with modern machinery for drying and hulling coffee. The importance of such improvements was striking. New machines could do in an hour what took primitive devices a day. Plantation owners from western São Paulo were the most receptive to innovation because of the higher productivity of these plantations. Heavy yields from new lands and high coffee prices facilitated the purchase of processing machinery. The growing labor problems encouraged those changes, since mechanizing production meant reducing the number of workers required. In 1883 a traveler noted that on many plantations in central and western São Paulo coffee was transported to the processing machinery, hulled, sorted, polished, bagged, and weighed mechanically.³⁰

The acquisition of machinery, however, required investments so sub-

stantial that they were beyond the economic capabilities of the planters whose plantations were in decline. For this reason, the planters of the Paraíba Valley generally failed to adopt most of the improvements, with the exception of those whose plantations showed higher productivity. Relying on slaves they had bought in a period when slaves were plentiful, and facing the declining productivity of their coffee trees, these planters had difficulties in modernizing their plantations.

Something similar to what happened in the South occurred in the Northeast but with a difference. While the coffee economy was expanding rapidly, the sugar-growing areas lived in a state of constant crisis interrupted by brief moments of euphoria triggered by an increase in sugar prices in the international market. The international situation had been favorable to Brazil during the Napoleonic Wars and the social upheaval in the West Indies, but when that period ended, matters worsened considerably. Competition from beet sugar and the protection given by European countries to their colonies hampered Brazilian sugar production. This fact was aggravated by the introduction in the West Indies of mechanical processes that substantially raised productivity, making Brazilian sugar production even less competitive. The small size of the internal market reinforced Brazil's dependence on the fluctuations of the international market. During the second half of the nineteenth century, as a consequence of the unfavorable international conjuncture, Brazilian producers received less and less for their products and planters had difficulties in improving methods of manufacturing sugar. There was no shortage of attempts to publicize the most recent developments in the sugar industry. Books and pamphlets were published on the subject, and the Society for the Advancement of Brazilian Industry promoted expositions with the aim of informing planters about processes used in other countries. Moreover, the government attempted to stimulate improvements in the methods of production. It ordered plant cuttings from abroad, provided information about systems of production, subsidized the purchase of machinery, gave tax exemptions to planters who introduced new techniques, awarded prizes for new inventions, and established commissions to study improvements in the cultivation of cane and the production of sugar in other centers of production. The government also attempted to develop technical training and even created training centers with the objective of spreading new techniques. None of these attempts succeeded. Great economic changes do not arise from technical knowledge alone, but from the possibility of applying this knowledge. An economy in a state of crisis does not provide capital enough for costly technological innovations.

In spite of the difficulties, some of the wealthiest plantation owners

struggled successfully against the backward methods that hindered production, and a few sugar mills in particularly favorable situations, such as those located on good land, well served by means of communication, and close to ports, were able to change their methods of production. In the beginning of the nineteenth century, the first steam-powered mills appeared: one in Bahia in 1815 and another in Pernambuco two years later. Steam-powered mills spread only slowly. In 1857, out of a total of 1,106 mills in Pernambuco, only 18 were run by steam and 346 by water power; the rest were all driven by animals.³¹ Most of the machinery used in these mills was imported from England. In 1829 a factory that made parts had been set up in Recife and in 1836 it had been able to assemble a completely Brazilian-made steam mill. However, English competition had finished off the attempt, and machinery continued to be imported.

In 1834, furnaces with grates came into use. Toward midcentury the use of horizontal grindstones was recommended, and kettles with flat bottoms were found to be better than those with curved bottoms. Another improvement introduced was the use of cane pulp to heat the kettles. French technicians were commissioned by the government to improve methods of sugar production, and a new technique, known as the Derosne system, was introduced. With this method, it was possible to increase yields by 40 percent and to make them of higher quality.

In 1853, a commission sent by the authorities of Bahia to study production techniques used in Europe, the United States, and Cuba came to the conclusion that *massapé* and *salmorão* soil would produce much better harvests if plows and other agricultural implements were used, following a system employed in Louisiana. Using this method, as well as improved techniques in the manufacture of sugar, slaves could produce ten boxes of superior sugar each, whereas they were able to produce only two and a half or three boxes of inferior sugar using traditional methods. But the machinery necessary for this improvement cost 1\$000 to 1\$500 per *arroba* during a year, roughly 50 *contos* for the manufacture of 50,000 *arrobas*—a sum that many planters could not afford.

Despite the efforts of the government and others, progress was slow. In 1859, a report on the state of agriculture, manufacturing, industry, and mining in the various districts of Pernambuco noted that in some areas the processes of planting cane and refining sugar were the same as those employed thirty or forty years earlier. The usual method for grinding cane wasted power, and the regulation of rates for cooking and purifying the cane juice was inefficient. The system of purification was limited to placing a little clay on the sugar and then throwing

water over it—a system that removed some impurities but produced dark and inferior sugar.

Almost twenty years later in a congress held under the auspices of the Agricultural Assistance Society, it was clear that the processes of preparing sugar were still rudimentary on most plantations. In many of them, the Labat method was still used, in which purification, evaporation, and cooking were done wastefully over an open fire. Only a few mills had installed improved machinery using steam, pressure cooking, and centrifugal force to process the pulp. This method was quite superior, providing 30 or 40 percent higher yields from each harvest. Such improvements, however, required investments that only planters who produced large harvests could make. Nine-tenths of the mills were small and in a critical state. Often the owners could not pay their dealers and had to turn their slaves over. Shortages of labor and cane supplies paralyzed the mill. And in certain periods, the price received for sugar did not even cover the costs of production, taxes, and transportation. Sugar production was profitable only in well-equipped mills where more rational methods of operation generated higher productivity.

The chronic need for capital—interest ranged from 12 to 74 percent a year—and the deficits of most of the small mills made the modernization of production methods impossible. A majority of the mills produced less than 1,000 loaves of sugar, and many under 600. Production in such small quantities resulted in high costs. In the larger sugar mills—even those using old methods—the cost of production was lower. With the prices of sugar declining, the smaller mills were forced into bankruptcy and many closed down or started manufacturing only rum.

The central mills, which began to spread in the 1870s, brought about a true revolution in the process of sugar production. Law 2689 of 6 January 1875 sought to encourage central mills like those in Egypt, Java, Martinique, and Cuba through guaranteed interest rates and other benefits. The imperial government fostered the creation of these undertakings and guaranteed returns ranging from 6.5 to 7 percent. But until 1880 the results of the central mills did not seem very encouraging. Some concessionaires were incompetent, while others did not comply with their obligations and so lost their contracts. In addition, resistance to the establishment of the central mills was very strong on the part of the planters.

The report of the Ministry of Agriculture in 1880 provides a list of the concessions made by the government as of that date: ten for Minas Gerais, São Paulo, and Rio de Janeiro; thirteen for Maranhão, Rio

Grande do Norte, Pernambuco, Sergipe, and Bahia; two for Pará. The capital employed varied from three hundred to a thousand *contos*, and the quantity of cane to be ground daily was calculated at between 150,000 and 250,000 kilos.²²

There was, however, considerable speculation, and some concessionaires sold their charters on the London market for a few *contos de reis*. The weakness of Brazilian capitalism encouraged a veritable invasion of foreign capital, largely British, in this sector. Some powerful companies monopolized the construction of central sugar mills in the Northeast: the Central Sugar Factories of Brazil, Ltd., the North Brazilian Sugar Factories, and the General Sugar Factories, Ltd., were some of the factories built with foreign capital. The first was organized in London in December 1881 under the concessions granted by the imperial government and the guaranteed interest of 8.5 percent a year on 4,200:000\$000. The firm assumed responsibility for the construction of sugar mills in the counties of Cabo, Escada, Ribeirão, Água Preta, Jaboatão, and Goiana. By 1884, four sugar mills were already in operation. In the harvest of 1885-86, four mills ground 46,510,330 kilos of cane, producing 2,975,370 kilos of sugar and 573,250 liters of rum. Up to 1887, thirteen concessions had been issued for the construction of central mills in Pernambuco: six to Central Sugar and seven to North Brazilian Sugar Factories. The same rush to build sugar mills took place in Bahia. In 1880, the Central Factory of Bom Jardim was established, employing the most recent technology and with a daily capacity of 200,000 kilos of cane. In the same period, a mill with a capacity of 250 tons of cane a day was being set up in Joazeiro, and in the following years several new undertakings were begun. The same phenomenon occurred elsewhere. In Maranhão, for example, cotton was abandoned in favor of sugar cane. New mills were constructed and equipped with modern machinery. The principle of state-sponsored central sugar mills failed, but *usinas* (sugar factories) equipped with modern machinery appeared everywhere.

The revolution in the system of production proceeded slowly but irreversibly, creating conflict between the new entrepreneurs and the traditional planters. Some of the new entrepreneurs in the Northeast lost interest in the maintenance of slavery. It was the backward sector, unable to adapt to new forms of production, that remained tied to the slave system.

Low productivity explains why some sugar producers clung tenaciously to the use of slaves and why it was impossible for them to adopt free labor. Even when repeated droughts devastated the backlands and sent substantial numbers of refugees fleeing toward the

coast, thus increasing the labor supply, many plantation owners remained pessimistic about the possibility of replacing slaves with wage laborers.

In 1876 it seemed to Millet, a planter in Pernambuco, that even those sugar mills capable of producing 1,000 or 1,500 loaves of sugar would continue in operation only as long as slavery existed, since they could not count on using free workers. Only the large sugar mills with modern equipment, he argued, could do without slaves. The expectation that a sugar mill could function with free workers exclusively seemed utopian to him.

In the coffee plantation areas, the situation was very similar to the one in the Northeast. The areas that continued to use slave labor almost entirely were those where the concentration of slaves was highest, productivity lowest, and traditional methods of production were retained. The more productive sectors, which modernized their methods of production, evolved more easily toward free labor. In São Paulo, many plantation owners of the western parts of the state began to use coffee-processing machines on their plantations and to experiment with free labor, making every effort to encourage immigration. Martinho Prado, representing the opinion of the most advanced planter group, told the Chamber of Deputies that a *colono* (immigrant) was worth three slaves. Nevertheless, the majority of plantation owners in areas affected by the declining productivity of their coffee trees continued to prefer slaves. In 1884, Louis Couty claimed that outside of São Paulo—where the number of immigrants was sufficient to replace in part the slaves who died or were freed—plantation owners had done nothing to replace their slaves. In most of the plantations of the Paraíba Valley, it was still a common belief that coffee could not be produced without slaves, and most planters still stubbornly asserted that immigrants were an impractical labor force for the plantations.²³

The planters of the Paraíba Valley, whose declining estates produced 20 to 30 *arrobas* per 1,000 trees compared to the 80 to 100 in western São Paulo, were unable to replace slaves who died. Moreover, most of them failed to improve their machinery or spend the sums necessary to secure immigrants for their estates. They were unable to compete in the labor market with the areas paying higher wages. Thus they remained tied to their slaves who, in the 1880s, represented the greater part of their patrimony. The Paraíba Valley plantation owners were indignant at the behavior of those Paulista planters who seemed to have lost interest in the slave system and who regarded the advance of abolition almost with indifference.

In a letter to Francisco de Paula Rodrigues Alves a year before abo-

lition, Rodrigues de Azevedo, a coffee planter in Lorena, expressed quite bitterly his opinion about the situation of agriculture. He represented very clearly the viewpoint of most planters in the Paraíba Valley (the North, as it was called at the time), who felt threatened by the prospect of abolition:

Unfortunately, the North is not equal to the West, where the fertility of the soil and the high production invite free labor and provide it with remuneration. Here we do not have, nor will we soon be able to have, foreign immigration. As long as there is no fundamental change in agriculture, we cannot do without slaves or free Brazilian workers. What immigrant would want to care for 1,000 coffee trees to harvest 20 *arrobas*? But for this very reason, we cannot be ignored or sacrificed to our rich brothers; on the contrary, it would be good policy to sacrifice them. . . . I see no reason to want to impose on us an opinion which we do not share, and a course of action identical to that followed by those who are rich and can dispense with certain services, which we are in no condition to do without. If they find that at the present time slave labor is no longer profitable for the producer, and that it is a burden for those who use it, let those who think this way free their slaves, regardless of the law; but they should not require others, who out of necessity understand the matter differently, to follow the same course of action. . . . Northern São Paulo and the province of Rio de Janeiro are, unfortunately, in the same situation: for us, immigration is a dream difficult to put into practice and the measures which the government takes in regard to it do not benefit us.³⁴

In fact, immigrants who arrived in 1885, destined for the Paraíba Valley, refused to sign contracts with planters of the region and were returned to the *Hospedaria de Imigrantes* (Reception Center for Immigrants) in São Paulo, from where they went on to the western part of the province, where they were sure to get better pay. Rodrigues Alves, president of the province, commented in 1888 on the situation of the Paraíba Valley planters and the preference the immigrants showed for the western part of the province: "In fact, the plantation owners with their vast landholdings cannot give immigrants the advantages which they find in the more fertile areas, where work is easier and better paid. Even if settled on depleted land, the immigrants certainly will not remain there if they learn of more favorable possibilities."³⁵

While the slaveholders of the Paraíba Valley protested, planters of the frontier areas found in Italian immigration the definitive solution for the labor question.

Overall conditions became more favorable to immigration, as the demand for coffee grew and the area under cultivation continued to expand. Slaves had become increasingly difficult to acquire. Slave prices rose steadily, reaching their highest levels between 1876 and 1880. By this time slavery had been abolished in other parts of the world and was universally condemned. Slaves no longer existed in the United States and in the French West Indies there had been no slavery since the middle of the century. Slavery had been abolished in 1873 in Puerto Rico and in 1880 in Cuba. At the same time abolitionist pressure had grown in Brazil. Meanwhile, improvements in the transportation system along with advances in coffee processing and sugar manufacture, the growth of the free population, and the expansion of the market economy—all had modified the conditions of the economy, creating greater possibilities for free labor. More important, in some areas slave labor became less productive when compared to free labor.³⁶ This happened in plantations in which, thanks to changes in the process of production and in the means of transportation, it became possible to reduce the permanent labor force and hire additional workers at the time of harvest. Hiring slaves, however, was difficult because all planters needed extra labor at the same time. The solution was to resort to free laborers and to employ their families whenever extra work was needed. By doing this planters could avoid investing capital in slaves—capital which in any case was condemned to disappear in the long run. This solution became increasingly attractive at a time when new opportunities for investments in railroads, banks, insurance companies, and factories were multiplying. Not that investments in slaves paid lower interest than capital invested in other sectors,³⁷ but by diversifying their investments, planters could minimize capital risks. All this made free labor gradually more attractive than slave labor. Slaveowners, however, did not give up their slaves, mainly because they continued to represent capital, and most plantation owners were still skeptical about the possibility of using free labor. Gradually, however, more people—particularly in the frontier areas more in need of labor—started giving more thought to the idea of replacing slaves by immigrants. The need to do so became even more urgent when abolitionists intensified their campaign. By the 1880s slaveowners had become convinced that slavery was an institution condemned to disappear. At the same time conditions abroad had become more propitious for immigration to Brazil. The political and economic transformations that followed the Italian unification forced thousands of people to leave their homes and to migrate to the New World. Be-