

RECONSIDERING TEXTILE
PRODUCTION IN
LATE COLONIAL BRAZIL:
New Evidence from Minas Gerais

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Scholars have long recognized that the final quarter of the eighteenth century in Brazil witnessed an agricultural renaissance in which traditional exports expanded and new tropical products began to find their way overseas (Prado Júnior 1967; Novais 1979; Arruda 1980, 1986; Alden 1984). In recent years, more attention has been paid to the diversified productive activities supplying an increasingly consolidated domestic market during this period (Brown 1986; Barickman 1991; Fragoso 1992). Although most of those activities were agricultural, artisan trades also flourished and domestic industry appears to have been growing, particularly the cottage textile industry. My examination of an unexplored and unusual primary source has revealed grounds for assuming that cloth and thread were being made throughout much of late colonial Brazil. The primary evidence also suggests that this cottage industry resembled the incipient stages of so-called European proto-industrialization to a remarkable degree, although important differences cannot be ignored. Nor does the regionalized nature of the source allow for generalizing about the colony as a whole. This research is thus a preliminary investigation that calls for further research. It nevertheless points out the potential importance of domestic industry within the overall Brazilian colonial economy and stimulates awareness of its complexities.

Homespun, particularly cotton homespun fabrics, were fairly common throughout Brazil in the colonial period (Holanda 1957). Several varieties of cotton were native to the colony, and long before the arrival of the Portuguese, indigenous tribes were spinning and weaving cotton (Branner 1885). By the 1770s, colonial officials began to complain that local cloth production was threatening to make Brazil independent of Portuguese manufacture (Carvalho 1916, 8–10). As part of a strategy aimed at protecting home industry, the crown issued a decree known as the

alvará (judicial writ) of 1785, which prohibited colonial production of all but the coarsest plain cotton textiles.¹

Some historians have held up the *alvará* as yet another example of draconian mercantile policies that stifled colonial development (Prado Júnior 1967, 261; Lima 1961, 167). But the more accepted interpretation now is that it represented an overreaction to a nonexistent problem, in view of the fact that the decree resulted in the seizure of no more than 13 looms used in weaving the prohibited categories of cloth (Novais 1979, 272–74; Maxwell 1973, 107). Thus one could conclude that textile production was marginal in Brazil and that the *alvará* amounted to much ado about nothing.

Such a conclusion leaves a number of questions unanswered, however, and ignores the fact that in Minas Gerais at least, textile production later burgeoned into what I have described elsewhere as a peculiar form of proto-industrialization (Libby 1991).² What were the dimensions of this cottage industry in Brazil during the 1780s? Was it adversely affected by the *alvará*, and who were the so-called marginal producers engaged in spinning and weaving? Is it possible to estimate levels of production and productivity? How might distribution have been organized, and how did textiles fit into the overall scheme of subsistence production if this peasant-oriented categorization is fully adequate? These questions are very difficult to answer, given the present state of scholarship and the sources available. Yet certain observations made by foreign travelers clearly indicate that domestic textile production was relatively common throughout Brazil in the late eighteenth and early nineteenth centuries, even though historians have largely chosen to ignore them up to now. Moreover, these indications suggest that the *alvará* had little or no effect on production of thread and cloth largely because the final product usually consisted of coarse cottons used for slaves' clothing and for sacking, products specifically exempted from the prohibitions. Rather, the sources point to the opening of Brazilian ports to foreign trade in 1808 and a resulting flood of British factory-made textiles as the decisive factors undermining the domestic industry in regions where transportation costs did not overburden the final price of imports.

Although foreign travelers largely entered Brazil after 1808, their observations often reflected recent history. In 1810, for example, Henry Koster stated that coarse homespun cottons were still common in the interior of the Northeast and had only recently been displaced by British textiles in the urban and coastal markets of the region (Koster 1966, 30–

1. For a transcription of the *alvará*, see Carvalho (1916, 10–11). A companion decree spelled out heavy penalties for smuggling textiles into Portugal. Contraband of British origin represented a real threat to Portuguese manufactures.

2. *Proto-industrialization* is defined here as any manifestation of widespread domestic manufacture potentially oriented toward commodity production.

31, 66–67). About the same time, English merchant John Luccock mentioned that spinning and weaving were important female activities in the city of Rio de Janeiro and its environs (Luccock 1820, 115). Later in the same decade, German naturalists Johann Baptist von Spix and Carl Friedrich Philipp von Martius noted locally produced coarse cotton goods in São Paulo, Goiás, Bahia, Sergipe, and Maranhão (Spix and Martius 1976, 1:106, 1:125, 2:101, 2:150, 2:259, 2:261). French naturalist Auguste de Saint-Hilaire also mentioned homespuns in São Paulo and Goiás (Saint-Hilaire 1976, 186; 1975, 23, 27). Until the 1860s, all travelers in Minas Gerais commented on the flourishing cottage textile industry in the province, where this activity survived the pressures of foreign imports and even consolidated along proto-industrial lines.³ To that extent, Minas represented an exception. Nevertheless, these early-nineteenth-century observations strongly suggest that domestic textile production may have been widespread throughout much of Brazil during the preceding decades. Thus evidence relating to spinning and weaving in Minas in 1786 may shed light on the state of production in the rest of the colony.

The Inventário dos Teares Existentes na Capitania de Minas Gerais

A few looms were actually sequestered as a result of the alvará. Most were located in the city of Rio de Janeiro and were used in fabricating luxury textiles that included gold or silver thread or both (Novais 1979, 272–73). Notwithstanding the limited scope of these seizures, they indicate that attempts were made to comply with the dictates of the alvará. It therefore seems likely that these efforts should have generated some kind of official documentation relating to domestic textile production, aside from the well-known high-level bureaucratic laments about its diffusion (Carvalho 1916, 8–12; see also Novais 1979; Maxwell 1973). Attempts surely were made to quantify and qualify that production, possibly a thorough canvassing of looms throughout Brazil. Given that a fair amount is already known about the cottage textile industry in nineteenth-century Minas Gerais, it would be particularly gratifying to come across sources relating to other regions of eighteenth-century Brazil. Thus far, unfortunately, that has not happened. What has recently become available to researchers is a set of loom inventories entitled “*Inventário dos Teares Existentes na Capitania de Minas Gerais*,” elaborated in 1786, which covers roughly half of the captaincy.⁴

On 1 August 1786, the governor of Minas Gerais posted a circular

3. For a discussion of the nineteenth-century cottage textile industry in Minas and its similarities to European proto-industrialization, see Libby (1991).

4. *Inventário dos Teares Existentes na Capitania de Minas Gerais, 1786*, Arquivo Público Mineiro, Seção Colonial, microfilm of the manuscript (the Arquivo possesses a microfilm copy of the original, which belongs to the Arquivo Histórico Ultramarino in Lisbon).

soliciting certain information from the commanders of the colonial militia headquartered in each of the captaincy's 8 *vilas*. The commanders reproduced the circular, which was then forwarded to the chief officers in all of the districts of the *vilas*. A copy of that circular has yet to be located, but the responses that eventually found their way to Lisbon make it clear that the information sought related to efforts to execute the alvará of 1785 by canvassing existing looms.

Given the difficulties inherent in administering so vast a territory, it is no surprise that the responses varied considerably in the quality and quantity of information furnished. Generally speaking, they came in the form of nominal lists, that is, lists of names identifying the owners of the looms, sometimes in detailed fashion but usually mentioning only sex and marital status and perhaps racial origins. In the few instances where an individual owned more than one loom, the fact was duly noted. Weavers were also identified in terms of their racial origin and the nature of their relationship to the loom owner. Often 2 or more inhabitants of a household were listed as being "occupied with the loom." Diverse combinations of relatives, slaves, and unrelated dependents of the owners were listed as weavers, although most were almost certainly engaged in spinning rather than weaving. Most responses indicated the type of textiles being produced, and the lists were evidently accompanied by a fair quantity of cloth samples. Annual production of the looms was reported in more than two-thirds of the cases. All but 4 percent included information about the destination of textiles produced, the basic distinction being those made for use at home versus those woven for sale. Regular provision of this information seems to suggest that the original circular must have solicited it, perhaps implying that the overriding preoccupation of the colonial administration was the growing commercialization of Brazilian textiles. The Minas inventory turned up few looms producing for the market, however. Thus although the circular must have insisted on information regarding the income generated by the sale of textiles, such entries were uncommon.

The *Inventário dos Teares Existentes na Capitania de Minas Gerais* is incomplete in canvassing of the captaincy. It includes nominal list responses from 4 of the 8 *vilas* established at the time, and not all the districts in each *vila* were represented. Responses from the *vilas* of São João and Vila Nova da Rainha appear to have been quite complete, but those from Sabará and Minas Novas partial. The districts of Sabará and Vila Nova da Rainha fanned out to the north and the west, and thus most of the area covered fell outside the central mining district. The territory of Minas Novas included the vast and sparsely populated northern reaches of the captaincy. São João served as the administrative center of the southern region of Minas. Thus the *Inventário* included a few urban centers, but most of the districts canvassed were rural. Little of the more

heavily populated mining district was included, and the same is true of the more agriculturally oriented west. The sparsely populated north-western and southeastern regions were not covered. Because reliable censuses are not available, it is difficult to say what proportion of the population lived in the districts canvassed, but roughly half would seem a reasonable guess. No local censuses have turned up that correspond to the nominal lists of the Inventário, precluding the possibility of determining the percentage of households that possessed looms in at least some of the districts. Despite such limitations, the data provided by the Inventário allow for a detailed examination of a colonial cottage industry.

Textile Production in Minas in 1786

The Inventário consists of a total of 63 district responses to the circular. Fifty-nine took (at least partially) the form of nominal lists that account for 1,242 households and 1,248 looms. Although more than 63 districts made up the 4 vilas canvassed, the overall coverage was fairly extensive.

Even the responses that do not list separate households attest to the fact that spinning and weaving were common activities in the captaincy. One official from the north of Minas noted a single household in which 3 daughters, their mother, and 2 female slaves produced, on request from outsiders, fine cotton tablecloths. He continued, "the rest of the looms in this district belong to people so poor (who weave a few yards for their own use and that of their families) that, given that the weaving takes up little of their time, it does not seem necessary to mention each one separately."⁵ Another response from the north claimed, "With respect to weaving manufactures, there are none in this district, although it is true that those who have their own cotton weave or seek out others to weave plain cotton cloth for them, and there are those who occasionally sell a few lengths—all plain cotton—but none are doing so at the moment. . . ."⁶ Truncated as these responses may be, they hint at some of the main characteristics of the cottage textile industry in Minas toward the end of the eighteenth century: the workforce was predominantly female; the cloth woven was largely used within the households; spinning and weaving may have been intermittent or seasonal activities; and commercialization was at best irregular.

The nominal list responses begin by denominating the loom owner, generally the male head of household, although women accounted for one-quarter of all owners. In 38 percent of the cases, no mention was made of the marital status or racial traits of the owners; in another 23

5. "Senhor Capitam Mor em observancia da ordem do Ilmo. e Exmo. Senhor General do primeiro de Agosto . . .," 1786.

6. "Senhor Capitam Mor Jozé de Oliveira Lemos Devo Resposta as ordens de v. m.," 1786.

TABLE 1 *Owners and Looms in Minas Gerais, 1786*

	<i>Number of Owners</i>		<i>Looms Owned</i>	
		%		%
Men	932	75	936	75
Women	310	25	312	25
Totals	1,242	100	1,248	100

Source: Inventário dos Teares Existentes na Capitania de Minas Gerais, 1786, Arquivo Público Mineiro, Seção Colonial, 1786, manuscript, microfilm.

percent, they were designated merely as married men or women. The 37 other combinations of sex, civil status, and reported race render detailed analysis of owners extremely complex and not particularly meaningful. Suffice it to say that while everyone from white married males to single black mothers owned looms, the former probably constituted the largest single group of owners. A breakdown of ownership by sex is provided in table 1.

What stands out in table 1 is the extreme rarity of households owning more than 1 loom, only 5 in number: 1 with 3 looms and 4 with 2 looms. The implication seems to be that Minas textile production was in its infancy in 1786. This hypothesis will be considered in examining production figures.

Weavers or groups of weavers were identified for 1,120 households. The wording of the responses shows that the workforce was engaged in both spinning and weaving. Moreover, spinning, which took up most of the time of household work groups, must be understood in the broadest possible sense here. The looms "occupied" many more workers in preparing thread (which often included separating out seeds and carding raw cotton as well as actual spinning) than in weaving per se. The Inventário reveals no fewer than 42 categories of weavers and groups of weavers in which the predominant criterion for classification is relationship to the owner (racial classification is statistically insignificant). Such listings of weavers as "his [her] daughters," "she and her sisters" or "some female slaves [*escravas*]" discouraged any attempt to quantify the actual workforce. But classification of weavers and weaving groups according to their relationship to loom owners (including slaves as property) and by gender allows for a fairly detailed look at textile workers. Table 2 considers all weavers as groups, including groups of one person, to arrive at a classification that highlights the family and household orientation of textile production in late-eighteenth-century Minas Gerais.

Table 2 suggests the overwhelming predominance of women workers in this incipient cottage textile industry. Because in 20 of the cases classified as "others" the workers are known to have been women, the proportion of exclusively female work groups totals 96.1 percent—and

TABLE 2 Textile Workers Groups in Minas Gerais according to Relationship to Loom Owner, 1786

<i>Workers in Relationship to Loom Owners</i>	<i>Number of Households</i>	<i>Percentage of Households</i>
Female loom owners	118	10.5
Wives	247	22.1
Daughters	283	25.3
Wives, mothers, and daughters	106	9.5
Female slaves	156	13.9
Other female household members ^a	30	2.7
Female household members and female slaves	115	10.3
Total female groups	1,055	94.3
Male loom owners	34	3.1
Sons	2	0.1
Male slaves	4	0.3
Other male household members ^a	2	0.1
Male household members and male slaves	1	0.1
Total male groups	43	3.7
Husband and wife groups	1	0.1
Others ^b	21	1.9
Total of all groups	1,120	100.0

Source: Inventário dos Teares Existentes na Capitania de Minas Gerais, 1786, Arquivo Público Mineiro, Seção Colonial, 1786, manuscript, microfilm.

^a These categories include relatives such as sisters, nieces, cousins, and in-laws as well as nonrelated household members such as godchildren, legal wards, and *agregados* (attached dependents).

^b Twenty of the cases in this category involved unidentified women, some from other households, and one case of children (*crianças*) whose sex was not specified.

that is probably an underestimate. The listings that register male owners as weavers are couched in ambiguous language, and most, if not all, of the looms were likely worked by female household members (hypothetically increasing the share of female work groups to 99.2 percent). The individuals listed as owners were not necessarily doing the actual weaving themselves. The military officers charged with elaborating the district inventories may have considered it unnecessary to stipulate that only female household members were involved in cloth and thread production because that was clearly the norm.

Excerpts from some of the responses demonstrate just how common that norm was. Most of the unidentified women mentioned were registered in a single district response that stated laconically, "The persons who occupy themselves on [the looms] are only women, both free

and slave and of all colors."⁷ A second response noted that one loom was inactive because the owner "no longer has a wife, nor has he any daughters."⁸ Another officer reported, "There are also many small farmers who have their looms for weaving threads spun by their wives, daughters, and children who are unfit for work in the fields."⁹ Another official observed:

the product of this manufacture is neither traded nor commercialized, nor are male slaves involved in it; those occupied in it are women unable to work in mining or in the fields.

It can be said that this loom industry was inspired by God for the salvation of the miserable poor. The utility of these textiles is that they employ those idle hands of the women, a great number of whom live in these [areas of] Minas and who every day multiply; they have no other legitimate occupation and the few lengths they weave contribute to the upkeep of their households, all of which are in debt to merchants and the royal treasury owing to the diminished incomes that are now the rule here.¹⁰

These excerpts bring up several aspects of textile production during the period under examination. At this point, what stands out are two interconnected and somewhat pejorative concepts. In the first place, weaving and spinning were relegated to the diminished status of "women's work." Second, that status derived from the supposition that women were unfit for "proper work" in agriculture or mining.¹¹ In the absence of cottage industries, women were viewed as idle hands that might become socially and morally disruptive. The result was an implied disassociation of men's work from women's work, in other words, a rigid gender division of labor. Table 2 corroborates this interpretation. One husband and wife team represented the single sexually mixed work group listed in the entire Inventário. In the 9 other instances in which men indisputably participated in spinning and weaving activities, the work groups were exclusively masculine. There was no intermingling of the sexes in the workplace. The origins of this sexual division of labor are difficult to pinpoint, but they may well have arisen in an ongoing gender struggle

7. "Lista dos Tiares q. ha neste destrito da Itabira de mato dentro do tro. da villa Nova da Rainha assignada e tirada pello comde. Manoel da costa Rocha aos 27 de obro. de 1786," 1786.

8. "Lista dos Teares e Fábricas de Algodão, q. se achão neste Destro. da Logoinha, Gramiães e Sta Anna, de que he Capitam Bento Jozé de Macedo Ferreira," 1786.

9. "Na forma da Ordem de Va. Exa. do premro. de Agosto do presente anno; ponho na sua prezença 19 relaçoens dos Comdes. deste Termo . . .," 1786.

10. "Em virtude da Ordem do Illmo. e Exmo. Sr. Luis da Cunha e Menezes Governador, e Capm. General desta Capitania ao meu Capm. Mor Senhor Manoel Jose Pena do pro. de Agosto do presente anno, a mim destribuida pelo mesmo Sr respectiva aos tersumes dos teares que ha no meu destrito," 1786.

11. These militia officials were clearly exaggerating. Many of the nominal lists explicitly state that women, free as well as slave, spun and wove and also worked in the fields and cared for livestock, aside from carrying out housework. It is true that no mention of female participation in mining was found, which seems to imply that men were anxious to limit the occupational range of women's work.

related to the transition from a more freewheeling society based on mining to a more sedentary one based on agriculture and domestic industry.

The contrast with the European experience of cottage textile industry could not be more stark. By definition, domestic industry in the proto-industrial vein in every stage was a full-fledged family enterprise in which husband, wife, and those children fit for work all participated (compare Medick 1981; Schlumbohm 1983; Gullickson 1991; Vardi 1993, 130–39). Whether this bias against male entry into textile production was a broad characteristic of Brazilian society or merely a *mineiro* quirk remains to be seen. I have argued elsewhere that male lack of interest in the domestic textile industry at least partially thwarted any potential evolution toward the factory system during the nineteenth century (Libby 1993). This combination of bias and lack of interest was evidently present at the inception of the industry.

The innocuousness of the alvará, at least regarding Minas Gerais, becomes clear when the responses related to the types of cloth produced are examined. Almost 95 percent of valid cases alluded to plain white cottons, most of which were probably of the coarse variety, although with some variation in the delicacy of the weave. The second-most-frequent category (another 3 percent of reported cloth types) was a mixture of plain whites with patterned cottons, which may have involved the use of other colors or simply the embossing of white on white. At any rate, nothing indicates that this particular textile variety constituted a violation of the prohibitions. The remaining 2.3 percent of the reported textiles were also mixtures: mostly interweavings of coarse cotton and coarse wool in which the wool yarn served merely as decoration but also some fustians (a mixture of cotton and linen). This type of fabric would have violated the alvará, but because none of the responses raised a red flag, the purpose of the linen may also have been decorative. The absence of pure wools and linens is conspicuous and, given the predominance of white cottons, may have rendered the mixtures pardonable. Ultimately, this relative lack of variety probably reflects the infant state of the cottage industry in Minas and may have distinguished it from other regions of Brazil.

Annual production was reported for slightly more than two-thirds of the households. Quantities registered were undoubtedly estimates because the practice of rounding becomes apparent when household production is arranged in ascending order of magnitude. Table 3 summarizes the available data.

The clearest indication of the incipency of the Minas cottage textile industry in 1786 is that it was dominated by small-scale producers. Households that produced up to 50 *varas* (55 meters) per year accounted for nearly three-quarters of all cases and just under half of total production. As will be shown, nearly all small-scale production of cloth was

TABLE 3 Annual Textile Production of Households in Minas Gerais, 1786

Annual Household Production in Varas ^a	Number of Households	%	Total Production in Varas	%
Up to 20	196	23.3	3,146	8.0
From 21 to 30	182	21.7	5,127	13.0
From 31 to 40	136	16.2	5,263	13.4
From 41 to 50	114	13.6	5,578	14.2
From 51 to 60	71	8.5	4,156	10.6
From 61 to 70	32	3.8	2,169	5.5
From 71 to 80	35	4.2	2,776	7.0
From 81 to 100	27	3.2	2,652	6.7
From 101 to 200	38	4.5	5,811	14.8
From 201 to 500	9	1.0	2,690	6.8
Totals	840	100.0	39,368	100.0

Source: Inventário dos Teares Existentes na Capitania de Minas Gerais, Arquivo Público Mineiro, Seção Colonial, 1786, manuscript, microfilm.

^a One vara equals 1.1 meters

used by the households themselves. At this stage, then, the industry remained largely at subsistence level, even in most households producing more than 50 varas a year. The implication is that looms were not being used at full capacity, leaving considerable potential for growth. Some of the district responses contain observations corroborating the idea that weaving (along with spinning) were carried out on a part-time basis, either seasonally or throughout the year as allowed by the press of other housekeeping and farming duties. The latter situation is illustrated by two entries from the district of São Domingos in the north:

Ignacio Alvares dos Santos, a married man, has a loom on which a *crioula* [a female slave native to Brazil] weaves plain cloth for use in his house and for those who bring their own thread. The charge is 30 *reis* for each vara, but this is not continuous work for the slave is occupied in other services, including fieldwork, nor is thread always available. . . . Alexandre da Cunha Braga, a married man, has a loom on which his daughters weave plain cloth for his house. Because he has no other people [meaning no slaves], most of their time is taken up in farming for their own subsistence.¹²

An official from Paraupeba, a district attached to the vila of Sa-bará, began his closing remarks in the following fashion: "I declare that, at present, the [female] weavers and spinners are not occupied during the whole year, but rather the work is carried out during a few months of the year. That is partly because of the scarcity of cotton, which is not abundantly produced in this district because of the cold that damages the

12. "Lista dos Teares que a de panos de Algodão nesta ma. Comandancia do Arrayal de São Domingos é a Seguinte," 1786.

plants; some supplies are obtained from areas where it is produced in abundance."¹³

From Cocais, a district under the jurisdiction of Vila Nova da Rainha, another official reported about the 15 looms in that district, "Most of the time, all these looms do not operate, so that if 2 or 3 of them were to work continuously throughout an entire year, they would produce as much, or more, than those listed as operating during this past year."¹⁴

The reporting official from São Miguel do Piracicaba, also attached to Vila Nova da Rainha, noted scrupulously the number of months of the year during which each loom was used. The periods ranged from 1.5 months to a full 12, yielding an average of 4.5 months. This official made no mention of the quantities produced.¹⁵ For the district of Brumado da Paraupeba, the number of months of loom operation as well as the annual production of each loom are available. The range was smaller, from 1 to 5 months, while annual production varied from 20 to 80 varas, averaging almost 16 varas per month.¹⁶ That figure does not represent full capacity, however, because the meticulous official went on to note that the women were also occupied with housekeeping and fieldwork. Given that the median annual household production calculated from table 3 was 40 varas, the average figure from Brumado da Paraupeba would indicate that the typical mineiro loom operated roughly 2.5 months out of the year.

These work patterns parallel those found for the early stages of European proto-industrialization and underscore the intimate relationship between domestic textile production and subsistence farming (Kriedte 1981; Vardi 1993, 130). Household production figures have not been available to scholars dealing with incipient proto-industrialization in Europe, making comparison difficult. As in Europe, the potential for growth by increasing the allocation of labor time to spinning and weaving is clear.

As table 3 demonstrates, at least some households were already weaving at capacity or close to it in 1786. The most extreme case was registered in the northern district of Santo Antonio da Itacambira, where

13. "Em virtude da Ordem do Illmo. e Exmo. Sr Luis da Cunha Menezes Governador, e Capm General desta Capitania ao meu Capm Mor Sr Manoel José Pena do pro de Agosto do prezente anno, a mim distribuida pelo mesmo Sr respectiva aos tesumes dos teares que ha no meu destrito," 1786.

14. "Relação dos Tiars de teçer Aldodão que ha no Destrito de Cocaes com declaração das pessoas a quem pertencem, suas Gerarchias, situaçoens, possibilidades, utilidades que tirão dos ditos teçumes, sahidas que lhes dão, e para onde," 1786.

15. "Em observancia da ordem do Illmo. e Exmo. Senhor Governador e Capm General, datada do 1º do Corrente e dado V M de 12 do mesmo sobre averiguação do numero de tiars, qualidade de pessoas que os ocupam, que fazendas perduzam, e sua sayda. Respondo o seguinte ao dipois de ha exacto conhecimento da materia," 1786.

16. "Rellação dos teares que ha no Destrito do Brumado da Paraupeba debaixo de que he Capm João Marques da Eyra sedo a ordem do Illmo. e Exmo. Sr Gnal expedida ao pro de Agosto de 1786," 1786.

"Manoel de Oliveira has a loom that produces satined and plain cloths; throughout the year, from 400 to 500 varas of these will be sold, and this workshop occupies 4 [male] slaves full time."¹⁷ Oliveira must have had a large slave force to be able to dedicate 4 males to full-time textile production, although cloth sales might have supported the entire household. No mention was made of the income derived from the trade. This case is unique as the only example of an all-male slave work group. Two other households in Santo Antonio da Itacambira produced a total of 350 varas for sale, in addition to an undisclosed quantity for home consumption. Ten female slaves were engaged in production, including spinners and weavers, although it was considered only part-time work.

When examining the most productive households, no clear correlations emerge among magnitude of production, consumption, destination, and workforce composition. Of the 33 cases in which 150 or more varas were produced annually, in 13 at least part of the cloth was woven to be sold. Slaves were clearly involved in 4 of the work groups, while another 7 were made up of free women. In the 2 remaining cases, the male owners were listed as the weavers, but in ambiguous language. Twenty of these households were producing exclusively for domestic consumption. In 11 cases, spinning and weaving were partially or wholly turned over to slaves; in the remaining 9, the workers were free women. Yet slavery almost certainly pervaded all these cases. In the first place, most of the domestically consumed textiles were used to clothe large numbers of slaves, the only plausible explanation for such elevated levels of internal consumption. Second, even where the work groups were composed of free women, slave domestic help must have freed the labor time allocated to textiles.

For just over two-thirds of all cases (67.2 percent), information is available on annual production and work-group composition, allowing for crude comparisons of productivity levels. Slave participation in work groups tended to increase production. The 25.6 percent of all work groups in which slaves were engaged accounted for 33.5 percent of total annual production. The average annual production of the work groups in which slaves participated amounted to 60.9 varas, while the corresponding figure for free groups was 41.7 varas. But the difference cannot be presumed to signify that slave labor was somehow inherently more productive. Most of the free work groups must have belonged to non-slaveholding households at a time when lack of ownership of chattel amounted to a declaration of poverty. Indeed, many of the district responses commented on the destitute state of the households listed. As one official noted

17. "Snr Capam M Jozé de Olivra Lemos Recebi a de a mce de 20 de 7bro e juntante a copia da carta de Ilmo. e Exmo. Sr Gnal de pro de Agosto de 1786 . . . Itacambira 15 de 8bro de 1786," 1786.

dramatically, "the time spent in harvesting, spinning, and weaving is of great utility to them, for they would otherwise succumb to nudity, such is the measure of poverty into which this district has fallen."¹⁸ The lower productivity of the free work groups reflected the fact that subsistence needs demanded labor time and held production levels down to meeting immediate requirements. If surplus production had become readily marketable, those circumstances could change and textiles might have played a larger role in overall household survival strategies.

Twenty-seven of the work groups were identified as exclusively masculine, although most involved the dubious designation of male owners as weavers. The annual average production of the male groups was 75.9 varas, substantially higher than the overall average of 46.6 varas. But the inclusion of Manoel de Oliveira's exceptionally productive male slave group heavily weighted the average. Exclusion of that group brings the average down to 59.6 varas, very close to the average for all work groups that included slaves. This finding suggests that the supposed male owner-weavers in fact used slaves in spinning and weaving.

It is also possible to compare production levels among male and female loom owners, although no clear pattern emerges. Of the 840 cases for which annual production figures are available, in 186 (22.1 percent) the looms were listed as belonging to women. They produced 20.9 percent of total output. The women's looms produced an annual average of 44.2 varas and the men's 47.6. Both figures approximate the overall average, and thus it appears that the gender of loom owners had little influence on productive levels.

All but 4.2 percent of the responses to the Inventário indicated whether household textile activities involved any sort of commercial transactions. In 83.7 percent of the cases, they did not, again underscoring the subsistence nature of the Minas cottage textile industry in 1786. Commercial relations were carried out in a total of 194 households. According to the responses, only 11 households produced cloth exclusively for sale. Some 81 households produced both for domestic consumption and for the market. Another 53 households produced for internal consumption and wove thread provided by outsiders at a fixed rate per vara. Forty-six households specialized in weaving at a fixed rate thread spun by their customers. In the remaining 3 cases, cloth was produced for the market and outsiders' thread was woven. Thus pure commercial production prevailed in less than a third (30.9 percent) of this reduced group, and these exclusively market-oriented households represented a mere 5.1 percent of total households. Cases in which market orientation was coupled

18. "Relação dos Teares que ha no Destrito do Brumado da Paraupeba debaixo de q. he Capam João Marques da Eyra sedo a ordem do Illmo. e Exmo. Sr Gnal expedida ao pro de Agosto de 1786," 1786.

with domestic consumption represented 11.2 percent of all households. While these percentages are not particularly impressive, they indicate that commercialization was already a viable option for households willing to allocate substantial labor time to textile production. If marketed textiles were making a reasonable contribution to household income, the fact can hardly have been lost on neighbors looking for ways to increase their own incomes.

Annual production figures are available for 58 of these market-oriented households. Annual production averaged 95.8 varas, slightly more than double the overall average. What is remarkable is that slave participation in partially or fully commercialized production was low. Work groups that included slaves apparently represented only 13.4 percent of the total, although a few of the groups were labeled as having male owner-weavers, which may have obscured some degree of slave participation.¹⁹ Relatively significant, if predictable, differences show up when turning to the average annual production figures for the various categories of commercialization. For the small set of households producing cloth for the market using their own thread, annual production averaged 312.5 varas. That figure is based on a sample of only 4 households and includes Manoel de Oliveira's male slaves. It therefore is probably exaggerated yet still indicative of the effect of full-scale market orientation on production levels. Among households where looms were dedicated to weaving thread brought in by customers, annual production averaged 104.8 varas. The corresponding figure for households producing for domestic consumption and weaving outsiders' thread was 78.8 varas. Finally, producers making cloth from their own thread whose output was divided between domestic consumption and sale averaged 62.5 varas a year. The database here is tiny, and little may be gleaned from these simple calculations except that the commercial potential of the Mineiro cottage industry was already evident in 1786. Inventories have yet to be found for other regions of Brazil that would allow comparison of degrees of commercialization. Later inventories would indicate the extent of commercial inroads in the industry.

Cloth sales and the weaving of outsiders' threads at a fixed rate were not the only market relations engendered by the cottage textile industry. Most responses to the *Inventário* make no mention of the origin of the cotton used in the industry, and one can reasonably suppose that the bulk of this raw material was grown and harvested on the land of the producers themselves. When the cloth was used domestically, the cottage industry remained entirely within the closed circuit of subsistence pro-

19. It should be noted that these percentages related to slave participation in the work groups are based on a larger sample of 164 households, including ones for which no production figures are given.

duction. But soil types and climatic conditions varied considerably in the regions under examination, and cotton did not grow well in all the districts inventoried. Textile production in some areas must have depended partially or wholly on interregional trade in raw cotton. In some cases, cotton brought in by traders augmented local supplies, but other areas depended entirely on trade. An official in Rio Pardo in the northern vila of Minas Novas commented, "what little is woven is made with cotton from elsewhere because of the unfavorable weather here. . . ."20 In the urban center of Vila Nova da Rainha, some households depended wholly on buying cotton, while others supplemented their home-grown supplies with purchases.²¹ The same was true in the districts that composed the seat of Sabará, probably the largest city in Minas Gerais at the time.²² Dependence on trade was not merely an urban phenomenon, however. As shown, the trade in cotton also supplemented the cottage industry in rural Paraupeba. Other rural districts such as Morro Vermelho (Vila Nova da Rainha) and Pedra Branca (Sabará) also supplemented local supplies with raw cotton shipped in from other areas.²³ The trade could cover considerable distances and supply a varied market, as evident in the following response of the official stationed at Antônio Dias Abaixo (a district of Vila Nova da Rainha): "Of those listed above, all have looms totaling 25, and they also plant their own cotton, although the product is so sparse as to hardly bear mentioning. Because cotton does not grow well here, the inhabitants cover their nakedness by buying the cottons that come from Cuyethe, and many of those who have no looms buy the cotton that they spin, having the threads woven by others, although the results amount to little more than clothing for themselves. . . ."24

Cuyethe lies far to the northeast of Antônio Dias Abaixo, and thus this observation suggests that the trade in raw cotton was already developed in 1786 and capable of meeting demands over long distances. Equally significant is the reference to an apparently large segment of the population engaged in spinning, a segment that thus far appeared only indirectly as those who paid to have their thread woven. The implications here are clear. Certain regions were already specializing in cotton cultivation to meet the demands of a widespread domestic textile industry, and

20. "Snr Capam Mor Jozé de Oliveira Lemos Emcluzo Remeto a V m a lista . . . Rio pardo de 9bro o Pro de 1786," 1786.

21. "Lista dos Tiares que ha no destrito de Villa Nova da Raynha," 1786.

22. "Lista das pessoas q tem Teares no Distrito da Igreja grande da Va Real de N Snra da Conceição do Sabará; em cumprimento da Orde do Illmo. e Exmo. Snr Genal desta Capitania," 1786; and "Relação dos Tiares q ha no destrito do Arral Velho tro da Va do Sabará da onde ha Capam Domingos Pereira da Oliveyra com expreção de seus donos suas moradas, qualide das pessoas q se ocupão no do Exercicio," 1786.

23. "Lista das pessoas q tem Theares neste Destrito de Morro Vermelho," 1786. "Rellasm dos Tiares de Destrito de Pedra Branca de q he Commde o Alfes Jozé Rois Guerra," 1786.

24. "Relação dos Teares que se acham neste Destrito de Antonio Dias abaixo," 1786.

in doing so, they tapped into and expanded existing trade and transportation networks. At the same time, the industry was considerably broader than it would appear from examining only loom inventories, given that many households specialized in spinning. Would it be too much to suggest that the elements for a proto-industrial takeoff were solidly in place by 1786?

The income generated by textile activities could be calculated for only 57 of the households listed in the *Inventário*. This meager sample may or may not be representative of the range of incomes earned by households involved in the various aspects of market relations. To make matters worse, little work has been done to date on prices in eighteenth-century Minas, rendering meaningful comparisons difficult. Overall income averaged 5,405 reis. Among male loom owners, the average stood at 8,214 reis, while female owners earned an average of 3,210 reis for their efforts at spinning and weaving. The highest earners were the few households that used their own thread to produce cloth for sale on the market, averaging 24,720 reis a year. These 5 cases generated 40 percent of the total income registered in the *Inventário*. Virtually all the rest were households that wove outsiders' thread, although many also produced cloth for domestic consumption. Annual income for this group averaged 3,548 reis. Slaves were conspicuously absent from all but 6 of the work groups in the sample. The average yearly income from textiles for households using slaves in production came to 21,233 reis, as compared with 3,542 reis for households with work groups made up of free individuals.

Although it is not easy to put these averages into meaningful perspective, indications are that textiles may have been making a fairly significant contribution to overall household income. Alida Metcalf has calculated the average income from crops of peasants and planters for the year 1798 in the town of Santana de Parnaíba, in the captaincy of São Paulo. Crops generated an annual average income of 2,080 reis for peasants and 110,890 reis for planters with slave holdings producing cash crops like sugar and cotton. For 1775, Metcalf found that the average value of agricultural production of peasant households varied from roughly 7,500 reis for nuclear families to about 1,000 reis for households headed by unmarried women. She also pointed out that during the eighteenth century, a mature adult male slave cost between 100,000 and 150,000 reis.²⁵ According to a recent article by Laird Bergad, the average probate evaluation (theoretically based on fair market value) of adult male slaves between 15 and 40 years of age in the Mariana region of Minas Gerais during the 1780s was slightly more than 102,000 reis (Bergad 1994, 517).

25. See Metcalf (1992, xvi, 80–81, 134–36). The author also notes that spinning and weaving were part of the survival strategy of Paulista peasant families in the late eighteenth century (1992, 143–47).

Given that few Mineiro households concentrated solely on textile production, the average income generated by spinning and weaving compares well to peasant incomes and agricultural production values in São Paulo for the same period. Although few were likely to become wealthy in the domestic textile industry, it apparently could provide significant supplemental income to households. That potential would have been the key to a deepening of market relations and further spread of the industry.

Conclusions

While the data from late-eighteenth-century Minas Gerais do not necessarily reflect the state of textile production in the rest of Brazil, when coupled with observations made by foreign travelers, they at least suggest that in some regions, cottage industry may have been a good deal more significant than previously imagined. Indirectly, the *Inventário* demonstrates the considerable dimensions of the domestic textile industry. Because production seems to have been entirely manual, each loom and corresponding weaver were maintained by a much larger contingent of spinners who were probably also engaged in separating seeds from raw cotton and carding it. These auxiliary spinners frequently came from households unconnected to those where the looms operated. How many additional households were thus involved in cottage industry is uncertain, but the Minas data point to the potential multiplier effect inherent in this labor-intensive industry.²⁶ Given indications that Maranhão was already shipping cloth to Pará in the final decades of the eighteenth century (Dias 1971) and that the typical dress in the northeastern interior was homespuns (prior to regular trade with Britain), can it not be presumed that the scale of cottage textile industry in those regions may have actually surpassed that of Minas? If so, peasants from the Northeast may also have supplied coastal sugar zones with textiles for clothing slaves. Similarly, why did spinning and weaving survive in the city of Rio and the surrounding countryside (surely the region most profoundly affected by the opening of ports to foreign trade) if not because these activities had previously been widespread? This line of thinking is all conjecture, but as informed conjecture, it begs for further study.

The evidence marshaled thus far consistently demonstrates that the *alvará* had little or no effect on the cottage textile industry in Minas simply because it did not target the cloth most commonly produced. As to the question of the source of labor for the industry—the marginal producers of economic history dominated by the logic of mercantilism—the Minas data are intriguing and suggestive. At present, it remains un-

26. Data from the 1830s reveal 24 spinners for each weaver. If the same ratio held true for the 1780s, the looms listed in the *Inventário* may have been generating employment for some 31,000 people. See Libby (1988, 201).

known whether the feminine composition of the labor force in the domestic textile industry was a strictly Mineiro phenomenon or not. The implication is that the female population, free and slave, constituted an underutilized segment of the workforce that could be allocated to textile production as subsistence needs dictated or as market opportunities arose. This notion of women as a relatively untapped source of labor or a segment of the labor force more likely to be engaged in meeting immediate needs envisions a certain flexibility of female workers and does not equate with marginality. In the context of export recuperation and economic diversification marked by import substitution and consolidation of the domestic market, it seems logical that women would play an increasingly important role in overall economic development. It might be posited that herein lies an explanation for the distinction between the family-oriented cottage industry of proto-industrial Europe and the gender-biased orientation of the Brazilian variety of domestic industry. In the European case, textile production represented initial entry into the export trade for most regions, thus requiring a major, if gradual, reallocation of labor factors. In Brazil, the export economy already commanded a large share of the labor force, leaving to residual and flexible (but not marginal) labor the chance to take advantage of opportunities that arose in the domestic economy.

The Minas data on production demonstrate no clear trends, nor can they simply be transposed to other regions of Brazil. They strongly suggest that the industry was in its infancy and that a great deal of potential productive capacity remained untapped. The fact that most looms were operated during only part of the year underscores the similarity of the Mineiro domestic textile industry and the earliest stages of European proto-industry, in which the distaff and loom were taken up on a seasonal basis governed by the agricultural calendar (Vardi 1993, 130). One district official reported, "the women and female slaves are occupied on the looms during the rainy period,"²⁷ suggesting that a certain seasonality also permeated textile production in Minas. But in households where production was clearly geared toward the market, the seasons no longer counted. If a market orientation was more prevalent in certain other regions of Brazil, then seasonality probably did not apply and productivity was substantially higher. Once again, further investigation is needed.

Given that colonial administrators were particularly concerned with possible commercialization of domestically produced textiles, it is curious that the *Inventário* offers no information as to how output was distributed on the market, except in the cases involving the weaving of thread

27. "Relação dos Teares que ha no Destrito do Brumado da Paraupeba debaixo de q he Capam João Marques da Eyra sedo a ordem do Illmo. e Exmo. Sr Gnal expedida ao pro de Agosto de 1786," 1786.

prepared in independent households. In fact, merchants (except those dealing in raw cotton) were conspicuously absent from the district responses. The reasons for this absence cannot be ascertained at present. If and when additional inventories are uncovered in the archival mazes of Lisbon and Rio de Janeiro, some light may be shed on merchant participation in the Brazilian domestic textile industry.

In occupying the "idle hands" of women and eliminating the need to purchase textiles on the market, domestic production fit neatly into the scheme of subsistence farming. But the presence of slaves in many Mineiro households and the proportionately more frequent participation of slave spinners and weavers in households producing strictly for domestic consumption suggest that labels such as "subsistence production" or "peasant strategies of survival" do not do justice to the complexities of the phenomena under examination here. As has been argued, households producing large quantities of cloth for domestic production must have possessed numerous slaves, and as such they were certainly not engaged in mere subsistence production. In Minas at least, domestic production must have represented considerable savings over buying imported textiles in every kind of household. Participation in the industry was socially varied and far from restricted to peasant households. This aspect also distinguishes the Mineiro cottage textile industry from the European phenomenon. Given the ubiquity of slavery in late-eighteenth-century Brazil, the same would doubtless hold true for other regions where domestic textile production flourished.

Overall, the *Inventário* allows for a rather detailed, although frustratingly synchronic, glimpse into an incipient domestic textile industry. In many ways, that industry bears a striking resemblance to the early stages of what has been labeled "textile proto-industrialization in pre-factory Europe," although certain features differentiate it from the European experience. The regionalized nature of the documentary source makes it difficult to generalize about textile production in all of late colonial Brazil, but the findings can serve as a basis for wider investigation. A great deal remains to be done. More inventories must be uncovered and analyzed, and if possible, the colonywide canvassing process should be reconstructed. Beyond that, however, in order for researchers to understand the evolution of the industry up to the arrival of the Portuguese court in Rio in 1808 and the subsequent opening of Brazilian ports to foreign trade, other sources will have to be tapped. Because little administrative documentation dealing with cloth production has been located aside from inventories, different types of sources will have to be examined. Probate records would be the logical choice, although access can be a problem in Brazil, and investigating them is a time-consuming process. It is to be hoped that these challenges can be met.

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