

AFTER THE MINING BOOM:  
Demographic and Economic Aspects of Slavery in  
Mariana, Minas Gerais, 1750–1808\*

Laird W. Bergad

Lehman College and Graduate and University Center,  
City University of New York

Slavery in the interior state of Minas Gerais has been a focal point of the voluminous historiography appearing on Brazilian slavery in the past twenty years.<sup>1</sup> During the mineral boom of the late seventeenth and

\*I would like to thank the Council for International Exchange of Scholars and the Fulbright Commission for providing a research and teaching fellowship during the fall and winter of 1992–1993 at the Universidade Federal de Minas Gerais. I would also like to express my gratitude to Professor Douglas Cole Libby for his hospitality and cooperation during my stay. Kátia Napoleão, director of the Arquivo Histórico Casa Setecentista de Mariana, provided invaluable assistance in all phases of this project, particularly in deciphering eighteenth-century Portuguese and readying the *inventários* for each day's research. Special thanks also to Elizabeth Botero, who helped me read the inventories from 1750 to 1800, and to Carlo G. Monti, Elizabeth de Freitas Neves, and Tereza C. P. Marcondes, who extracted the data for 1801 to 1808. I also want to thank Stanley Engerman and three anonymous LARR readers for their comments on the original draft of this article.

1. The bibliography on Brazilian slavery is extensive. Some general studies of note include Raymundo Nina Rodrigues, *Os africanos no Brasil* (São Paulo: Editorial Nacional, 1932); Maurício Goulart, *Escravidão africana no Brasil (das origens a extinção do tráfico)* (São Paulo: Alfa-Omega, 1975; originally published 1950); Gilberto Freyre, *The Masters and the Slaves*, translated by Samuel Putnam (New York: Knopf, 1966; originally published 1933); Jacob Gorender, *O escravismo colonial* (São Paulo: Atica, 1980); Emília Viotti da Costa, *Da senzala à colônia* (São Paulo: Brasiliense, 1966); Kátia M. de Queirós Mattoso, *To Be a Slave in Brazil*, translated by Arthur Goldhammer (Rutgers, N.J.: Rutgers University Press, 1989); Fernando Henrique Cardoso, *Capitalismo e escravidão no Brasil meridional* (São Paulo: DIFIL, 1962). Topical studies of importance include Leslie Bethell, *The Abolition of the Brazilian Slave Trade* (Cambridge: Cambridge University Press, 1970); Robert Conrad, *The Destruction of Brazilian Slavery, 1850–1888* (Berkeley and Los Angeles: University of California Press, 1972); Robert Conrad, *World of Sorrow: The African Slave Trade to Brazil* (Baton Rouge: Louisiana State University Press, 1986); Robert Brent Toplin, *The Abolition of Slavery in Brazil* (New York: Atheneum, 1972); Robert W. Slenes, "The Demography and Economics of Brazilian Slavery, 1850–1888," Ph.D. diss., Stanford University, 1976; Roger Bastide, *The African Religions of Brazil* (Baltimore, Md.: Johns Hopkins University Press, 1978); João José Reis, *Rebelião escrava no Brasil: A história do levante dos malês (1835)* (São Paulo: Brasiliense, 1986); Sidney Chalhoub, *Visões da liberdade: Uma história das últimas décadas da escravidão na corte* (São Paulo: Companhia das Letras, 1990). Important local or regional studies beyond Minas Gerais are Mary C. Karasch, *Slave Life in Rio de Janeiro, 1808–1850* (Princeton, N.J.: Princeton University Press, 1987); Stuart B. Schwartz, *Sugar Plantations in the Formation of Brazilian Society: Bahia, 1550–1825* (Cambridge: Cambridge University Press, 1985); Stanley J. Stein, *Vassouras, a Brazilian Coffee County, 1850–1890* (Cambridge, Mass.: Harvard University Press,

early eighteenth centuries, Minas was the key region of the colonial Brazilian economy and the largest slaveholding *capitania*. The older literature on Brazilian history recognized the centrality of slave labor to the eighteenth-century mining sector but concluded that as the mining boom waned after 1750, slavery began to disintegrate.<sup>2</sup> The history of Minas Gerais after the boom was interpreted as a long period of economic stagnation accompanied by reversion to cattle raising and subsistence agriculture, slow demographic growth, and the transfer of the Mineiro slave population during the nineteenth century to the more dynamic coffee-growing areas in Rio de Janeiro and São Paulo.<sup>3</sup>

For some reason, the most elementary evidence that could have challenged these conclusions was rarely considered until recently. Throughout the nineteenth century, when the provincial economy was supposedly experiencing a long-term depression, Minas Gerais contained the largest population of any province in Brazil and the most numerous slave population as well. Between 1819 and 1872, slaves in Minas Gerais more

---

1957); Warren Dean, *Rio Claro, A Brazilian Plantation System, 1820–1920* (Stanford, Calif.: Stanford University Press, 1976); Peter Eisenberg, *The Sugar Industry in Pernambuco, 1840–1910* (Berkeley and Los Angeles: University of California Press, 1974); and Pierre Verger, *Fluxo e refluxo: Do tráfico de escravos entre o Golfo do Benin e a Bahia de Todos os Santos dos séculos XVII a XIX* (São Paulo: Corrúpio, 1987; originally published in French in 1968). See the bibliographical essay by Stuart B. Schwartz, “Recent Trends in the Study of Brazilian Slavery,” in Schwartz, *Slaves, Peasants, and Rebels: Reconsidering Brazilian Slavery* (Urbana: University of Illinois Press, 1992), 1–38.

2. Minas Gerais was classified as a *capitania* (captaincy) from 1720 to 1822, as a province from 1822 to 1889, and as a state thereafter. For an excellent study on the relationship between mining and slavery, see A. J. R. Russell-Wood, *The Black Man in Slavery and Freedom in Colonial Brazil* (New York: St. Martin’s Press, 1982); and Russell-Wood, “The Gold Cycle, 1690–1750,” in *Colonial Brazil*, edited by Leslie Bethell (Cambridge: Cambridge University Press, 1987), 190–243. The first chapter of *The Black Man in Slavery and Freedom* provides a good summary of evolving interpretations of Brazilian slavery (see 1–26). For general considerations, see the classic study of C. R. Boxer, *The Golden Age of Brazil, 1695–1750* (Berkeley and Los Angeles: University of California Press, 1962); and Kenneth Maxwell, *Conflicts and Conspiracies: Brazil and Portugal, 1750–1808* (Cambridge: Cambridge University Press, 1973). Laura de Mello e Souza provides another perspective on the mining boom by examining the vast majority of the Minas population who were marginalized from possibilities of accumulating wealth and lived lives of unmitigated misery and oppression. See Laura de Mello e Souza, *Desclassificados do ouro: A pobreza mineira no século XVIII* (Rio de Janeiro: Graal, 1982). See also Francisco Vidal Luna, *Minas Gerais: Escravos e senhores* (São Paulo: Instituto de Pesquisas Econômicas, 1981); Francisco Vidal Luna and Iraci del Nero da Costa, *Minas colonial: Economia e sociedade* (São Paulo: Instituto de Pesquisas Econômicas, 1982); Iraci del Nero da Costa, *Vila Rica: População (1719–1826)* (São Paulo: Instituto de Pesquisas Econômicas, 1979); João Dornas Filho, *O ouro das gerais e a civilização da capitania* (São Paulo: Editora Nacional, 1957); and Virgílio Noya Pinto, *O ouro brasileiro e o comércio anglo-português* (São Paulo: Editora Nacional, 1979). On the diamond industry, see Augusto de Lima Júnior, *História dos diamantes nas Minas Gerais* (Lisbon and Rio de Janeiro: Dois Mundos, 1945), and his general survey *A Capitania das Minas Gerais* (Rio de Janeiro: Zélio Valverde, 1943).

3. See, for example, Celso Furtado, *The Economic Growth of Brazil* (Berkeley and Los Angeles: University of California Press, 1965); Costa, *Da senzala a colônia*; Conrad, *The Destruction of Brazilian Slavery*; and Francisco Iglésias, *A economia política do governo provincial mineiro, 1835–1889* (Rio de Janeiro: Ministério da Educação e Cultura, 1958).

than doubled from 169,000 to 370,000, which increased their proportion of all Brazilian slaves from 15 to 24 percent.<sup>4</sup>

In 1983 Amílcar Martins Filho and Roberto Martins published a seminal article that challenged nearly every previous conclusion about the economic and social history of Minas Gerais after 1750.<sup>5</sup> They argued that the generalized demographic growth of the province as well as its increase in slave population (based on large-scale African imports up to the closing of the slave trade in 1851–1852) were linked to a thriving agricultural and cattle economy oriented toward local and regional markets. The conclusion that slavery could be economically viable only in export-oriented economies (a long-standing assumption in studies of slavery in the Western Hemisphere) was questioned aggressively. Scholars have not accepted entirely the observations made by Martins Filho and Martins, as documented in the lively debate that ensued. Some of the main questions raised by Robert Slenes, Warren Dean, Stanley Engerman, and Eugene Genovese focused on the Martins assertions regarding the dynamic slave trade to Minas Gerais during the nineteenth century. It was impossible to challenge the fact that the slave population expanded and that the slave trade to Minas Gerais was vigorous during various periods in the era following the mining boom. But how were slaves, who were part of a broader international economic system, paid for? If the Minas economy was revolving around producing food crops for local and regional markets, how were the necessary revenues or credits generated to continue importing slaves?

Robert Slenes attempted to resolve this possible paradox by questioning the assertion that the Minas economy revolved principally around food production for narrowly defined markets.<sup>6</sup> He examined the development of dynamic economic activities during the period following the boom and concluded that contrary to the more isolationist perspective of Martins Filho and Martins, Minas Gerais was indeed well connected to world markets through export-oriented sectors. These included the well-

4. Instituto Brasileiro de Geografia e Estatística, *Estatísticas históricas do Brasil: Séries econômicas, demográficas e sociais, 1550 a 1988* (Rio de Janeiro: IBGE, 1990), 32.

5. Amílcar Martins Filho and Roberto B. Martins, "Slavery in a Non-Export Economy: Nineteenth-Century Minas Gerais Revisited," *Hispanic American Historical Review* 63, no. 3 (Aug. 1983):537–68. Also see the critical comments on this article by Robert W. Slenes, Warren Dean, Stanley Engerman, and Eugene D. Genovese (569–90 in the same issue). The authors replied to these critiques in "Slavery in a Nonexport Economy: A Reply," *Hispanic American Historical Review* 64, no. 1 (Feb. 1984):135–46. Also see Roberto B. Martins, "Growing in Silence: The Slave Economy of Nineteenth-Century Minas Gerais, Brazil," Ph.D. diss., Vanderbilt University, 1980; and a more recent updated argument found in Roberto Borges Martins, *Minas e o tráfico de escravos no século XIX, outra vez*, Texto para Discussão no. 70 (Belo Horizonte: UFMG and CEDEPLAR, 1994).

6. See Slenes's comments in the Martins Filho and Martins article cited in n. 5; see also Slenes, "The Demography and Economics of Brazilian Slavery, 1850–1888," diss.; and Slenes, "Os múltiplos de porcos e diamantes: A economia escravista de Minas Gerais no século XIX," *Estudos Econômicos* 18, no. 3 (Sept.–Dec. 1988):449–507.

known coffee-growing regions of the Zona da Mata in southeastern Minas as well as less-recognized economic activities promoting exports: diamond production renewed after 1830 based on slave labor; continued gold mining that did not collapse as precipitously as previously believed; and thriving commercial agriculture that helped provision smaller provincial mining regions as well as the urban markets and coffee-producing zones of Rio de Janeiro and São Paulo. Thus Minas Gerais possessed externally oriented economic sectors with strong linkages to international trade even if some of those connections were indirect. The revenues generated by export activities help explain the ability to import slaves and the continued vibrant development of a slave-based economic and social system in Minas right up to abolition.

Following Slenes's lead, Douglas Cole Libby focused on the evident economic capacity of Minas Gerais to keep importing slaves during the nineteenth century.<sup>7</sup> For the Minas economy to function, a wide range of manufactured goods ranging from textiles to agricultural and mining implements had to be acquired. If these items were secured from outside, the capital-exporting requirements of a slave-importing region would be substantially raised. Libby suggests that the supply of manufactured goods was resolved by the onset of import-substitution industrialization. The province consequently could afford to import slaves because it was producing more of its own tools, textiles, and even luxury items throughout the nineteenth century.

The capacity to import slaves was thus increased by provincial production of manufactured goods, and reliance on imported slaves to replenish labor supplies may not have been as heavy as in plantation regions of Brazil. According to Libby and Clotilde Andrade Paiva, the pattern of slave demography in nineteenth-century Minas Gerais differed from that in sugar- and coffee-producing regions. Although they do not dispute the existence of a slave trade to Minas, the apparent ability of Minas slaves to reproduce helped create a slave labor force that lessened reliance on imports and capital exports for sustaining labor supplies.<sup>8</sup>

7. See Douglas Cole Libby, *Transformação e trabalho em uma economia escravista: Minas Gerais no século XIX* (São Paulo: Brasiliense, 1988); Libby, "Proto-Industrialisation in a Slave Society: The Case of Minas Gerais," *Journal of Latin American Studies* 23 (1991):1–35; and Clotilde Andrade Paiva and Douglas Cole Libby, "The Middle Path: Alternative Patterns of Slave Demographics in Nineteenth-Century Minas Gerais," in *El poblamiento de las Américas*, 3 vols. (Veracruz, Mexico: International Union for the Scientific Study of Population, 1992), 1:185–232.

8. This conclusion on slave demography by Libby and Paiva was suggested earlier by Francisco Vidal Luna and Wilson Cano in "Economia Escravista em Minas Gerais," *Cadernos IFCH-UNICAMP*, no. 10 (Oct. 1985):2–12. It has also been buttressed by a range of studies on early-nineteenth-century slavery in Brazil. See Horácio Gutiérrez, "Demografia escrava numa economia não exportadora: Paraná," *Estudos Econômicos* 17, no. 2 (1987):297–314; and Gutiérrez, "Crioulos e Africanos no Paraná, 1798–1830," *Revista Brasileira de História* 8, no. 16 (1988):161–88; José Flávio Motta, "A família escrava e a penetração do café em Bananal (1801–

The debates on slavery in Minas Gerais have focused on the development of the provincial economy from the end of the gold boom after 1750 until abolition in 1888. Lively discussions have debated the relative importance of various Minas economic sectors over time—cattle, subsistence farming, commercial agriculture, textile production, coffee, gold, and diamonds—but scholars have continued to acknowledge that African slavery remained central to the provincial economy until abolition. This situation did not, however, preclude regional movement of slaves within Minas into expanding economic districts or even some outmigration of slaves to coffee-growing areas of Rio de Janeiro and São Paulo. It is nonetheless striking that almost no research has been conducted into specific economic aspects of slave labor or the slave trade to Minas. Thus despite the debate's economic focus, the most elementary empirical data needed to understand how slavery functioned have been lacking. How much did slaves cost in the rural and urban markets of Minas Gerais during the various cycles of economic expansion and contraction before and after 1750? Historians have considered how the provincial economy paid for its African imports, but the cost of slave labor remains unknown. Additionally, the demographic record on slavery is almost nonexistent between 1750 and 1808 due to the absence of detailed census records.

This article will examine the demography of slavery in Minas Gerais in this period of nearly six decades and consider how measuring demographic change may be useful in understanding the readjustments occurring in the structure of the slave labor force during the decline in mining. The central question of slave reproduction will be considered carefully. The article will also provide the first systematic study of the values placed on slaves in Minas Gerais as the mineral export boom came to a close during the second half of the eighteenth century. Trends in such values can be used as important analytical tools in comprehending economic cycles, given that slave labor provided the underlying foundation for Mineiro economy and society. Another objective is to analyze and make available an empirical database on the value of slaves that can be used by historians to help understand the cycles of expansion and contraction in the Mineiro economy between 1750 and 1808.

### Sources

The sources utilized for this article were the collections of manuscript *inventários* located in the town of Mariana at the Arquivo Histórico Casa Setecentista de Mariana. Along with Ouro Prêto and Sabará, Mariana was the one of the earliest settlements in Minas following the discov-

1829),” *Revista Brasileira de Estudos de População* 5 (1988):71–101; and Iraci del Nero da Costa, Robert W. Slenes, and Stuart B. Schwartz, “A família escrava em Lorena,” *Estudos Econômicos* 17, no. 2 (1987):245–95.

ery of alluvial gold deposits along its rivers in the late seventeenth and early eighteenth centuries. Mariana was established in 1711, the first official town in the captaincy, as Vila do Ribeirão de Nossa Senhora do Carmo.<sup>9</sup> From its official founding to the early nineteenth century, Mariana was the largest slaveholding district in Minas Gerais, although it was no more important in provincial economy and society than its better-known rival nearby, Ouro Prêto (part of what was called Vila Rica in colonial times), or than Sabará.<sup>10</sup> Because Mariana was a major center of mining and slavery, data from this district are likely to be representative of slavery throughout the captaincy.

Inventários were records made to detail the property of deceased owners whose last wills and testaments were being adjudicated. A complete survey was required before an estate could be divided among its heirs. Because these records related to property, they were carefully conserved, and most local Brazilian archives now contain extensive collections of inventários.<sup>11</sup> The Mariana documents consist of the inventories from two *cartórios* (notarial offices) that recorded legal transactions in the district.<sup>12</sup> These inventories noted every item of property owned by the deceased, including book titles in libraries, pieces of silverware, land, tools, machinery, items of clothing, gold dust, and so on. If the deceased had owned slaves, data on them were usually fairly complete: the slave's name, sex, age, origin, physical defects, infirmities, and assessed value. For my study, more than thirteen hundred inventories were examined, with data collected on almost thirteen thousand slaves living between 1750 and 1808.<sup>13</sup>

In terms of the value of slaves, however, these data are not ideal

9. The region around the Ribeirão do Carmo was one of the first where significant gold deposits were discovered in 1696. For the early history of Minas Gerais and the founding of the main towns in the captaincy, see Diogo de Vasconcelos, *História antiga das Minas Gerais*, 3 vols. (Belo Horizonte: Itatiaia, 1974), 1:141–93. Also see Augusto de Lima Júnior, *A Capitania das Minas Gerais* (Belo Horizonte: Itatiaia, 1978), 17–55.

10. Ouro Prêto was the administrative capital of the capitania and Mariana the ecclesiastical center. I want to thank one anonymous *LARR* referee for underscoring this distinction.

11. For a recent study that uses inventários creatively in studying Bahia, see B. J. Barickman, "A Bit of Land, Which They Call *Roça*': Slave Provision Grounds in the Bahian Recôncavo, 1780–1860," *Hispanic American Historical Review* 74, no. 4 (Nov. 1994):649–87.

12. The two principal collections of inventários in the Mariana archives are organized and labeled as *ofícios* rather than *cartórios*. Several guides to these collections can be found in the Mariana archive. One was compiled by the archive staff for each *ofício* and is listed in alphabetical order by the last name of the *inventariado*. I organized another guide listing the inventories by year from 1713 through 1888, which I donated to the archive. Separate chronological guides were made for each *ofício*.

13. Clearly, these inventoried slaves represented only a fraction of the total slave population of the district for each year. Although the limited number of slaves included in each year's sample may have resulted in an unmeasurable annual margin of error, no other time-series data exist that offer demographic or value information on slaves in Mariana or Minas Gerais in the period under consideration.



because they do not reflect conditions in the actual marketplace where slaves were bought and sold. Unfortunately, no consistent time-series documents exist on market transactions of slaves that could be used to compile a database on slave prices. For the inventários, slaves were appraised by theoretically independent assessors, who physically examined each slave and determined his or her worth. Assessors could have been susceptible to bribes, no doubt, and their assessments could have been influenced by various subjective factors. In order to minimize the inevitable and unknown margin of statistical error, the largest possible database was compiled. Rather than sampling, every extant inventory was read, and data on every slave appearing in them were transcribed. Although inaccuracies may exist in these assessed values in any individual year relative to prices for slaves actually bought and sold, the long-term trends indicated are probably accurate because yearly statistical distortions can be assumed to be fairly uniform over the longer term. Despite the imperfections of inventários, these historical documents are the only ones known to exist over an extended time frame that could systematically reveal the values placed on slaves.

### *Changing Slave Demography*

General data on the growth of the Mariana slave population are limited to the first half of the eighteenth century (see table 1). They indicate expansion until 1735, followed by relative stability into the early 1740s, and then gradual decrease. Between 1740 and 1749, slaves in Mariana declined by more than 20 percent, a clear indicator of contraction in mining and a temporary end to slave imports to the region.<sup>14</sup>

A population census was undertaken throughout the captaincy in 1776 and again in 1786, but summary data are available only for the four main *comarcas* (general administrative districts): Vila Rica (of which Mariana was a part), Rio das Mortes (the region surrounding São João del Rei and Tiradentes), Sabará, and Serro.<sup>15</sup> Thus for the second half of the

14. Russell-Wood dates mining decline from the 1730s in the older areas of production around Ouro Preto (and presumably also in Mariana). See the descriptions by the Ouro Preto town council that referred in 1741 to great poverty, the absence of new gold discoveries, and exhaustion of older mining areas, cited in Russell-Wood, *The Black Man in Slavery and Freedom*, 105.

15. Detailed data became available in 1735 because of implementation of the capitation tax on slaves. Prior to that year, taxes were levied on gold production, with the crown attempting to extract the royal fifth (known as the *quinto*). Because of subterfuge and smuggling, this levy proved impossible to collect and a head tax of 4.75 *oitavas* of gold (drams or eighths of an ounce) was imposed on slaves older than twelve. This levy was abolished in 1750, when the *quinto* was reestablished. The 1776 census noted general population data only by race, dividing the population into whites, "*pardos*" or mixed, and blacks. It can be assumed that almost all blacks and a good portion of *pardos* were enslaved. These data were published in the *Revista do Arquivo Público Mineiro* 4, no. 3 (1899):511. The 1786

TABLE 1 Slave Population in Mariana, Minas Gerais, 1717–1808

Year	Slave Population	as a % of	Year	Slave Population	as a % of
		Minas Gerais Slaves			Minas Gerais Slaves
1717	6,834	24.5	1741	26,149	28.1
1718	10,974	31.3	1742	25,491	27.1
1719	10,937	31.3	1743	25,495	27.0
1720	9,812	31.1	1744	24,448	26.7
1728	17,376	33.2	1745	23,438	24.6
1735	26,892	27.8	1746	22,891	24.5
1736	26,752	27.1	1747	21,866	24.8
1737	26,584	27.1	1748	21,331	23.8
1738	26,532	26.1	1749	20,539	23.2
1739	26,545	26.0	1808	19,020	13.9
1740	26,082	27.5			

Sources: For the 1717 to 1728 data, A. J. R. Russell-Wood, *The Black Man in Slavery and Freedom in Colonial Brazil*, p. 231; for 1735 through 1749, C. R. Boxer, *The Golden Age of Brazil*, pp. 341–46; and for 1808, Arquivo Público Mineiro, Seção Governo, Caixas Avulsas, caixa 77, documento 77.

eighteenth century, no documents are known on Mariana’s slave population until 1808, when a 7 percent overall decrease was measured since 1749. Despite this slight decline over a sixty-year period, the number of slaves in the district evidently remained fairly stable in the second half of the eighteenth century, with minimal yearly rates of population loss (–0.1 percent annually).

Some 341,000 slaves are estimated to have entered Minas Gerais between 1698 and 1770.<sup>16</sup> Although little is known about birth and mor-

census noted 174,135 slaves in Minas Gerais, but data on Mariana are lacking. In 1805, 188,761 slaves were counted in Minas. The 1786 and 1805 data were indicated in the *Revista do Arquivo Público Mineiro* 4, no. 2 (1899):294–95.

16. Goulart, *Escravidão africana*, 149–54, 164–66. For data on slave imports to Brazil from Luanda and Benguela, see Joseph C. Miller, “The Numbers, Origins, and Destinations of Slaves in the Eighteenth-Century Angolan Slave Trade,” in *The Atlantic Slave Trade: Effects on Economies, Societies, and Peoples in Africa, the Americas, and Europe*, edited by Joseph E. Inikori and Stanley L. Engerman (Durham, N.C.: Duke University Press, 1992), 77–116. The studies by Francisco Vidal Luna and Iraci del Nero da Costa have provided a great deal of data on demographic aspects of the slave population of Minas, but the fundamental question about eighteenth-century reproductive rates remains unanswered. In 1734, according to a report to the Portuguese crown from Minas, only twelve years of working life were expected, even among the youngest slaves. In the same year, slave mortality rates were estimated to be somewhere between 5.0 percent and 6.6 percent. This estimate compares with an overall mortality rate of 2.3 percent among the general population of Vila Rica in 1776. See “Ocupação, povoamento e dinâmica populacional,” in Francisco Vidal Luna and Iraci del Nero da Costa, *Minas colonial: Economia e sociedade* (São Paulo: Fundação Instituto de Pesquisas Econômicas, 1973), 34. See also Luna and Costa, “Demografia histórica de Minas Gerais no período colonial,” *Revista Brasileira de Estudos Políticos*, no. 58 (1984):15–61; and “Algumas



tality rates, it is certain that during the first half of the eighteenth century, slave population growth through natural reproduction was severely limited by the extremely distorted sex ratio favoring males among African slaves imported into the captaincy. By the early 1750s, at the end of the mining boom, 792 males were listed for every 100 females among African slaves recorded in Mariana inventories, although the overall sex ratio was lower when creoles were included (329 males for every 100 females). With males accounting for nearly 77 percent of total slaves in the middle eighteenth century, net population increase would have been all but impossible. These distorted sex ratios in the mining districts of Minas Gerais should be placed in comparative perspective. Stuart Schwartz found an overall sex ratio of 113 males per 100 females on nine Bahian sugar *engenhos* in 1739; 199 on sugar plantations with mills between 1710 and 1827; and 126 on cane-growing farms in the same period.<sup>17</sup>

Mining contraction after 1750 caused significant shifts in the demographic characteristics of the slave population. As the importing of slaves to Minas slowed by the late eighteenth century, the national, sex, and age profiles of slaves in Mariana were being transformed. Most dramatic was the steadily decreasing percentage of Africans and the parallel increase in Brazilian-born slaves. During the early 1760s, Africans still accounted for an overwhelming majority of Mariana slaves (72 percent), but thereafter Brazilian-born slaves began to increase steadily in relative terms. By 1795 creole slaves constituted a majority (54 percent), and by the turn of the nineteenth century, more than 60 percent of slaves in Mariana had been born in Brazil (see figure 1).<sup>18</sup>

The demographic characteristics of Mariana's increasingly Brazilian-born slave population of the late eighteenth century depended more and more on internal reproductive patterns. A major result was the sharp decline in the sex ratio of males to females, although male slaves were still a commanding majority by 1808. From 1750 through 1754, the sex ratio (males per 100 females) was 329. Among slaves inventoried between 1805 and 1808, the ratio had fallen by 45 percent to 181 (see figure 2).<sup>19</sup> Another

características do contingente de cativos em Minas Gerais," *Anais do Museu Paulista* 29 (1979):79–97. For a summary of demographic research on Minas Gerais until the early 1980s, see Herbert S. Klein, "The Population of Minas Gerais: New Research on Colonial Brazil," *Latin American Population History Newsletter* 4, nos. 1–2 (1984):3–10.

17. See Schwartz, *Sugar Plantations in the Formation of Brazilian Society*, 348.

18. These same demographic changes were occurring elsewhere in Minas Gerais. Luna and Costa found that in Ouro Preto in 1804, 59 percent of all slaves were Brazilian-born. Also see Iraci del Nero da Costa, *Vila Rica*; and Herculano Gomes Mathias, *Um recenseamento na Capitania de Minas Gerais (Vila Rica 1804)* (Rio de Janeiro: Arquivo Nacional, 1969).

19. This trend toward a more equitable sex distribution was a key element in the changing demography of slavery in Minas Gerais, and it continued after 1808. A detailed population census was conducted in 1821 throughout the captaincy by Governor Luis Maria da Silva Pinto. It was published in Raimundo José da Cunha Matos, *Corografia histórica da provincia de Minas Gerais (1837)*, 2 vols. (Belo Horizonte: Imprensa Oficial, 1979), 2:45–51.

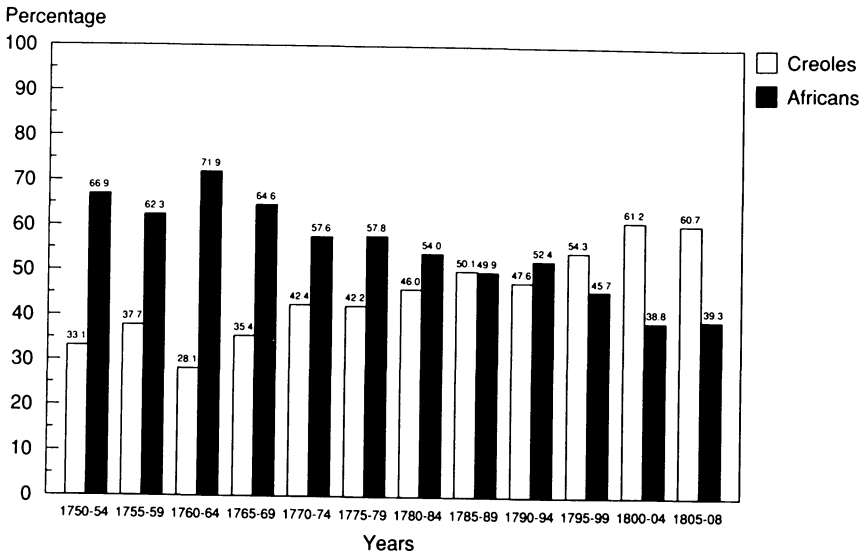


FIGURE 1 Mariana Slaves by Origin 1750–1808 (in percentages)

result was the gradual emergence of a more balanced age structure highlighted by growing numbers of younger Brazilian-born slaves. Between 1750 and 1754, 18 percent of all slaves were less than fifteen years of age, while between 1805 and 1808, one-third of the slave population sample consisted of Brazilian-born younger slaves.

The slave population of Mariana was gradually declining during the second half of the eighteenth century, but it was shifting demographically toward a population with the possibility of natural increase: a majority of slaves were Brazilian-born by the early nineteenth century; the sex ratio was moving toward a greater balance between men and women; and more younger slaves were appearing who had the potential to reproduce in the future. Between 1805 and 1808, 53 percent of Mariana’s creole slaves (61 percent of the total slave population) were less than fifteen years of age and another 41 percent were between fifteen and forty years old. Fertility rates and birthrates probably increased significantly with these changes. In view of the debates discussed at the outset of this article on various aspects of the nineteenth-century slave experience in Minas Gerais, one explanation for the growth of the slave population after 1800 may lie in the shift in slave demographic structure after 1750

Although the sex ratios in the 1808 and 1821 censuses for Mariana were exactly the same (180 males per 100 females), in Minas Gerais as a whole, the slave sex ratio fell from 184 in 1808 to 149 in 1821. The fact that the Mariana inventories yielded a sex ratio for Mariana slaves of 181 between 1805 and 1808 and that the 1808 census revealed a sex ratio of 180 indicates the accuracy of the inventories as a source on slave demography.

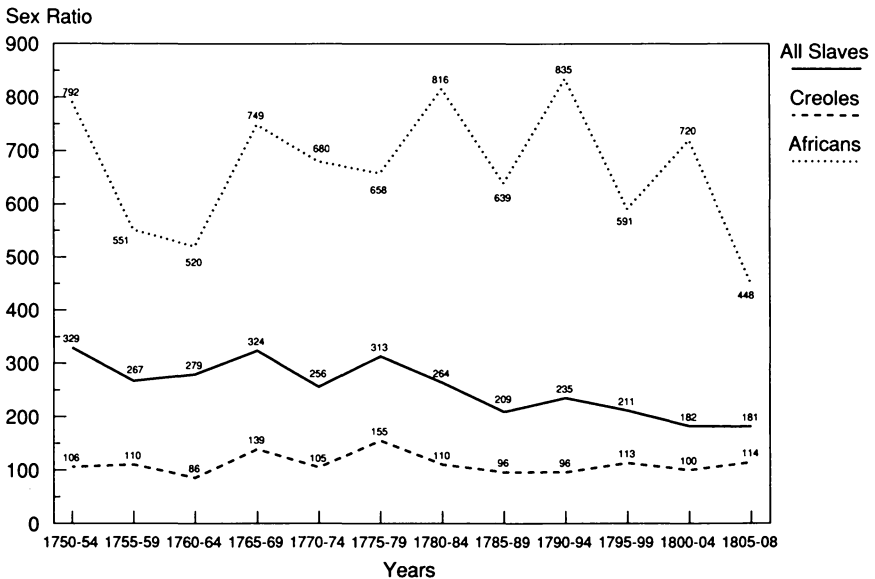


FIGURE 2 Sex Ratios of Mariana Slaves, 1750–1808 (Expressed as the Number of Males for Every 100 Females).

and the resulting possibility of net population increase through natural reproduction.<sup>20</sup>

The question of how the Minas slave population expanded so consistently during the nineteenth century cannot be answered until more empirical data are produced on rates of birth and death, the number of slaves imported into the province, and rates of manumission. The last variable is crucial to understanding the demographic dynamics of slavery in Minas during the second half of the eighteenth century. It has generally been assumed that high mortality rates caused a decline in slave population in Brazil. Yet some studies of Brazilian colonial slavery indicate a steady process of manumission and opportunities among slave populations for participating in marketplace activities that could have led to the accumulation of capital for self-purchase.<sup>21</sup> These possibilities should

20. See Luna and Cano, "Economia Escravista em Minas Gerais," *Cadernos IFCH-UNICAMP*, as well as their review of Roberto Borges Martins, *A economia escravista de Minas Gerais no século XIX* (Belo Horizonte: CEDEPLAR, 1980), a translation of his doctoral dissertation. See also Wilson Cano and Francisco Vidal Luna, "La reproducción natural de los esclavos en Minas Gerais: una hipótesis," *Revista Latinoamericana de Historia Económica y Social* (Lima) 4, no. 2 (1984):129–35.

21. See Mieko Nishida, "Manumission and Ethnicity in Urban Slavery: Salvador, Brazil, 1808–1888," *Hispanic American Historical Review* 73, no. 3 (Aug. 1993):361–91; Stuart B. Schwartz, "The Manumission of Slaves in Colonial Brazil: Bahia, 1684–1745," *Hispanic American Historical Review* 54, no. 4 (Nov. 1974):603–35; Kathleen Joan Higgins, "The Slave Society in Eighteenth-Century Sabará: A Community Study in Colonial Brazil," Ph.D. diss., Yale University, 1987; James Patrick Kiernan, "The Manumission of Slaves in Colonial Brazil:

not be exaggerated, but the consistent growth of a free population of color was an important aspect of the demographic history of eighteenth-century Minas Gerais. By 1808 more free people of color were living in Mariana (44 percent of the total population) than slaves (38 percent).<sup>22</sup> It may be that the 7 percent overall decline in slave population between 1749 and 1808 resulted from manumissions or migration out of the captaincy rather than from more deaths than births.

All this analysis suggests that the slave trade to Minas had virtually ended by the 1770s and that the extant slave population was on its own in terms of increasing or decreasing. The fact that the slave population of Mariana remained relatively stable between 1750 and 1808 in the absence of significant African imports after 1770 implies positive rates of slave reproduction. The growth of the free black and mulatto population must have resulted from natural population increase, and other studies of colonial Brazilian slavery suggest the strong likelihood that slave manumissions nurtured this community and could have reduced the slave population.<sup>23</sup> Manumissions thus may have masked reproductive rates among slaves to some extent.

The age profile of the slave population of Mariana in 1808 is indicated in table 2. If such data were available for the early or mid-eighteenth century, the contrasts would undoubtedly be remarkable. An obvious sex disequilibrium still favored males, but reproduction was gradually reshaping the age structure of the population. Younger Brazilian-born slaves were slowly replacing the dominant prime-age African males who had determined the demography of Minas slavery during the heyday of mining in the first half of the eighteenth century. In 1808, 36 percent of Mariana's slaves were less than twenty years old. This ratio was approximating the age characteristics of the white and the free black and mulatto populations. In both these racial sectors, 42 percent of the overall population were less than twenty-one years old.

---

Paraty, 1789–1822." Ph.D. diss., New York University, 1976; and Kátia M. de Queirós Matoso, Herbert S. Klein, and Stanley L. Engerman, "Trends and Patterns in the Prices of Manumitted Slaves: Bahia, 1819–1888," *Slavery and Abolition* 7, no. 1 (May 1986):59–67.

22. These data are in line with the captaincy at large. In all of Minas Gerais, 43 percent of the total population were free people of color, while 36 percent were enslaved. Such congruence underscores the fact that the Mariana data are representative of slavery throughout Minas. They came from my calculations based on the 1808 census materials in the *Arquivo Público Mineiro, Seção Governo, Caixas Avulsas, caixa 77*.

23. The question of manumissions in Minas during the second half of the eighteenth century based on a study of Sabará is discussed by Higgins in "The Slave Society in Eighteenth-Century Sabará," 191–257. She found that with the economic contraction of the late eighteenth century, the number of manumissions per annum was reduced in comparison with the first half of the century. Higgins points out that this interpretation contradicts much of the literature on manumissions in Minas, which had reported that the downturn in economic activity was accompanied by a surge in manumissions. For one example, see Mello e Souza, *Desclassificados do ouro*, 28–29.

Moreover, the ratio between younger slaves and female slaves of childbearing ages in 1808 suggests a significant birthrate with the potential for net population increase, although until manumission and death rates are known, these conclusions will remain tentative. The data in the 1808 census are not ideal because age divisions were very broad, but the Mariana ratio of children age one to ten to women age twenty to fifty was 1,059 (expressed as children per 1,000 women); 862 for children age one to ten to women age fifteen to fifty; 533 for children age one to five to women age twenty to fifty; and 434 for children one to five to women age fifteen to fifty.<sup>24</sup> The ratio of 862 children age one to ten to women age fifteen to fifty was considerably higher (at 54 percent) than the average ratio of 560 children under ten years old to women between fifteen and forty-nine found in three São Paulo slaveholding districts in 1829 by Francisco Vidal Luna and Herbert Klein. The probable explanation is a greater portion of creoles among Mariana's slave population.<sup>25</sup> The Mariana ratio of 862 was also significantly greater than the 597 average ratio of children nine and younger to women between fifteen and forty-five found by Schwartz for three Bahian rural parishes in 1788.<sup>26</sup> But it was much lower than the 1,482 ratio of children from one to nine to women between fifteen and forty-five for slaves in the southern United States in 1820, which had the highest ratio of children to women of any slave society in the Americas as well as the greatest rate of population growth.<sup>27</sup> It is also worth noting that the Mariana ratios of slave children to women for the various age categories indicated in table 3 were higher than for the free black and mulatto population of the district and approached the rates found among whites. The Mariana slave ratios were nonetheless lower than the rates found among slaves in the captaincy as a whole.

One other indicator suggesting the possibility of slave reproduction was the dependency ratio of the slave population in 1808, which is expressed as the relationship between adults of productive age (here defined as between twenty and fifty years of age) and the rest of the population. Higher ratios indicate the likelihood of lower child mortality

24. The total used here for adult females age fifteen to fifty was an estimate derived by adding all female slaves ages twenty through fifty to half of all female slaves ages ten through twenty. This estimate obviously entails an undetermined margin of error.

25. Francisco Vidal Luna and Herbert S. Klein, "Slaves and Masters in Early-Nineteenth-Century Brazil: São Paulo," *Journal of Interdisciplinary History* 21, no. 4 (Spring 1991):549–73.

26. Schwartz, *Sugar Plantations in the Formation of Brazilian Society*, p. 359, table 13-9. The number 597 is the average of the ratios of children to women for the three Bahian parishes (expressed in hundreds rather than thousands, as I have done here), which were 72, 49, and 58.

27. Richard H. Steckel, "Children and Choice: A Comparative Analysis of Slave and White Fertility in the Antebellum South," in *Without Consent or Contract: Conditions of Slave Life and the Transition to Freedom, Technical Papers*, vol. 2, edited by Robert William Fogel and Stanley L. Engerman (New York: Norton, 1992), 371. In 1860 the ratio of children to women slaves in the U.S. South was 1,056.

TABLE 2 *Population of Mariana, Minas Gerais, according to Age, Sex, Race, and Status, 1808*

Age Category	Total White Males		Total White Females		Total Whites
	Males	(%)	Females	(%)	
1-5	630	(13.7)	550	(12.7)	1,180
5-10	562	(12.2)	323	(7.5)	885
10-20	808	(17.6)	908	(21.0)	1,716
20-30	688	(15.0)	809	(18.7)	1,497
30-40	648	(14.1)	603	(13.9)	1,251
40-50	499	(10.9)	463	(10.7)	962
50-60	379	(8.3)	295	(6.8)	674
60-70	207	(4.5)	220	(5.1)	427
70-80	121	(2.6)	96	(2.2)	217
80-90	44	(1.0)	49	(1.1)	93
90-100	5	(0.1)	7	(0.2)	12
Totals	4,591	(100.0)	4,323	(100.0)	8,914

Age Category	Total Black Male Slaves		Total Black Female Slaves		Total Black Slaves
	Male Slaves	(%)	Female Slaves	(%)	
1-5	729	(6.7)	525	(9.6)	1,254
5-10	643	(5.9)	558	(10.2)	1,201
10-20	1,918	(17.5)	1,136	(20.7)	3,054
20-30	2,126	(19.4)	1,138	(20.7)	3,264
30-40	2,140	(19.6)	840	(15.3)	2,980
40-50	1,546	(14.1)	580	(10.6)	2,126
50-60	974	(8.9)	348	(6.3)	1,322
60-70	510	(4.7)	203	(3.7)	713
70-80	255	(2.3)	108	(2.0)	363
80-90	84	(0.8)	43	(0.8)	127
90-100	16	(0.1)	16	(0.3)	32
Totals	10,941	(100.0)	5,495	(100.0)	16,436

rates and greater life expectancy as well as low levels of adult immigration. Dependency ratios in Mariana in 1808 were 104 for slaves, 157 for free blacks and mulattos, and 140 for whites. Ratios for all of Minas Gerais at this time were 102 for slaves, 167 for free blacks and mulattos, and 177 for whites. By comparison, the same ratios in Bahia in 1788 were 58 for slaves, 111 for free blacks and mulattos, and 126 for whites.<sup>28</sup>

28. The Mariana and Minas Gerais data for 1808 were derived by dividing the total population between ages twenty and fifty into the rest of the population. The Bahian data



<i>Total Free Black Males</i>	(%)	<i>Total Free Black Females</i>	(%)	<i>Total Free Blacks</i>
246	(9.3)	229	(6.8)	475
233	(8.8)	250	(7.4)	483
534	(20.1)	603	(17.9)	1,137
266	(10.0)	385	(11.4)	651
337	(12.7)	496	(14.7)	833
350	(13.2)	435	(12.9)	785
315	(11.9)	431	(12.8)	746
216	(8.1)	290	(8.6)	506
105	(4.0)	171	(5.1)	276
42	(1.6)	66	(2.0)	108
14	(0.5)	22	(0.7)	36
(2,658)	(100.0)	3,378	(100.0)	6,036

<i>Total Free Male Mulattos</i>	(%)	<i>Total Free Female Mulattos</i>	(%)	<i>Total Free Mulattos</i>
1,056	(13.6)	712	(8.5)	1,768
955	(12.3)	875	(10.5)	1,830
1,464	(18.9)	2,195	(26.3)	3,659
1,170	(15.1)	1,357	(16.2)	2,527
1,030	(13.3)	1,052	(12.6)	2,082
732	(9.5)	1,003	(12.0)	1,735
619	(8.0)	616	(7.4)	1,235
475	(6.1)	305	(3.7)	780
153	(2.0)	155	(1.9)	308
65	(0.8)	55	(0.7)	120
22	(0.3)	28	(0.3)	50
7,741	(100.0)	8,353	(100.0)	16,094

(continued next page)

*The Value of Slaves*

The study of prices in Latin America and the Caribbean has become increasingly significant to economic historians of the region. With-

are averages for ages fifteen to forty-four divided into the rest of the population from three parishes examined by Schwartz. See *Sugar Plantations in the Formation of Brazilian Society*, p. 359, table 13-9. Although the Mariana and Minas Gerais data for 1808 are for different age categories, this information indicates the contrasts between the two regions in different time periods. Bahia in the late eighteenth century exhibited no growth in its slave population through natural reproduction and high rates of slave importations.

TABLE 2 (continued)

Age Category	Total Mulatto Male Slaves	(%)	Total Mulatto Female Slaves	(%)	Total Mulatto Slaves
1-5	208	(16.1)	166	(12.8)	374
5-10	229	(17.8)	174	(13.4)	403
10-20	262	(20.3)	258	(19.9)	520
20-30	204	(15.8)	222	(17.1)	426
30-40	147	(11.4)	166	(12.8)	313
40-50	93	(7.2)	106	(8.2)	199
50-60	76	(5.9)	68	(5.2)	144
60-70	40	(3.1)	114	(8.8)	154
70-80	18	(1.4)	12	(0.9)	30
80-90	11	(0.9)	9	(0.7)	20
90-100	0	(0.0)	1	(0.1)	1
Totals	1,288	(100.0)	1,296	(100.0)	2,584

Age Category	Total Male Free Colored	(%)	Total Female Free Colored	(%)	Total Free Colored
1-5	1,302	(12.5)	941	(8.0)	2,243
5-10	1,188	(11.4)	1,125	(9.6)	2,313
10-20	1,998	(19.2)	2,798	(23.9)	4,796
20-30	1,436	(13.8)	1,742	(14.8)	3,178
30-40	1,367	(13.1)	1,548	(13.2)	2,915
40-50	1,082	(10.4)	1,438	(12.3)	2,520
50-60	934	(9.0)	1,047	(8.9)	1,981
60-70	691	(6.6)	595	(5.1)	1,286
70-80	258	(2.5)	326	(2.8)	584
80-90	107	(1.0)	121	(1.0)	228
90-100	36	(0.3)	50	(0.4)	86
Totals	10,399	(100.0)	11,731	(100.0)	22,130

out some notion of how commodity prices change over time, it is nearly impossible to interpret long-term economic trends.<sup>29</sup> Price history has played a central role in the debates about slavery raging since the late 1950s, when the economics of slave labor in the United States came

29. For an example of recent research, see the essays in *Essays on the Price History of Eighteenth-Century Latin America*, edited by Lyman L. Johnson and Enrique Tandeter (Albuquerque: University of New Mexico Press, 1990).

<i>Total Male Slaves</i>	(%)	<i>Total Female Slaves</i>	(%)	<i>Total Slaves</i>
937	(7.7)	691	(10.2)	1,628
872	(7.1)	732	(10.8)	1,604
2,180	(17.8)	1,394	(20.5)	3,574
2,330	(19.1)	1,360	(20.0)	3,690
2,287	(18.7)	1,006	(14.8)	3,293
1,639	(13.4)	686	(10.1)	2,325
1,050	(8.6)	416	(6.1)	1,466
550	(4.5)	317	(4.7)	867
273	(2.2)	120	(1.8)	393
95	(0.8)	52	(0.8)	147
16	(0.1)	17	(0.3)	33
12,229	(100.0)	6,791	(100.0)	19,020

<i>Total Males</i>	(%)	<i>Total Females</i>	(%)	<i>Total Population</i>
2,869	(10.5)	2,182	(9.6)	5,051
2,622	(9.6)	2,180	(9.5)	4,802
4,986	(18.3)	5,100	(22.3)	10,086
4,454	(16.4)	3,911	(17.1)	8,365
4,302	(15.8)	3,157	(13.8)	7,459
3,220	(11.8)	2,587	(11.3)	5,807
2,363	(8.7)	1,758	(7.7)	4,121
1,448	(5.3)	1,132	(5.0)	2,580
652	(2.4)	542	(2.4)	1,194
246	(0.9)	222	(1.0)	468
57	(0.2)	74	(0.3)	131
27,219	(100.0)	22,845	(100.0)	50,064

under scrutiny in a scientific way.<sup>30</sup> In these seminal studies and others, efforts were made to calculate economic aspects of slavery by using data collected on prices paid for slaves, hire rates, production information, and commodity price movements. Historians have applied some of these meth-

30. These debates were heralded by articles written by Alfred H. Conrad and John R. Meyer, "The Economics of Slavery in the Antebellum South," *Journal of Political Economy* 66 (Apr. 1958):95–130; and in Robert Evans, Jr., "The Economics of American Negro Slavery,

odologies to studying slave labor in Brazil, although most have focused on the nineteenth century, especially during abolition in the 1870s and 1880s.<sup>31</sup> No systematic studies have been made of prices of slaves or the economics of slavery for eighteenth-century Brazil, although some important research into general price history for Rio de Janeiro and Salvador, Bahia, has been published.<sup>32</sup>

For Minas Gerais, no time-series data exist on slave prices or on any other aspect of the Mineiro economy during the second half of the eighteenth century, except for tax revenues generated by gold production.<sup>33</sup> The general image is that gold mining was exhausted during the 1750s in the older areas of exploitation around Sabará, Ouro Preto, and Mariana, followed by a near total collapse by the 1770s throughout the captaincy. What kinds of economic transformations accompanied the demise of the mining economy?

After the administrative and economic reforms that took hold during the tenure of Sebastião José Carvalho e Melo (the Marquês de Pombal), who ran the Portuguese government during the reign of Dom José I (1750–

---

1830–1860,” in *Aspects of Labor Economics*, edited by Universities-National Bureau Committee for Economic Research (Princeton, N.J.: Princeton University Press, 1962), 185–243. The most important research on the economics of slavery in the United States prior to the mid-1960s is summarized in a series of excerpts from books and articles published in *Slavery and the Southern Economy*, edited by Harold D. Woodman (New York: Harcourt, Brace, and World, 1966). On the evolution of economic interpretations of U.S. slavery until the early 1970s, see Stanley L. Engerman, “The Effects of Slavery upon the Southern Economy: A Review of the Recent Debate,” *Explorations in Entrepreneurial History*, 2d ser., vol. 4, no. 2 (1967):71–97, reprinted in *Did Slavery Pay? Readings in the Economics of Black Slavery in the United States*, edited by Hugh G. J. Aitken (Boston, Mass.: Houghton Mifflin, 1971), 295–327. Also see Robert W. Fogel and Stanley L. Engerman, *Time on the Cross: The Economics of American Negro Slavery* (New York: Norton, 1974).

31. See, for example, Pedro C. de Mello, “Rates of Return on Slave Capital in Brazilian Coffee Plantations, 1871–1881,” in *Without Consent or Contract: Markets and Production, Technical Papers*, vol. 1, Robert William Fogel and Stanley L. Engerman (New York: Norton, 1992), 63–79; Pedro C. de Mello, “Expectation of Abolition and Sanguinity of Coffee Planters in Brazil, 1871–1881,” in *Without Consent or Contract: Conditions of Slave Life and the Transition to Freedom, Technical Papers*, vol. 2, edited by Fogel and Engerman, 629–46; Pedro Carvalho de Mello, “The Economics of Labor in Brazilian Coffee Plantations, 1850–1888,” Ph.D. diss., University of Chicago, 1977; and Robert W. Slenes, “The Demography and Economics of Brazilian Slavery.”

32. See Harold B. Johnson, Jr., “A Preliminary Inquiry into Money, Prices, and Wages in Rio de Janeiro, 1763–1823,” in *The Colonial Roots of Modern Brazil*, edited by Dauril Alden (Berkeley and Los Angeles: University of California Press, 1973), 231–83; and Dauril Alden, “Price Movements in Brazil before, during, and after the Gold Boom, with Special Reference to the Salvador Market, 1670–1769,” in Johnson and Tandeter, *Essays on the Price History of Eighteenth-Century Latin America*, 335–71. This essay lists slave prices over twenty-years between 1659 and 1769 but does not reveal the number of observations on which these data were based. See also Mircea Buescu, *300 anos de inflação* (Rio de Janeiro: APEC, 1973), for scattered price data for Minas Gerais.

33. Tax revenues on gold have been published in varying forms in many different publications. See, for example, Mello e Souza, *Desclassificados do ouro*, 43–47; W. L. von Eschwege, *Pluto brasiliensis* (Belo Horizonte: Itatiaia, 1979), 1:200–202; and Maxwell, *Conflicts and Conspiracies*, 249.

1777), Brazil experienced what has been called “an agricultural renaissance.”<sup>34</sup> During the 1780s and after, traditional export products like sugar and tobacco in Pernambuco and Bahia were progressively revitalized. Cotton cultivation expanded in Maranhão and Pernambuco; sugar production grew in Rio de Janeiro and São Paulo; coffee began to be cultivated in Rio; and production of grains and cattle products in southern Brazil generally increased.<sup>35</sup> How did this process of economic renewal affect Minas Gerais? In the absence of any demographic or economic studies of Minas in the late eighteenth century, only a series of images can be constructed.

Kenneth Maxwell has suggested that a major shift in population occurred in the captaincy after the 1760s away from the mining centers and toward southern areas contiguous to São Paulo (the *comarca* of Rio das Mortes), where sugarcane cultivation, cattle ranching, and grain production were gradually taking hold. But unlike the coastal captaincies, where agriculture was geared toward export markets, the economic structure of Minas came to revolve around an urbanized society where local town markets became the focal points of a growing agricultural economy complemented by the beginnings of manufacturing.<sup>36</sup>

During the mining boom, the captaincy had imported a large share of the agricultural and industrial products required. But after mining dwindled and lacking other significant exports to pay for imported goods, the self-sufficiency noted by scholars cited at the beginning of this article started to develop.<sup>37</sup> During the second half of the eighteenth century, grain production surged in the vicinity of São João del Rei; coffee developed in the Zona da Mata; sugar, molasses, and brandy were being produced in the south; cattle ranching spread; and even a rudimentary manufacturing infrastructure appeared. Plans were drawn up to establish a steel mill in 1780; soapstone products such as plates, tiles, pots, and

34. For the Pombaline period, see the general treatment by Dauril Alden in *Royal Government in Colonial Brazil* (Berkeley and Los Angeles: University of California Press, 1968); and two essays in the Cambridge Latin American History series (paperback version), *Colonial Brazil*, edited by Leslie Bethell (Cambridge: Cambridge University Press, 1987): one by André Mansuy-Diniz Silva, “Imperial Re-organization, 1750–1808,” 244–83; and the second by Dauril Alden, “Late Colonial Brazil, 1750–1808,” 284–343. The last-named essay by Alden referred to the “agricultural renaissance.”

35. For excellent summaries of this economic revitalization in the late eighteenth century, see Alden, “Late Colonial Brazil,” and the essays in *Essays concerning the Socioeconomic History of Brazil and Portuguese India*, edited by Dauril Alden and Warren Dean (Gainesville: University Presses of Florida, 1977). For data on Brazilian external trade between 1796 and 1811, see José Jobson de A. Arruda, *O Brasil no comércio colonial* (São Paulo: Atica, 1980).

36. See Maxwell, *Conflicts and Conspiracies*, 87–98. He postulates that this increasingly inward-looking socioeconomic structure in Minas Gerais clashed with Portugal’s desire to stimulate external links and became a factor in the rebellion of 1789 known as the *Inconfidência Mineira*.

37. For the provisioning of Minas Gerais during the mining boom, see the informative study by Mafalda P. Zemella, *O abastecimento da Capitania das Minas Gerais no século XVIII* (São Paulo: Universidade de São Paulo, 1951).

pans were produced in the old gold mining regions; and cottage production of textile products for local markets increased.<sup>38</sup> Population spread from the mining regions toward the headwaters of the São Francisco River, west to frontier regions in the Triângulo Mineiro, and south toward Rio de Janeiro and São Paulo.<sup>39</sup> Yet, despite these general images, one finds no reliable quantitative materials on changing forms of land use and tenure, production, or trade. Lacking hard data on the Minas Gerais economy during the second half of the eighteenth century, the long-term tendencies of values of slaves can be used to help understand the economic adjustments in Minas Gerais after the mining boom ended.

The Mariana data indicate three definable periods in the evolution of slave values between 1750 and 1808. The first period lasted from 1750 to 1773, when the mining economy continued the steady decline evident since the 1730s. During this period, the value of working-age slaves fell steadily (see figure 3).

The second period, between 1773 and 1796, was marked by relative stability in the value of slaves at considerably lower levels than at the peak of mining activity. In this period, mining continued to contract, and a general economic reorganization was accompanied by significant growth in subsistence agriculture, commercial agriculture oriented toward local markets, and general economic diversification.

After 1796 the value of slaves began to rise significantly and peaked in 1805. This trend was related to increasing demand for provincial labor due to a new cycle of economic growth. The capitania was diversifying economically and forging strong connections to the revitalized sugar and coffee economies of Pernambuco, Bahia, Rio de Janeiro, and São Paulo. These economies had been stimulated by price increases on world markets stemming from the economic impact of the Haitian slave revolt and the Napoleonic wars in Europe.<sup>40</sup>

38. *Ibid.*, 196; 256–57. Douglas Cole Libby's study on "proto-industrialization" during the nineteenth century examines this process of import-substitution industrialization after the initial period in the late eighteenth century. See Libby, *Transformação e trabalho em uma economia escravista*.

39. For a vague description of this process, see Waldemar de Almeida Barbosa, *A decadência das minas e a fuga da mineração* (Belo Horizonte: Imprensa da Universidade Federal de Minas Gerais, 1971). He claims that by the 1760s, Minas cattle ranchers were exporting hides even to Rio de Janeiro. The detailed descriptions of Minas Gerais provided by Auguste de Saint-Hilaire during his sojourn in Brazil from 1816 to 1822 are suggestive. Although Saint-Hilaire's observations were made a bit later than the period under consideration here, they are important. He noted the cultivation of sugarcane, wheat, maize, cotton, tobacco, rice, beans, and many other subsistence crops during his travels throughout the captaincy. See Auguste de Saint-Hilaire, *Viagem pelas províncias do Rio de Janeiro e Minas Gerais* (Belo Horizonte: Itatiaia, 1975).

40. For a discussion of increases in Brazilian sugar production in the late eighteenth and early nineteenth centuries, see Schwartz, *Sugar Plantations in the Formation of Brazilian Society*, 422–34. On rising prices throughout Brazil in the 1790s and the early nineteenth century, see Jobson de A. Andrade, *O Brasil no comércio colonial*, 331–52. One drawback of



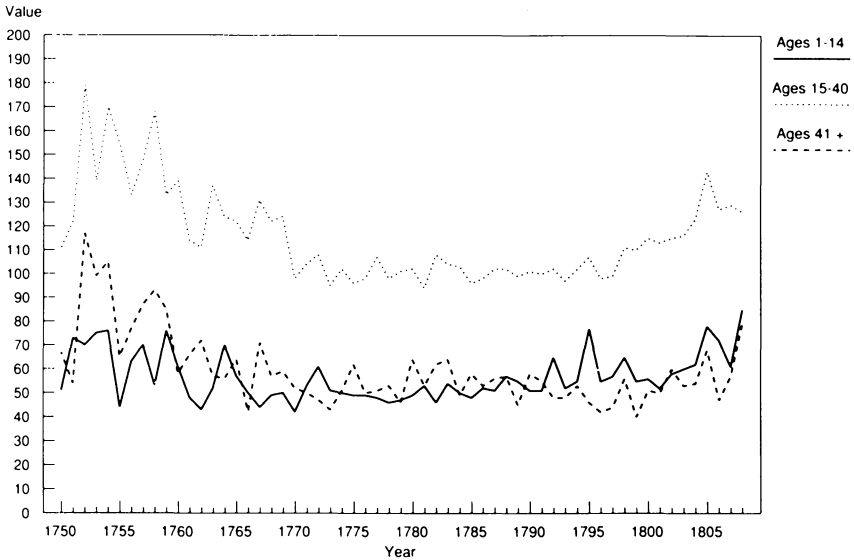


FIGURE 3 *Mariana Slave Values by Age Category, 1750–1808 (in milreis).*

The value of slaves in Mariana between 1750 and 1808 was determined by age, sex, and nationality. The value of working-age slaves (between fifteen and forty years old) was always noticeably higher than for younger or older slaves, and in most years, working-age slaves cost twice as much. The longer-term trend for slaves older than forty was similar to that of working-age slaves between 1750 and 1808, although at significantly lower levels.

Trends in assessed values of slaves younger than fifteen manifested important differences. Although values fluctuated over the short term, the price structure of the market for younger slaves in Mariana exhibited long-term stability. This finding is significant because by the 1770s, the difference between the valuation levels of younger slaves and prime-age slaves had narrowed considerably. This trend coincided with the probable beginning of slave reproduction and the expectation that younger Brazilian-born slaves would live into adulthood, which implied that the costs of rearing slave children could be recouped when they reached full productivity in their late teens. This interpretation suggests that in the post-mining era, the increasingly Brazilian-born slave population in Mariana was probably living longer. Relatively higher comparative values placed on younger slaves also coincide with the slowing im-

---

using nominal values of slaves to measure market trends is that they do not measure price fluctuations resulting from inflation or deflation. This problem is exacerbated by the lack of eighteenth-century Brazilian price indexes that could be used to convert nominal to "real" prices. One exception is the Salvador market between 1710 and 1769, with price indexes published by Alden in "Price Movements in Brazil," 360–61.

portation of slaves into Minas Gerais and the implication that the future working-age population of slaves would depend on younger slaves living into adulthood.

Despite apparently increasing reproductive rates among slaves toward the end of the eighteenth century, females in the prime working and reproductive age group were valued lower than males nearly every year between 1750 and 1808, with little significant long-term variation in relative price ratios of male to female slaves. Higher prices for male slaves could be expected while mining was still significant to the local economy because of greater demand for male laborers for mining and the high level of predominantly male African slaves. But as mining waned and the economy of the region diversified, greater equality in valuations by sex would be expected, especially given the evidence of reproduction and a narrowing gap in the price difference between prime-age and younger slaves. This trend should have implied a premium on female reproductive potential. Yet little variation was found in the price differential between prime-age males and females, despite the demographic changes in the slave population.<sup>41</sup>

The evidence on slave valuations by nationality also reveals the lack of any premium placed on acculturation. Prime-age Brazilian-born slaves, male or female, were consistently valued slightly below their African counterparts. This trend was probably related to the strong demand for prime-age Africans as the slave trade to Minas contracted by the late eighteenth century. Differences probably occurred in occupational structures by nationality. Certainly, greater proportions of Africans labored in primary economic sectors like mining, agriculture, and cattle raising. The preference for creole slaves in domestic occupations in most slaveholding societies is well known, and labor patterns in Minas Gerais were no exception. Africans may have been perceived as being more economically productive than creoles due to these occupational differences, thus raising their relative values. It is also possible that an abundance of Brazilian slaves and the scarcity of Africans as the eighteenth century drew to a close, regardless of occupation, simply drove the prices for creoles down relative to Africans. Until more data are generated from archival sources

41. This finding is puzzling because a premium should have been placed on female reproductive capacity if the slave population was indeed growing. Yet it is possible that no premium was placed on prime-age females precisely because reproduction was so commonplace. Another factor could have been the greater short-term labor productivity of prime-age males compared with females, even when the longer-term benefit of reproduction among females was factored in. Fe Iglesias García, María del Carmen Barcia, and I found that when the Cuban slave trade was threatened by external political variables during the nineteenth century, the price of reproductive-age females soared past same-age-group males, but only for brief periods of time. See Bergad, Iglesias García, and Barcia, *The Cuban Slave Market, 1790–1880* (New York: Cambridge University Press, 1995). More equal valuations of prime-age males and females were recorded between 1820 and 1880.

on the prices of slaves in different occupations, these findings are only suggestive. The price series for Mariana slaves by age, sex, and nationality between 1750 and 1808 are indicated in table 3.

### *Conclusion*

The data collected and presented here provide the first systematic examination of a time-series database on demographic and economic aspects of slavery in Minas Gerais in the aftermath of the legendary gold-mining boom. These data point to two fundamental conclusions. First, the slave population of the capitania was shifting in demographic structure toward a population whose characteristics were determined by reproduction. This process is indicated by the constant decline in the sex ratio after 1750, the fact that the slave population was becoming younger and younger, and the fact that the percentage of Brazilian-born slaves among the total slave population had increased to a majority by the late eighteenth and early nineteenth centuries. Various other indicators, such as the ratio of slave children to women and the population dependency ratio in 1808, support this conclusion. Implicit in these findings is the decline of the slave trade to Minas in the second half of the eighteenth century.<sup>42</sup>

The second conclusion could have been anticipated by the extant literature on Brazilian economic history. It is not surprising to find that slave valuations declined as gold-mining production collapsed and leveled out as the economy of the capitania began to reorganize. The dimensions and direction of that reorganization have become the focal point of scholarly debate. These data indicate an upward trend in the value of slaves during the 1790s that continued into the early nineteenth century. This pattern was probably not unique to Minas Gerais in that slaves likely became more valuable elsewhere in Brazil. Overall price rises in the late eighteenth century and strong demands for primary products in European markets stimulated economic growth throughout the colony, increasing demand for labor considerably in most regions. Expansion of the African slave trade represented a logical response to these favorable eco-

42. In light of the historiographical debates about nineteenth-century Minas Gerais slavery indicated at the outset, it will be interesting to see what the post-1808 data reveal. In May 1994, I began to create data files for the period from 1808 to 1888 and expect to have them analyzed by mid-1995. The various studies of nominal lists of slaves in Minas Gerais during the early 1830s indicate that slave reproduction was clearly underway by the fourth decade of the nineteenth century. See Libby and Paiva, "The Middle Path." This article pushes the probable beginning of net-positive reproductive patterns among the Minas slave population back chronologically to the late eighteenth century.

TABLE 3 Average Values of Slaves in Mariana, Minas Gerais, according to Age Group, Sex, and Nationality, 1750–1808, in Milreis

Year	All Ages		Ages 1–14					
	All Slaves	(N)	Males (N)	Females (N)	Creoles (N)	Africans (N)		Males (N)
1750	86	(143)	53 (18)	49 (17)	50 (33)	66	(2)	116 (57)
1751	94	(70)	58 (10)	91 (8)	73 (18)	—	—	121 (18)
1752	141	(43)	72 (5)	60 (1)	70 (6)	—	—	193 (15)
1753	113	(40)	62 (3)	95 (2)	75 (5)	—	—	141 (16)
1754	142	(203)	76 (12)	76 (14)	74 (25)	120	(1)	175 (110)
1755	111	(45)	46 (5)	42 (4)	44 (9)	—	—	167 (18)
1756	101	(243)	56 (30)	72 (22)	63 (51)	60	(1)	135 (83)
1757	119	(97)	68 (8)	72 (5)	66 (10)	83	(3)	154 (37)
1758	134	(36)	49 (5)	72 (1)	53 (6)	—	—	184 (18)
1759	102	(52)	78 (7)	69 (2)	65 (8)	160	(1)	134 (15)
1760	96	(85)	75 (5)	51 (7)	58 (11)	95	(1)	151 (21)
1761	93	(162)	50 (9)	46 (9)	45 (17)	110	(1)	124 (26)
1762	88	(59)	60 (1)	39 (5)	43 (6)	—	—	109 (26)
1763	110	(86)	47 (7)	57 (8)	49 (14)	100	(1)	139 (39)
1764	91	(82)	70 (3)	69 (9)	70 (12)	—	—	126 (31)
1765	102	(124)	58 (17)	57 (8)	53 (21)	100	(2)	128 (61)
1766	92	(39)	—	—	50 (2)	—	—	116 (20)
1767	106	(65)	42 (7)	47 (4)	48 (9)	—	—	136 (36)
1768	85	(133)	46 (8)	53 (6)	49 (13)	—	—	124 (39)
1769	96	(110)	57 (6)	46 (9)	50 (15)	—	—	125 (49)
1770	69	(97)	40 (15)	45 (8)	42 (23)	—	—	107 (30)
1771	77	(226)	59 (14)	50 (23)	53 (35)	60	(2)	105 (66)
1772	82	(253)	61 (25)	60 (28)	57 (49)	100	(4)	116 (68)
1773	69	(136)	57 (7)	48 (15)	51 (21)	50	(1)	98 (43)
1774	79	(225)	45 (21)	56 (14)	50 (35)	—	—	105 (98)
1775	77	(99)	54 (12)	41 (8)	46 (19)	95	(1)	98 (44)
1776	76	(206)	50 (22)	48 (14)	50 (35)	—	—	101 (61)
1777	79	(284)	49 (32)	46 (24)	47 (55)	80	(1)	111 (110)
1778	78	(228)	45 (25)	48 (17)	43 (39)	77	(3)	99 (107)
1779	70	(127)	50 (18)	42 (11)	45 (26)	65	(2)	103 (39)
1780	77	(155)	53 (24)	46 (21)	50 (44)	40	(1)	108 (44)
1781	70	(415)	61 (73)	43 (54)	45 (106)	94	(21)	102 (119)
1782	78	(332)	48 (45)	43 (26)	44 (68)	97	(3)	111 (110)
1783	84	(257)	58 (20)	51 (28)	54 (48)	—	—	108 (112)
1784	79	(358)	51 (29)	49 (39)	47 (65)	107	(3)	106 (159)
1785	73	(278)	48 (40)	48 (44)	48 (84)	—	—	104 (93)
1786	76	(307)	57 (41)	48 (44)	52 (83)	120	(1)	101 (104)
1787	78	(391)	53 (41)	49 (44)	51 (81)	60	(3)	109 (140)
1788	88	(241)	47 (9)	60 (26)	57 (35)	—	—	106 (123)
1789	75	(353)	56 (52)	53 (49)	53 (98)	93	(3)	105 (118)
1790	82	(244)	56 (13)	38 (5)	46 (16)	90	(2)	103 (117)
1791	76	(325)	50 (23)	52 (34)	51 (56)	40	(1)	103 (114)
1792	83	(164)	62 (19)	71 (9)	65 (28)	—	—	105 (68)

SLAVERY IN MINAS GERAIS, 1750–1808

Ages 15–40				Ages 41 and older									
Females	(N)	Creoles	(N)	Africans	(N)	Males	(N)	Females	(N)	Creoles	(N)	Africans	(N)
95	(17)	102	(24)	115	(50)	73	(27)	36	(5)	—	—	69	(31)
124	(11)	119	(11)	128	(16)	55	(13)	53	(4)	35	(3)	59	(14)
144	(6)	162	(7)	188	(14)	130	(14)	28	(2)	68	(2)	124	(14)
100	(1)	134	(5)	141	(12)	106	(14)	63	(3)	90	(1)	97	(15)
139	(18)	152	(18)	173	(107)	109	(45)	58	(4)	60	(2)	109	(46)
118	(6)	108	(3)	161	(21)	74	(8)	42	(3)	35	(1)	68	(10)
127	(37)	131	(47)	134	(72)	80	(61)	57	(9)	53	(7)	78	(60)
134	(13)	135	(16)	155	(34)	100	(13)	44	(4)	45	(1)	90	(16)
112	(5)	145	(2)	171	(21)	93	(7)	—	—	—	—	93	(7)
127	(5)	120	(6)	138	(14)	89	(15)	71	(4)	80	(1)	86	(17)
124	(15)	104	(10)	152	(25)	56	(19)	63	(6)	50	(1)	58	(24)
91	(12)	99	(11)	122	(26)	68	(40)	53	(4)	35	(1)	68	(40)
130	(3)	123	(3)	112	(25)	74	(19)	54	(2)	—	—	72	(21)
132	(13)	124	(7)	139	(45)	75	(9)	25	(5)	33	(3)	64	(11)
107	(5)	90	(2)	125	(33)	57	(8)	45	(2)	—	—	58	(19)
102	(20)	107	(19)	131	(57)	68	(10)	20	(1)	80	(1)	62	(10)
107	(7)	107	(12)	119	(15)	41	(7)	43	(3)	—	—	42	(10)
106	(7)	125	(4)	135	(35)	72	(8)	68	(2)	78	(2)	71	(7)
111	(7)	119	(7)	124	(36)	59	(28)	45	(5)	36	(4)	58	(27)
117	(11)	125	(24)	123	(35)	59	(22)	60	(3)	35	(2)	61	(22)
75	(12)	93	(20)	102	(21)	52	(25)	52	(7)	61	(7)	49	(25)
100	(30)	102	(43)	105	(51)	52	(60)	42	(17)	59	(7)	48	(68)
97	(46)	111	(63)	106	(46)	49	(55)	38	(14)	60	(12)	44	(56)
89	(20)	93	(30)	98	(32)	45	(45)	33	(6)	35	(3)	44	(47)
88	(19)	105	(33)	102	(81)	52	(54)	38	(6)	60	(14)	48	(46)
87	(10)	94	(19)	97	(34)	65	(21)	34	(2)	38	(3)	65	(17)
86	(17)	92	(25)	100	(53)	50	(56)	49	(6)	69	(8)	47	(51)
93	(35)	108	(69)	105	(75)	54	(63)	38	(14)	49	(17)	52	(59)
93	(28)	95	(35)	99	(100)	55	(40)	47	(10)	68	(12)	49	(37)
91	(10)	87	(12)	106	(35)	48	(28)	40	(6)	67	(3)	44	(31)
89	(19)	105	(34)	99	(9)	67	(37)	52	(7)	82	(4)	63	(39)
76	(52)	81	(72)	103	(97)	56	(93)	36	(21)	50	(42)	54	(68)
95	(32)	108	(63)	107	(79)	62	(107)	65	(6)	58	(8)	62	(97)
87	(32)	96	(38)	107	(106)	66	(53)	53	(10)	66	(12)	63	(49)
89	(41)	97	(70)	107	(123)	51	(66)	44	(20)	57	(13)	48	(70)
79	(45)	90	(59)	100	(78)	60	(43)	45	(8)	51	(10)	59	(40)
92	(54)	96	(63)	100	(90)	55	(54)	44	(9)	50	(4)	54	(58)
85	(55)	94	(76)	107	(118)	57	(93)	46	(14)	57	(20)	56	(85)
91	(36)	99	(44)	104	(110)	58	(34)	49	(7)	51	(9)	58	(31)
87	(56)	95	(84)	103	(90)	46	(61)	37	(13)	40	(24)	47	(50)
90	(17)	99	(28)	102	(103)	59	(75)	37	(6)	48	(13)	59	(67)
90	(44)	99	(49)	100	(109)	58	(91)	41	(19)	45	(21)	57	(89)
94	(28)	106	(41)	99	(55)	49	(33)	47	(5)	49	(7)	48	(31)

(continued next page)

TABLE 3 (continued)

Year	All Ages		Ages 1-14					
	All Slaves	(N)	Males (N)	Females (N)	Creoles (N)	Africans (N)		Males (N)
1793	72	(439)	56 (57)	48 (71)	51 (127)	105	(1)	106 (130)
1794	79	(268)	57 (34)	54 (34)	53 (65)	108	(3)	106 (95)
1795	80	(203)	58 (12)	90 (17)	77 (29)	—	—	114 (67)
1796	75	(445)	53 (50)	56 (49)	54 (98)	115	(1)	101 (177)
1797	73	(420)	60 (63)	54 (63)	56 (123)	95	(2)	107 (122)
1798	84	(360)	61 (49)	69 (44)	65 (92)	—	—	125 (105)
1799	77	(85)	49 (5)	58 (10)	55 (15)	—	—	113 (31)
1800	87	(311)	59 (42)	53 (38)	56 (80)	—	—	120 (101)
1801	79	(225)	57 (35)	47 (29)	52 (64)	—	—	124 (62)
1802	81	(204)	59 (42)	56 (36)	58 (77)	20	(1)	122 (47)
1803	81	(248)	63 (32)	59 (40)	61 (70)	33	(2)	125 (65)
1804	92	(197)	62 (29)	62 (20)	61 (48)	115	(1)	130 (75)
1805	103	(172)	83 (29)	73 (31)	75 (57)	140	(3)	133 (44)
1806	89	(48)	80 (10)	52 (4)	72 (14)	—	—	141 (14)
1807	95	(36)	61 (6)	62 (6)	63 (11)	40	(1)	131 (10)
1808	102	(148)	85 (30)	85 (20)	84 (48)	115	(2)	132 (40)

NOTE: Numbers in parentheses are the number of slaves upon which the average value is based.

conomic conditions.<sup>43</sup> Some fundamental questions emerge regarding the history of slavery in Minas Gerais because of economic revitalization and the resurgence of the Brazilian slave trade by the early nineteenth century. A central one to be answered by future researchers is the precise volume of the slave trade to the region and how the renewed arrival of slaves affected the demographic and market trends and tendencies found in this study and elsewhere.<sup>44</sup>

43. For data on slaves arriving in Brazil in the late eighteenth century, see David Eltis, *Economic Growth and the Ending of the Transatlantic Slave Trade* (New York: Oxford University Press, 1987), 243.

44. This article represents the beginning of a long-term project on slavery in Minas Gerais that I expect to reveal some answers. I am now creating a large database on slavery from various locales in Minas (Ouro Preto, São João del Rey, Sabará, Mariana, and Diamantina), using the earliest inventários available from the early eighteenth century to abolition in 1888.



Ages 15–40				Ages 41 and older									
Females	(N)	Creoles	(N)	Africans	(N)	Males	(N)	Females	(N)	Creoles	(N)	Africans	(N)
82	(77)	92	(120)	103	(87)	50	(76)	43	(27)	54	(38)	45	(65)
92	(44)	96	(58)	106	(80)	54	(46)	45	(6)	45	(8)	55	(43)
91	(31)	106	(55)	108	(42)	47	(68)	34	(7)	30	(7)	46	(67)
90	(62)	95	(98)	101	(138)	44	(87)	33	(16)	41	(19)	43	(82)
85	(58)	99	(114)	101	(59)	45	(80)	42	(20)	42	(25)	45	(74)
84	(56)	107	(65)	114	(90)	59	(61)	38	(11)	46	(14)	57	(55)
102	(10)	110	(20)	110	(21)	38	(21)	45	(7)	60	(2)	38	(25)
106	(59)	116	(66)	114	(82)	53	(51)	39	(12)	50	(16)	52	(42)
96	(41)	111	(59)	116	(44)	52	(44)	45	(14)	48	(21)	52	(37)
106	(32)	111	(47)	123	(32)	63	(40)	46	(7)	51	(5)	62	(42)
100	(38)	115	(66)	118	(37)	53	(58)	53	(15)	69	(18)	47	(55)
102	(27)	119	(59)	128	(43)	56	(36)	46	(10)	53	(15)	54	(31)
158	(29)	151	(40)	134	(33)	66	(33)	77	(6)	65	(5)	68	(34)
101	(7)	120	(12)	138	(9)	47	(13)	—	—	44	(4)	48	(9)
128	(8)	124	(11)	139	(7)	57	(6)	—	—	—	—	57	(6)
117	(24)	121	(38)	134	(26)	86	(25)	59	(9)	78	(6)	79	(28)

## REFERENCES

## ALDEN, DAURIL

- 1968 *Royal Government in Colonial Brazil*. Berkeley and Los Angeles: University of California Press.
- 1987 "Late Colonial Brazil, 1750–1808." In BETHELL 1987, 284–343.
- 1990 "Price Movements in Brazil before, during, and after the Gold Boom, with Special Reference to the Salvador Market, 1670–1769." In JOHNSON AND TANDETER 1990, 335–71.

## ALDEN, DAURIL, AND WARREN DEAN, EDS.

- 1977 *Essays concerning the Socioeconomic History of Brazil and Portuguese India*. Gainesville: University Presses of Florida.

## ARRUDA, JOSE JOBSON DE A.

- 1980 *O Brasil no comércio colonial*. São Paulo: Atica.

## BARBOSA, WALDEMAR DE ALMEIDA

- 1971 *A decadência das minas e a fuga da mineração*. Belo Horizonte: Imprensa da Universidade Federal de Minas Gerais.

## BARICKMAN, B. J.

- 1994 "A Bit of Land, Which They Call Roça': Slave Provision Grounds in the Bahian Recôncavo, 1780–1860." *Hispanic American Historical Review* 74, no. 4 (Nov.):649–87.

## BASTIDE, ROGER

- 1978 *The African Religions of Brazil*. Baltimore, Md.: Johns Hopkins University Press.

## BERGAD, LAIRD W., FE IGLESIAS GARCIA, AND MARIA DEL CARMEN BARCIA

- 1995 *The Cuban Slave Market, 1790–1880*. New York: Cambridge University Press.

## BETHELL, LESLIE

- 1970 *The Abolition of the Brazilian Slave Trade*. Cambridge: Cambridge University Press.

## BETHELL, LESLIE, ED.

- 1987 *Colonial Brazil*. Cambridge: Cambridge University Press.

- BOXER, C. R.**  
1962 *The Golden Age of Brazil, 1695–1750*. Berkeley and Los Angeles: University of California Press.
- BUESCU, MIRCEA**  
1973 *300 anos de inflação*. Rio de Janeiro: APEC.
- CANO, WILSON, AND FRANCISCO VIDAL LUNA**  
1984 "La reproducción natural de los esclavos en Minas Gerais: Una hipótesis." *Revista Latinoamericana de Historia Económica y Social* 4, no. 2 (1984):129–35 (published in Lima).
- CARDOSO, FERNANDO HENRIQUE**  
1962 *Capitalismo e escravidão no Brasil meridional*. São Paulo: DIFIL.
- CHALHOUB, SIDNEY**  
1990 *Visões da liberdade: Uma história das últimas décadas da escravidão na corte*. São Paulo: Companhia das Letras.
- CONRAD, ALFRED H., AND JOHN R. MEYER**  
1958 "The Economics of Slavery in the Antebellum South." *Journal of Political Economy* 66 (Apr.):95–130.
- CONRAD, ROBERT**  
1972 *The Destruction of Brazilian Slavery, 1850–1888*. Berkeley and Los Angeles: University of California Press.  
1986 *World of Sorrow: The African Slave Trade to Brazil*. Baton Rouge: Louisiana State University Press.
- COSTA, EMILIA VIOTTI DA**  
1966 *Da senzala à colônia*. São Paulo: Brasiliense.
- COSTA, IRACI DEL NERO DA**  
1979 *Vila Rica: População (1719–1826)*. São Paulo: Instituto de Pesquisas Econômicas.
- COSTA, IRACI DEL NERO DA, ROBERT W. SLENES, AND STUART B. SCHWARTZ**  
1987 "A família escrava em Lorena." *Estudos Econômicos* 17, no. 2:245–95.
- DEAN, WARREN**  
1976 *Rio Claro, A Brazilian Plantation System, 1820–1920*. Stanford, Calif.: Stanford University Press.
- DORNAS FILHO, JOÃO**  
1957 *O ouro das gerais e a civilização da capitania*. São Paulo: Editora Nacional.
- ELTIS, DAVID**  
1987 *Economic Growth and the Ending of the Transatlantic Slave Trade*. New York: Oxford University Press.
- EISENBERG, PETER**  
1974 *The Sugar Industry in Pernambuco, 1840–1910*. Berkeley and Los Angeles: University of California Press.
- ENGERMAN, STANLEY L.**  
1967 "The Effects of Slavery upon the Southern Economy: A Review of the Recent Debate." *Explorations in Entrepreneurial History*, 2d ser., vol. 4, no. 2 (1967):71–97. Reprinted in *Did Slavery Pay? Readings in the Economics of Black Slavery in the United States*, edited by Hugh G. J. Aitken. Boston, Mass.: Houghton Mifflin, 1971.
- EVANS, ROBERT, JR.**  
1962 "The Economics of American Negro Slavery, 1830–1860." In *Aspects of Labor Economics*, edited by Universities–National Bureau Committee for Economic Research, 185–243. Princeton, N.J.: Princeton University Press.
- FOGEL, ROBERT WILLIAM, AND STANLEY L. ENGERMAN**  
1974 *Time on the Cross: The Economics of American Negro Slavery*. New York: Norton.
- FOGEL, ROBERT WILLIAM, AND STANLEY L. ENGERMAN, EDs.**  
1992a *Without Consent or Contract: Markets and Production, Technical Papers*. Vol. 1. New York: Norton.  
1992b *Without Consent or Contract: Conditions of Slave Life and the Transition to Freedom, Technical Papers*. Vol. 2. New York: Norton.
- FREYRE, GILBERTO**  
1966 *The Masters and the Slaves*. Translated by Samuel Putnam. New York: Knopf (originally published in 1933).

- FURTADO, CELSO  
1965 *The Economic Growth of Brazil*. Berkeley and Los Angeles: University of California Press.
- GORENDER, JACOB  
1980 *O escravismo colonial*. São Paulo: Atica.
- GOULART, MAURICIO  
1975 *Escravidão africana no Brasil (das origens a extinção do tráfico)*. São Paulo: Alfa-Omega (originally published in 1950).
- GUTIERREZ, HORACIO  
1987 "Demografia escrava numa economia não exportadora: Paraná." *Estudos Econômicos* 17, no. 2:297–314.  
1988 "Crioulos e Africanos no Paraná, 1798–1830." *Revista Brasileira de História* 8, no. 16:161–88.
- HIGGINS, KATHLEEN JOAN  
1987 "The Slave Society in Eighteenth-Century Sabará: A Community Study in Colonial Brazil." Ph.D. diss., Yale University.
- IGLESIAS, FRANCISCO  
1958 *A economia política do governo provincial mineiro, 1835–1889*. Rio de Janeiro: Ministério da Educação e Cultura.
- INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTADISTICA  
1990 *Estatísticas históricas do Brasil: Series econômicas, demográficas e sociais, 1550 a 1988*. Rio de Janeiro: IBGE.
- JOHNSON, HAROLD B., JR.  
1973 "A Preliminary Inquiry into Money, Prices, and Wages in Rio de Janeiro, 1763–1823." In *The Colonial Roots of Modern Brazil*, edited by Dauril Alden, 231–83. Berkeley and Los Angeles: University of California Press.
- JOHNSON, LYMAN L., AND ENRIQUE TANDETER, EDS.  
1990 *Essays on the Price History of Eighteenth-Century Latin America*. Albuquerque: University of New Mexico Press.
- KARASCH, MARY C.  
1987 *Slave Life in Rio de Janeiro, 1808–1850*. Princeton, N.J.: Princeton University Press.
- KIERNAN, JAMES PATRICK  
1976 "The Manumission of Slaves in Colonial Brazil: Paraty, 1789–1822." Ph.D. diss., New York University.
- KLEIN, HERBERT S.  
1984 "The Population of Minas Gerais: New Research on Colonial Brazil." *Latin American Population History Newsletter* 4, nos. 1–2:3–10.
- LIBBY, DOUGLAS COLE  
1988 *Transformação e trabalho em uma economia escravista: Minas Gerais no século XIX*. São Paulo: Brasiliense.  
1991 "Proto-Industrialisation in a Slave Society: The Case of Minas Gerais." *Journal of Latin American Studies* 23, pt. 1 (Feb.):1–35.
- LIMA JUNIOR, AUGUSTO DE  
1943 *A Capitania das Minas Gerais*. Rio de Janeiro: Zélio Valverde.  
1945 *História dos diamantes nas Minas Gerais*. Lisbon and Rio de Janeiro: Dois Mundos.  
1978 *A Capitania das Minas Gerais*. Belo Horizonte: Itatiaia.
- LUNA, FRANCISCO VIDAL  
1981 *Minas Gerais: Escravos e senhores*. São Paulo: Instituto de Pesquisas Econômicas.
- LUNA, FRANCISCO VIDAL, AND WILSON CANO  
1985 "Economia Escravista em Minas Gerais." *Cadernos IFCH-UNICAMP* no. 10 (Oct.):2–12.
- LUNA, FRANCISCO VIDAL, AND IRACI DEL NERO DA COSTA  
1973 "Ocupação, Povoamento e Dinâmica Populacional." In *Minas colonial: Economia e sociedade*. São Paulo: Fundação Instituto de Pesquisas Econômicas.  
1979 "Algumas características do contingente de cativos em Minas Gerais." *Anais do Museu Paulista* 29:79–97.  
1982 *Minas colonial: Economia e sociedade*. São Paulo: Instituto de Pesquisas Econômicas.  
1984 "Demografia histórica de Minas Gerais no período colonial." *Revista Brasileira de Estudos Políticos*, no. 58:15–61.

- LUNA, FRANCISCO VIDAL, AND HERBERT S. KLEIN  
1991 "Slaves and Masters in Early-Nineteenth-Century Brazil: São Paulo." *Journal of Interdisciplinary History* 21, no. 4 (Spring):549–73.
- MANSUY-DINIZ SILVA, ANDREE  
1987 "Imperial Re-organization, 1750–1808." In BETHELL 1987, 244–83.
- MARTINS, ROBERTO BORGES  
1980a "Growing in Silence: The Slave Economy of Nineteenth-Century Minas Gerais, Brazil." Ph.D. diss., Vanderbilt University.  
1980b *A economia escravista de Minas Gerais no século XIX*. Belo Horizonte: CEDEPLAR.  
1994 "Minas e o tráfico de escravos no século XIX, outra vez." Texto para Discussão no. 70. Belo Horizonte: UFMG and CEDEPLAR.
- MARTINS FILHO, AMILCAR, AND ROBERTO BORGES MARTINS  
1983 "Slavery in a Non-Export Economy: Nineteenth-Century Minas Gerais Revisited." *Hispanic American Historical Review* 63, no. 3 (Aug.):537–68.  
1984 "Slavery in a Non-Export Economy: A Reply." *Hispanic American Historical Review* 64, no. 1 (Feb.):135–46.
- MATHIAS, HERCULANO GOMES  
1969 *Um recenseamento na Capitania de Minas Gerais (Vila Rica 1804)*. Rio de Janeiro: Arquivo Nacional.
- MATOS, RAIMUNDO JOSE DA CUNHA  
1979 *Corografia histórica da provincia de Minas Gerais (1837)*. 2 vols. Belo Horizonte: Imprensa Oficial.
- MATTOSO, KATIA M. DE QUEIROS  
1989 *To Be a Slave in Brazil*. Translated by Arthur Goldhammer. Rutgers, N.J.: Rutgers University Press.
- MATTOSO, KATIA M. DE QUEIROS, HERBERT S. KLEIN, AND STANLEY L. ENGERMAN  
1986 "Trends and Patterns in the Prices of Manumitted Slaves: Bahia, 1819–1888." *Slavery and Abolition* 7, no. 1 (May):59–67.
- MAXWELL, KENNETH  
1973 *Conflicts and Conspiracies: Brazil and Portugal, 1750–1808*. Cambridge: Cambridge University Press
- MELLO, PEDRO C. DE  
1977 "The Economics of Labor in Brazilian Coffee Plantations, 1850–1888." Ph.D. diss., University of Chicago.  
1992a "Rates of Return on Slave Capital in Brazilian Coffee Plantations, 1871–1881." In FOGEL AND ENGERMAN 1992a, 63–79.  
1992b "Expectation of Abolition and Sanguinity of Coffee Planters in Brazil, 1871–1881." In FOGEL AND ENGERMAN 1992b, 629–46.
- MELLO E SOUZA, LAURA DE  
1982 *Desclassificados do ouro: A pobreza mineira no século XVIII*. Rio de Janeiro: Graal.
- MILLER, JOSEPH C.  
1992 "The Numbers, Origins, and Destinations of Slaves in the Eighteenth-Century Angolan Slave Trade." In *The Atlantic Slave Trade: Effects on Economies, Societies, and Peoples in Africa, the Americas, and Europe*, edited by Joseph E. Inikori and Stanley L. Engerman, 77–116. Durham, N.C.: Duke University Press.
- MOTTA, JOSE FLAVIO  
1988 "A família escrava e a penetração do café em Bananal (1801–1829)." *Revista Brasileira de Estudos de População* 5:71–101.
- NISHIDA, MIEKO  
1993 "Manumission and Ethnicity in Urban Slavery: Salvador, Brazil, 1808–1888." *Hispanic American Historical Review* 73, no. 3 (Aug.):361–91.
- PAIVA, CLOTILDE ANDRADE, AND DOUGLAS COLE LIBBY  
1992 "The Middle Path: Alternative Patterns of Slave Demographics in Nineteenth-Century Minas Gerais." In *El poblamiento de las Américas*, 3 vols., 1:185–232. Veracruz, Mexico: International Union for the Scientific Study of Population.
- PINTO, VIRGILIO NOYA  
1979 *O ouro brasileiro e o comércio anglo-português*. São Paulo: Editora Nacional.

- REIS, JOÃO JOSE  
1986 *Rebelião escrava no Brasil: A história do levante dos malês (1835)*. São Paulo: Brasiliense.
- RODRIGUES, RAYMUNDO NINA  
1932 *Os africanos no Brasil*. São Paulo: Editorial Nacional.
- RUSSELL-WOOD, A. J. R.  
1982 *The Black Man in Slavery and Freedom in Colonial Brazil*. New York: St. Martin's.  
1987 "The Gold Cycle, 1690–1750." In BETHELL 1987, 190–243.
- SAINT-HILAIRE, AUGUSTE DE  
1975 *Viagem pelas províncias do Rio de Janeiro e Minas Gerais*. Belo Horizonte: Itatiaia.
- SCHWARTZ, STUART B.  
1974 "The Manumission of Slaves in Colonial Brazil: Bahia, 1684–1745." *Hispanic American Historical Review* 54, no. 4 (Nov.):603–35.  
1985 *Sugar Plantations in the Formation of Brazilian Society: Bahia, 1550–1825*. Cambridge: Cambridge University Press.  
1992 "Recent Trends in the Study of Brazilian Slavery." In Schwartz, *Slaves, Peasants, and Rebels: Reconsidering Brazilian Slavery*, 1–38. Urbana: University of Illinois Press.
- SLENES, ROBERT W.  
1976 "The Demography and Economics of Brazilian Slavery, 1850–1888." Ph.D. diss., Stanford University.  
1985 "Os múltiplos de porcos e diamantes: A economia escravista de Minas Gerais no século XIX." *Estudos Econômicos* 18, no. 3 (Sept.–Dec.):449–507.
- STECKEL, RICHARD H.  
1992 "Children and Choice: A Comparative Analysis of Slave and White Fertility in the Antebellum South." In FOGEL AND ENGERMAN 1992b, 369–92.
- STEIN, STANLEY J.  
1957 *Vassouras, a Brazilian Coffee County, 1850–1890*. Cambridge, Mass.: Harvard University Press.
- TOPLIN, ROBERT BRENT  
1972 *The Abolition of Slavery in Brazil*. New York: Atheneum.
- VASCONCELOS, DIOGO DE  
1974 *História antiga das Minas Gerais*. 3 vols. Belo Horizonte: Itatiaia.
- VERGER, PIERRE  
1987 *Fluxo e refluxo: Do tráfico de escravos entre o Golfo do Benin e a Bahia de Todos Os Santos dos séculos XVII a XIX*. São Paulo: Corrúpio (originally published in French in 1968).
- VON ESCHWEGE, W. L.  
1979 *Pluto brasiliensis*. 2 volumes. Belo Horizonte: Itatiaia.
- WOODMAN, HAROLD D., ED.  
1966 *Slavery and the Southern Economy*. New York: Harcourt, Brace, and World.
- ZEMELLA, MAFALDA P.  
1951 *O abastecimento da Capitania das Minas Gerais no século XVIII*. São Paulo: Universidade de São Paulo.